International Journal of Research in Economics and Social Sciences(IJRESS)
Available online at: http://euroasiapub.org
Vol. 9 Issue 5, May- 2019
ISSN(o): 2249-7382 | Impact Factor: 6.939 |

Emerging pattern of chronic morbidity – an analysis on NCDs in Kerala

Sanitha Sadanandan[1]K Gangadharan[2]

1. PhD Research Scholar (UGC-JRF), Department of Economics,Kannur University, Thalassery Campus, Palayad.
2. Professor and Head, Department of Economics, Kannur University, Thalassery Campus, Palayad.

Corresponding Author:

Sanitha Sadanandan,PhD Research Scholar (UGC-JRF), Department of Economics, Kannur University, Palayad, Kannur-670661, Kerala.
E Mail ID: sreesani637@gmail.com

Abstract

Kerala has noteworthy achievements in almost all health care indicators, which contributes high human and social development in the state. Apart from this accomplishments, the real health care circumstances are entirely different. There exists low mortality but high and extensive morbidity, which recalls the 'paradox of low mortality ang high morbidity'. As per national level surveys, Kerala accounts the highest self-reported morbidity in India. There is increasing trend in the prevalence of both communicable and non-communicable ailments. However, NCDs are more prominent in Kerala. In this juncture, the present study focuses on the emerging pattern of self- reported morbidity and NCD issues in Kerala. The study intends to use the 71st round of National Sample Survey Organization data to analyze the pattern of self-reported morbidity. The study uses descriptive analysis to explore the prevalence of NCDs. The results indicate that NCDs increased by six times in Kerala over the last two decades. The emerging pattern of hike in the prevalence of NCDs in Kerala needs sustained pubic health care system for the diagnosisand treatment of NCDs at affordable cost to reduce the economic burden.

Keywords: Chronic morbidity,Economic burden, mortality, Non-communicable disease, NCD.

International Journal of Research in Economics and Social Sciences(IJRESS)
Available online at: http://euroasiapub.org
Vol. 9 Issue 5, May- 2019
ISSN(o): 2249-7382 | Impact Factor: 6.939 |

Introduction

The burden of chronic diseases is escalating worldwide. In 2016, an estimated 41 million deaths occurred due to non-communicable diseases (NCDs), accounting for 71% of the total 57 million deaths. India's, current stage of epidemiological transition is characterized by low mortality, high morbidity, and by the double burden of communicable diseases and NCDs. Although the absolute burden from communicable diseases is being reduced, but it remains high. At the same time, NCDs have emerged as the leading cause of morbidity and death contributing to 55 percent of all disease burden and more than 62 percent of deaths in the country.

In the case of Kerala, ithas noteworthy achievements in almost all health care indicators such as high life expectancy, low infant mortality, low birth and death rate, which contributes high human and social development in the state. Apart from this accomplishments, the real health care circumstances are entirely different. The state's health situation is characterized by various aspects like falling-off of public health system, uncontrolled growth of private sector, escalation of health care cost and the presence of communicable, non-communicable and life-style diseases.

One of the most paradoxical condition existing in the state is low mortality but high and extensive morbidity. As per national level surveys, Kerala accounts the highest self-reported morbidity in India.There is increasing trend in the prevalence of both communicable and non-communicable ailments. Morbidity rate has been growing over the years for non-communicable diseases. Yet, fast urbanization, migration,age pattern, inadequate nutritionand changing lifestyle have to be found Kerala in acondition where facing a continually increasing burden of non-communicable diseases.The state is facing highest prevalence of noncommunicable diseases including cardiac disease, diabetes, cancer, chronic pulmonary disorders and their risk factors (Thankappan et al. 2010).

