

Original Research Article

Potential gain in life expectancy by eliminating the endocrine nutritional and metabolic diseases in Southern States of India

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ABSTRACT

Background: Over the past century, non-communicable diseases have emerged as the primary cause of death globally. Among them, Endocrine, Nutritional and Metabolic diseases have shown an increasing trend from 2017 to 2020, likely the ranking rising from the 8th to the 5th in the MCCD data. In southern India, people are living longer, but not always healthier. Diabetes and thyroid disorders are silently shortening lives, often without drawing the attention they deserve.

Methods: The estimated data for India was extracted from the Medically Certified Data (MCCD)2020. The gain in life expectancy is calculated by following the elimination method (Shuji Hashimoto et al, 2012). Abridged Life tables were constructed using Chaing's method in the United Nations' software package for mortality measurements (MORTPAK). For the construction of the life table, first, calculate the $_{nqx}$ values from the observed age-specific death rates $_{nmx}$. A life table that eliminated deaths caused by disease was constructed using data on the number of deaths and life tables without disease elimination. The study is a cohort study that was conducted from January 2024 to August 2024.

Results: The potential gain in life expectancy ranges from 0 to 7.84 years. By comparing other southern states, Tamil Nadu witnessed drastic changes in the life expectancy of males (7.84 years) and females (0 years) in the age group 25 to 35 age group.

Conclusions: The significant impact of Endocrine Nutritional and Metabolic diseases on mortality and life expectancy across southern Indian states, underlining the critical need for healthcare interventions.

Keywords: Endocrine nutritional and metabolic disease, Life expectancy, Medical certification of causes of death, non-communicable diseases, Potential gain

INTRODUCTION

Over the past century, non-communicable diseases have emerged as the primary cause of death globally, accounting for the majority of deaths from system ailments. Trend of the endocrine Nutritional and Metabolic diseases shows the increase in deaths from 2000 (3.3) to 2020 (5.8). The group of Endocrine, nutritional and metabolic diseases is the fifth major leading cause and has contributed to 5.8 per cent of the

total medically certified deaths. Under this cause group, 'Diabetes mellitus', which causes serious health complications such as renal failure, heart disease, stroke and blindness, etc., is the leading cause of death. Its alone accounts for 87.1 per cent of total deaths reported under this cause group. The share of diabetes mellitus in total medically certified deaths is 5.0 per cent. The distribution of major causes of death under this group of Endocrine, Nutritional and Metabolic Diseases is 5.8 per cent of the total medically certified deaths at the national level. Six States/UTs reporting more than 10.0 per cent share are

Assam (18.6 per cent), Kerala (15.5 per cent), Lakshadweep (14.4 per cent), A & N Islands (13.4 per cent), Maharashtra (11.2 per cent) and Goa (10.2 per cent) (2020, MCCD).¹

The age, sex and cause-specific mortality rates are important indicators for evidence-based monitoring of health trends in the population. Data on mortality by age, sex and cause are primary inputs for assessing population health status and a cornerstone of the evidence base for health policy in combination with other epidemiological and socio-economic information. Life expectancy is a statistical measure to depict the average life span a person is expected to live at a given age under given age-specific mortality rates. Eliminating an illness can result in a potential gain in life expectancy (PGL), which indicates that people will generally live longer than they would if the condition still existed. PGL represents the additional years of life expectancy that the population would experience if the number of fatalities from a specific cause were decreased or removed as a risk factor for death.² The study aims to estimate potential gain in life expectancy by gender in southern India after complete causes of death due to endocrine nutritional and metabolic diseases.

METHODS

The sample Registration system statistics report 2020, which was released by the office of the Registrar General and Census Commissioner of India, provided the age-specific mortality rate data for the southern states of India. The MCCD 2020 study results are used to gather cause of death data to eliminate Endocrine, Nutritional and Metabolic Diseases. The estimated data for India was extracted from the MCCD 2020. Under the Registration of Births and Deaths Act, 1969, the scheme of MCCD—an integral part of the Vital Statistics System, aims at providing a reliable database for generating cause-specific mortality statistics on a regular basis.¹⁷ The office of the registrar general, India (ORGI) obtains data on the cause of death from the chief registrar of births and deaths of different states and Union Territories. The study is a cohort study that was conducted from January 2024 to August 2024.