International Journal of Research in Economics and Social Sciences(IJRESS)
Available online at: http://euroasiapub.org
Vol. 9 Issue 5, May- 2019
ISSN(o): 2249-7382 | Impact Factor: 6.939 |

Review of Literature

The review of various research studies on health and morbidity hasgiven animportant insight into the prevalence and determinants of morbidity (Panikar and Soman 1984; Murray and Chen 1992;Duraisamy 2001;T.R Dilip 2002; Naveneetham et al 2009; Srinivasan et al 2017; K. Paul et al 2019). The review has clearly shown that prevalence and incidence of illness varied with age, gender, economic status, socio-economic and deprived groups, rural-urban region etc.There is a clear age pattern in morbidity levels, with disease composition revealing the relatively higher prevalence of acute ailments in younger age groups and of chronic ailments in older ones (NSSO 1998; Dilip 2002; Navaneetham et al, 2006; Dilip 2007).

There is large literature on the economic aspects of NCDs in middle- and low-income countries as well as developing countries (Mahal et al 2010, Nikolic et al 2011, Kankeu et al 2013). Mahal et al (2010) analysed the economic effect of NCDs both on household's economic wellbeing as well as on total economic outcomes in India.

Themultidimensional nature of health and ill health effect at individual, household, and macroeconomiclevel, indicates chronic nature of morbidity as global emergency.However, limited studies have explored the pattern of chronic morbidity and NCD issues in Kerala recentlyusing latest large-scalenational survey. In this juncture, the present study focuses on the emerging pattern of self- reported morbidity and NCD issues in Kerala.

Objectives

- To analyse the pattern of chronic morbidity in relation with NCDs in Kerala.
- To examine pattern of prevalence of chronic morbidity across gender, region and age.

International Journal of Research in Economics and Social Sciences(IJRESS)
Available online at: http://euroasiapub.org
Vol. 9 Issue 5, May- 2019
ISSN(o): 2249-7382 | Impact Factor: 6.939 |

Materials and methods

The study used descriptive analysis to explore the prevalence of NCDs.In this paper, we used data collected by the NationalSample Survey Organization during its 60th (January-June 2004) and 71st round (January-June 2014)survey focused on morbidity and the consumption of healthcare.The particular details collected from households included information on whether members of the household had been ailing in the last 15 days, admitted in hospital in the last one year, their detailed expenditures and financing of these healthcare expenditures.In the 71st round, 2478 households were surveyed of which 1199 were from rural areas and 1279 in urban areas. In the 60th round, 2829 households were surveyed of which 1839 were rural households and 990 were urban ones.

The secondary source of information collected from various sources like WHO, NSSO, NCAER, ICMR, GOI, GOK, KER, other government publications and through various journals.

Results

In Kerala, the morbidity prevalence rate reached from 110 to 308 per thousand population and NCDs increased by nearly six timeswithin two decades (K. Paul et al, 2019).

In 2014, the morbidity ratemeasured in terms of Proportion of Ailing Person in Kerala is 308 per 1000 population. The level of morbidity is 310 for rural Kerala as against 89 in rural India and it is 306 for urban areas as against 118 in all India.

International Journal of Research in Economics and Social Sciences(IJRESS)
Available online at: http://euroasiapub.org
Vol. 9 Issue 5, May- 2019
ISSN(o): 2249-7382 | Impact Factor: 6.939 |

Table 1: Prevalence of morbidity rate in Kerala, 2014

Ailment Category	Proportion of Ailing Person (per thousand populations)
Chronic ailment	208
Short duration ailment	117
All	308

Source: NSSO Data, 71st round, 2014.

Out of the total, 208 per thousand population suffering from chronic conditions and 117 perthousand population reported short duration ailments.

Among different categories of ailments, infectious diseases nearly increased by six times, CVDs closely by nine times, NCDs by almost six times, and disability increased by five times from 1995 to 2014.

Table 2: Prevalence of various types of self-reported morbidity in Kerala

(per thousand populations)

Ailment Category	1995	2004	2014
Infectious	8	21	44
CVDs	9	32	84
NCDs	18	86	109
Disability	13	38	69
Others	63	89	79

Source: NSSO Data, 52nd, 60th and 71st round.