In the framework of this study, the data acquired from the sample registration system (SRS) is used. The age groups presented as 1, 1-4, 5-9, 10-14,75-79, 80-85, 85+ years. However, this age categorization does not align with the age group used in the MCCD 2020 database, which is likely a crucial reference for the study. To ensure consistency and comparability with the MCCD 2020 data, we modified the age groups as follows 0-1, 1-4, 5-14, 15-24,55-64, 65-69, 70+. Abridged Life tables were constructed using Chaing's method in the United Nations' software package for mortality measurements (MORTPAK). For the construction of the life table, first, calculate the nqx values from the observed age-specific death rates nm_x . A life table that eliminated deaths

caused by disease was constructed using data on the number of deaths and life tables without disease elimination.

Potential Gain in life expectancy is found by following the article "Gains in Disability-Free Life Expectancy from The Elimination of Diseases and Injuries" by Shuji Hashimoto et al.⁷ The probability of survival in the age group x with the disease eliminated (p_x^e) was expressed using the probability without disease elimination (p_x) obtained from the abridged life table and the number of deaths from the disease ($[D]_x$) from all diseases and injuries and the number of deaths from the disease (D_x^e), which was obtained from MCCD 2019. The relationship between removed. These variables were used to express the probability of survival in the age group with the disease.

$$\ln p_x^e = \left(\frac{1 - D_x^e}{D_x} \right) \times \ln p_x$$

Where $\ln$ is the natural logarithm function.

Using Chiang's life table method as mentioned above we can calculate the number of survivors (l_x^e), nL_x^e , T_x^e and the new life expectancy is called the gain in life expectancy (e_x^e).

RESULTS

The following figure shows the prevalence of endocrine nutritional and metabolic diseases in southern states of India based on the MCCD data from the period 2017-2020.

Figure 1 provides the prevalence rates of Endocrine Nutritional and Metabolic diseases in southern states of India over the years, 2017, 2018, 2019 and 2020. Andhra Pradesh exhibited a significant decline in its prevalence rate, dropping from 4.4 in 2017 to 1.0 in 2020. Conversely, Karnataka saw a consistent increase from 6.5 in 2017 to 7.5 in 2020, indicating a rising trend. Kerala, which had the highest prevalence rates among the states listed, showed a steady increase each year, escalating from 11.0 in 2017 to 15.5 in 2020. Tamil Nadu also experienced a gradual rise, with its prevalence rate increasing from 6.4 in 2018 to 6.3 in 2020. On the other hand, Telangana had the lowest prevalence rates, which decreased further from 1.7 in 2017 to 0.3 in 2020. This data highlights varying trends in the prevalence of endocrine and nutritional diseases across these states, with Kerala showing a notably high and increasing rate, while Andhra Pradesh and Telangana displayed significant decreases over the same period.

Figure 2 provides a detailed overview of the life expectancy for males in India before and after the elimination of Endocrine Nutritional and Metabolic diseases. At birth (age 0), the life expectancy increases from 69.99 years to 76.47 years when endocrine diseases

are eradicated. This positive effect continues across all age groups up to age 65. However, by age 70, life expectancy remains unchanged at 10.93 years, indicating that other health factors become more significant at this stage of life.

Figure 3 provides a comprehensive overview of the impact of eliminating Endocrine Nutritional and Metabolic diseases on the life expectancy of females in

India. The data reveal a significant increase in life expectancy across various age groups when these diseases are eradicated. At birth, life expectancy increases from 73.42 years to 78.94 years, highlighting a substantial improvement. This positive trend continues across all younger and middle-aged groups, demonstrating the profound effect of eliminating endocrine diseases on mortality rates. However, by age 70, life expectancy remains unchanged at 12.33.