The massive rise in morbidity prevalence was noted in NCDs, from 18 to 109 per thousand population from 1995 to 2014 in Kerala. The prevalence of NCDs is increased from

International Journal of Research in Economics and Social Sciences(IJRESS)
Available online at: http://euroasiapub.org
Vol. 9 Issue 5, May- 2019
ISSN(o): 2249-7382 | Impact Factor: 6.939 |

18 to 86 from 1995 to 2004 and to 109 per thousand population in 2014. It clearly shows that NCDs is most prominent in Kerala than any other type of disease.

The district wise analysis of self-reported morbidity in Kerala shows that NCDs is highly prevalent in Thrissur followed by Alappuzha and Ernakulam. In Trissur, prevalence of NCDs was 182 per thousand populations in 2014.The minimum prevalence of NCDs in Pathanamthitta and Idukki districts. The highest increase wasin Alappuzha from 50 per thousand population to 158 per thousand population in 2004 and 2014 respectively. Thiruvananthapuramrecorded a decreasing trend, from 181 to 131 per thousand population, in Pathanamthitta from 60to 42 per thousand population and in Idukki from62 to 43 per thousand population in 2004 and 2014 respectively.

Table 3: District wise self-reported NCD morbidity in Kerala

Districts	NCDs (per thousand populations)	
	2004	2014
Thiruvananthapuram	181	131
Kollam	44	125
Pathanamthitta	60	42
Alappuzha	50	158
Kottayam	113	149
Idukki	62	43
Ernakulam	125	154
Trissur	142	182
Palakkad	35	95
Malappuram	47	65
Kozhikode	67	68
Wayanad	87	87
Kannur	52	73
Kasaragod	31	59

Source: NSSO Data, 60th and 71st round.

International Journal of Research in Economics and Social Sciences(IJRESS)
Available online at: http://euroasiapub.org
Vol. 9 Issue 5, May- 2019
ISSN(o): 2249-7382 | Impact Factor: 6.939 |

The demographic attributes indicate that there exists gender as well as urban-rural disparity in morbidity.NCDs were higher in the female population compared to the male.During 2014, females are more morbid as against their male counterparts. Region wise analysis shows that NCDs were somewhat higher among the urban than ruralpopulationin 2014.TheNCDsrises with increasing age. A higher prevalence of NCDs, due to the existence of higher percentage of old age population in Kerala.

Table 4: Prevalence of NCDs across gender, region and age, 2014

Category	Prevalence of NCDs (per thousand populations)
Sex	
Male	93
Female	125
Place of residence	
Rural	106
Urban	113
Age	
< 15	22
15-59	191
60+	280

Source: NSSO Data, 71st round, 2014.

Overall, the NCDmorbiditywassignificantlyhigh amongfemales. NCDs was more likely among urban areas and among elder population in Kerala.

International Journal of Research in Economics and Social Sciences(IJRESS)
Available online at: http://euroasiapub.org
Vol. 9 Issue 5, May- 2019
ISSN(o): 2249-7382 | Impact Factor: 6.939 |

Discussion

The evidence from a number of surveys, even with its speciously good health accomplishments, Kerala has the highest morbidity somewhere else in India.Kerala has gone under epidemiological polarization, wherein mortality is low and morbidity is very high (Paul and Singh 2017; Paul et al 2019). The morbidity rate is rising over the last some decades. In Kerala,due to the demographic, health andepidemiological transitions, chronic illnesses are increasing. The results indicate that the pattern of chronic condition of morbidity especially NCDs is increasing in Kerala.Among different category of ailments, NCDs increased by six times during the last decade, from 2004 to 2014. It shows NCDs is most prominent in Kerala.