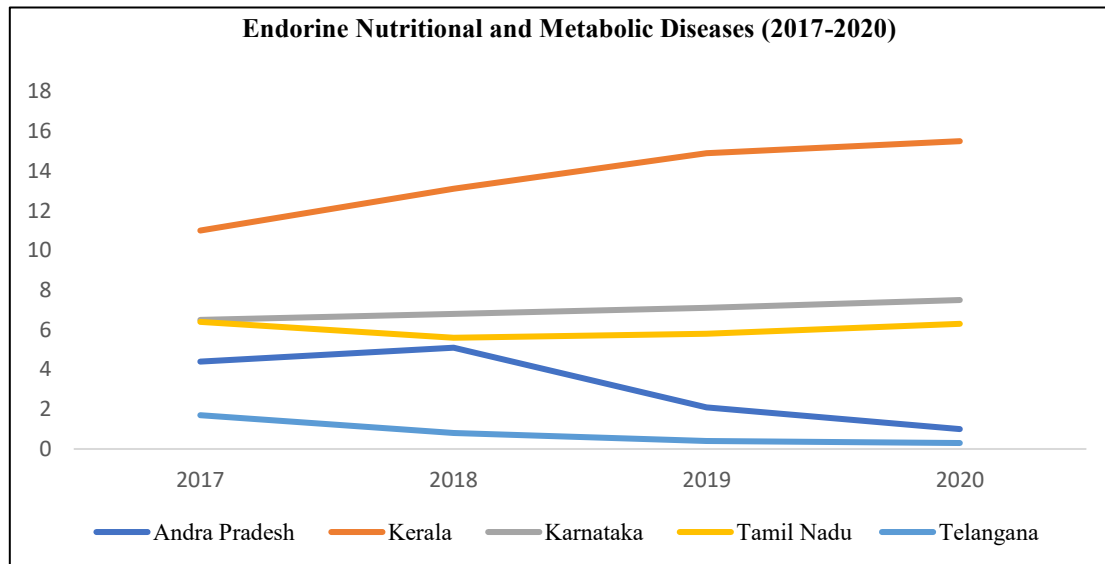


Figure 1: Prevalence of endocrine nutritional and metabolic diseases in southern states of India.

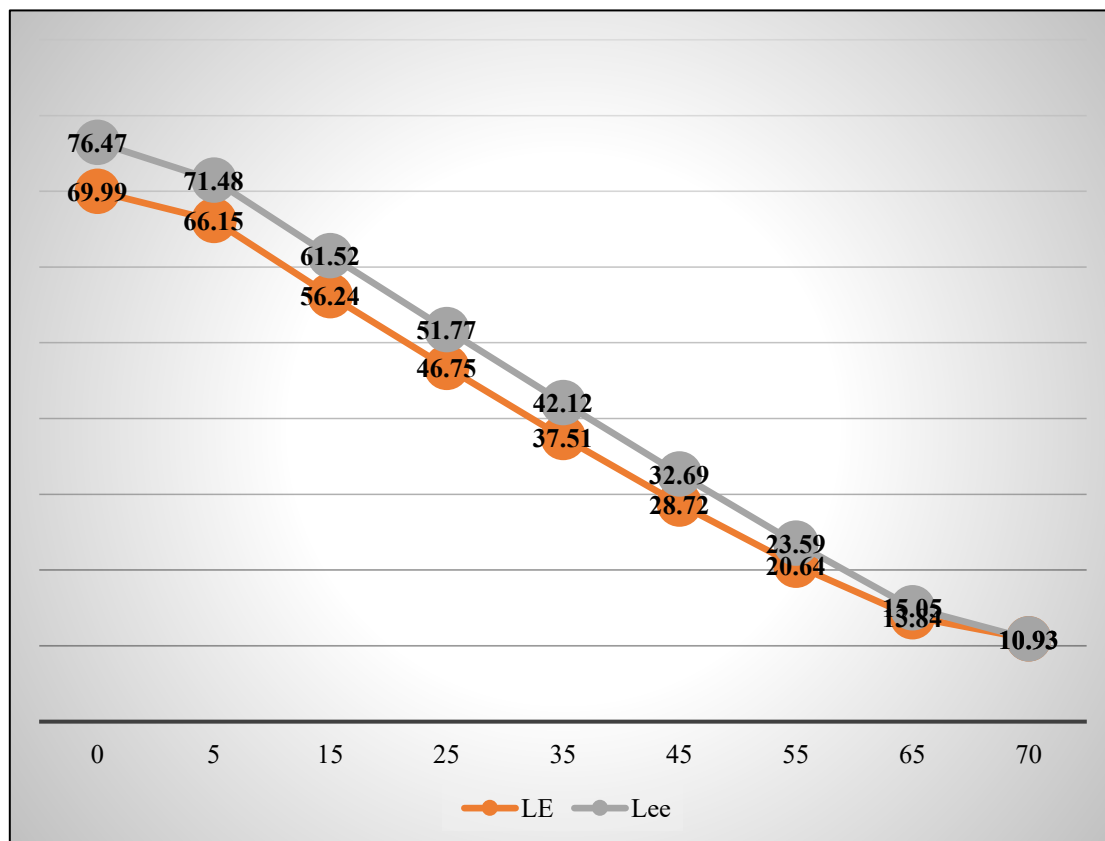


Figure 2: Gain in life expectancy by eliminating endocrine nutritional and metabolic diseases of males in India.

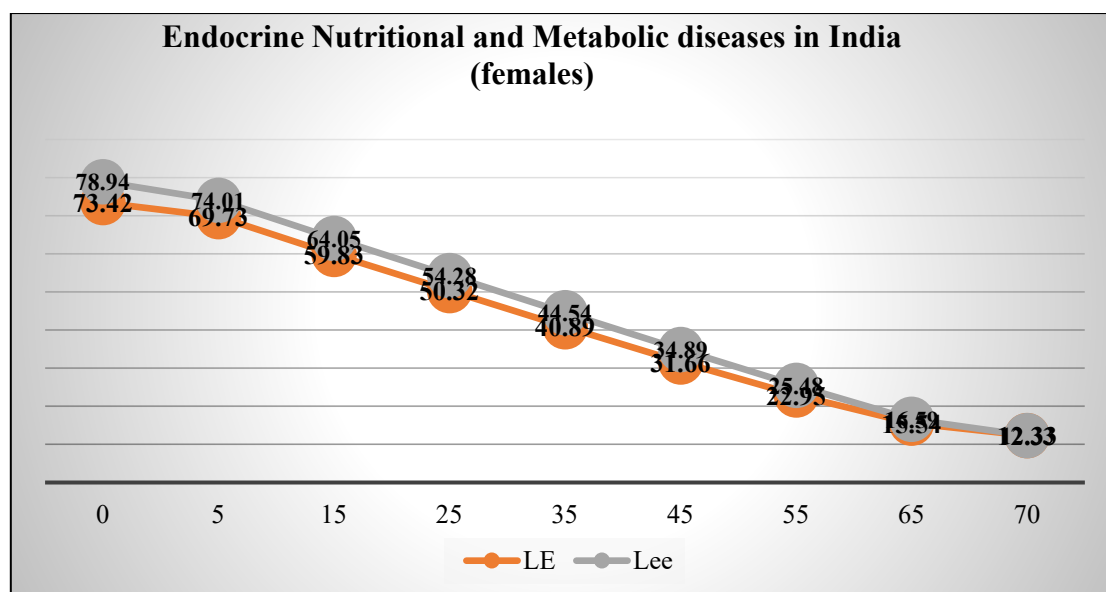


Figure 3: Gain in life expectancy by eliminating endocrine nutritional and metabolic diseases of females in India.

Table 1: Number of deaths due to endocrine nutritional and metabolic disease in southern states of India, MCCD (2020).

Age (years)	Andhra Pradesh		Karnataka		Kerala		Tamil Nadu		Telangana	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
0	0	0	0	0	3	8	21	13	0	0
5	0	0	21	29	4	2	17	20	1	1
15	8	15	51	48	8	8	66	69	1	0
25	40	16	165	75	19	15	202	119	7	0
35	62	26	435	221	103	58	642	296	11	0
45	138	56	1092	618	375	220	1671	1060	18	16
55	199	76	1778	1104	683	455	2757	1994	41	27
65	71	36	1037	696	436	322	1500	1125	8	10
70+	159	67	2327	1774	833	778	3692	2812	38	22