The results show there exist wide disparities across because demographic attributes of morbidity. More number of females are reporting higher NCD morbidity than their male counterpart. The self-reported morbidity in Kerala shows that NCDs is highly prevalent in districts of Thrissur followed by Alappuzha and Ernakulam.Similarly,NCDs were somewhat higher among the urban than rural population.Therise of NCDs in urban areas is disturbing, suggesting the concerns of health care planning in urban areas. TheNCDsincreases with increasing age. 'The chronic ailments were much higher in Kerala in age groups starting from prime working ages' (Dilip, 2007). Another alarming fact is that the working age group is to be having the high share of NCDs. The presence of higher percentage of old age population leads to higher prevalence of NCDs in Kerala. 'Thehighelderlypopulationhas created J-shaped association with level of morbidity and hospitalization' (Dilip, 2002).

However, allresearch debates concluded that high self-reported morbidity isnot because of perception factors, high morbidity in Kerala is anactual burden of illnessin Kerala. The lifestyle-related nature of chronic conditions may have added to the higher prevalence of chronic ailments, resulting in a higher burden of morbidity and hospitalization (Paul et al 2019).The high morbidity in the state results huge economic burden in terms of high out of

pocket health expenditure. Overall, the high prevalence chronic morbidity creates additional burden to the individual, household and society.

Based on the discussions of the paper, future focus area is to be NCDs among working age and old age group, females, socio-economic class. And, economic burden of illness in relation with health care expenditure will also focused.

Conclusion

In Kerala, high prevalence of morbidity is a serious matter of concern. The increasing rate of morbidity especially chronic NCDs can have severe economic impact on the society. The high economic burden as a result of prevalence of chronic NCDs is a major anxiety among the people as well as policy makers. The growing NCD burden with multimorbidity is yet another problem in the state. Therefore, health sector in Kerala need special attention from officials and policy makers. Health care strengthening measures are essential to improve the efficiency of the system.

References

- Dilip TR. Age-Specific Analysis of Reported Morbidity in Kerala, India. World Health & Population 9(4) December 2007 : 98-108.doi:10.12927/whp.2007.19527
- Dilip TR. Understanding levels of morbidity and hospitalization in Kerala, India. Bulletin World Health Organisation. 2002; 80:746–751.
- Government of Kerala. Economic Review 2016, State Planning Board, Thiruvananthapuram, Kerala, India, March 2017
- Kankeu H.T, Saksena P, Xu Ke, Evans D.B. The financial burden from non-communicable diseases in low- and middle-income countries: a literature review, Health Research Policy and Systems 2013; 11:31.
- Kumar BG. Low mortality and high morbidity in Kerala reconsidered. Population Development Review. 1993 Mar 1:103–121.
- Mahal A, Karan A, Engelgau. The Economic Implications of Non-Communicable Disease for India. HNP Discussion paper. Washington DC: The International Bank for Reconstruction and Development/The World Bank. 2010; 52913.

- Mini GK, Thankappan KR. Pattern, correlates and implications of non‐ communicable disease multimorbidity among older adults in selected Indian States: A cross‐ sectional study. BMJ Open 2017;7: e013529.
- Navaneetham, Kabir and Krishna Kumar.The levels, patterns and determinants of morbidity in Kerala, CDS, Working Paper 411, PP: 1-50.
- NSSO. India Social Consumption and Health New Delhi: Ministry of Statistics and Programme Implementation, Government of India; 2015 Report no. 574.
- NSSO. Morbidity Health Care and the Condition of Aged New Delhi: Ministry of Statistics and Programme Implementation, Government of India; 2006 Report no. 507.
- Pannikar PGK, Soman C R. Health status of Kerala: The paradox of economic backwardness and health development. Trivandrum: Centre for Development Studies; 1984.
- Paul K, Chaudhary M, Chowdhary R, Sengupta R., Changes in levels of morbidity and hospitalisation in Kerala: A district level analysis (1995–2014). Clinical Epidemiology and Global Health. https://doi.org/10.1016/j.cegh.2019.03.011
- Paul K, Singh J. Emerging trends and patterns of self-reported morbidity in India: evidence from three rounds of national sample survey. J Health Population and Nutrition. 2017 Dec;36(1):32.
- Thankappan K.R. Some health implications of globalization in Kerala, India. Bulletin of World Health Organization, 79 (9): 892-893.