Table 1 illustrates the number of deaths caused by endocrine, nutritional and metabolic diseases across five southern Indian states, based on the MCCD 2020 report. The number of deaths due to Endocrine Nutritional and Metabolic diseases is comparatively highest in Tamil Nadu and lowest in Telangana. Tamil Nadu exhibits the highest mortality across all age groups, reflecting a significant disease burden, particularly in the elderly (70+ years). Kerala shows balanced mortality trends between genders, while Karnataka reports a noticeable increase in deaths among males and females in older age groups. Telangana has comparatively lower numbers, with marginal gender differences in most age groups, while Andhra Pradesh records the fewest deaths, indicating a relatively lower burden. Across all states, mortality increases significantly after 45 years of age. Table 2 represents the life expectancy at birth (in years) before the elimination of deaths due to Endocrine Nutritional and Metabolic diseases across five southern states of India. Across all states, females tend to have a higher life expectancy than males. Kerala demonstrates the highest

life expectancy for both males and females across most age groups, reflecting better healthcare and living standards. Tamil Nadu follows closely, showing relatively high life expectancy but with slightly lower values than Kerala. Karnataka, Telangana and Andhra Pradesh report lower life expectancy, with Telangana showing consistent values across genders. Table 3 presents the life expectancy (in years) after the elimination of deaths caused by endocrine, Nutritional and Metabolic diseases. Females consistently have higher life expectancy than males in all states except Tamil Nadu. Kerala exhibits the highest life expectancy across all age groups and for both genders. Tamil Nadu closely follows Kerala, with slightly lower values but still significant gains in life expectancy. Karnataka, Telangana and Andhra Pradesh show comparatively lower life expectancy, with Andhra Pradesh recording the lowest values among the five states. Table 4 highlights the potential gain in life expectancy (in years) by eliminating deaths caused by Endocrine Nutritional and Metabolic diseases in the southern states of India, based on MCCD

2020 data. The table shows the gain in life expectancy by gender. The potential gain in life expectancy at birth (e0x) ranged from 0 years to 9.1 years in males and from 0 years to 6.2 years in females. The highest gains are observed in the 0–4 age group, particularly among males in Tamil Nadu (9.1 years), indicating the significant

impact of these diseases on early-life mortality. As age increases, the potential gain in life expectancy gradually decreases, with minimal impact seen in older age groups (65+ years). Across all states, males tend to exhibit higher potential gains than females, except in older age.

Table 2: Life expectancy at birth (e0x) in southern states of India using MCCD (2020).

Age (years)	Andhra Pradesh		Karnataka		Kerala		Tamil Nadu		Telangana	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
0	71.2	74.2	69.1	74.0	72.0	79.3	70.0	77.6	70.0	71.7
5	67.0	69.7	69.5	69.7	66.9	73.5	65.8	72.8	65.8	67.3
15	57.1	59.8	54.6	59.7	57.1	63.6	55.8	62.9	55.8	57.5
25	47.1	49.9	45.3	50.1	47.6	53.9	46.3	53.3	46.3	48.0
35	38.2	40.4	36.2	40.6	38.1	44.3	37.3	43.6	37.3	38.4
45	29.5	31.1	27.6	31.2	29.2	34.8	28.9	34.0	28.9	29.3
55	21.5	22.7	19.7	22.4	21.0	25.2	21.2	25.2	21.2	21.5
65	15.1	15.8	12.9	14.6	14.0	17.0	14.5	17.0	14.5	14.4
70+	12.0	12.6	9.6	11.4	11.2	13.4	11.2	13.4	11.2	11.0

Table 3: Cause-eliminated life expectancy after eliminating endocrine nutritional and metabolic diseases in southern states of India using MCCD (2020).

Age (years)	Andhra Pradesh		Karnataka		Kerala		Tamil Nadu		Telangana	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
0	77.4	79.2	75.4	78.8	77.9	82.6	79.1	78.5	76.4	77.9
5	72.2	73.9	70.0	73.6	72.3	76.7	73.6	73.0	71.2	72.6
15	62.3	63.9	60.1	63.6	62.4	66.7	63.6	63.1	61.3	62.7
25	52.4	54.0	50.4	53.8	52.6	56.9	53.8	53.3	51.5	52.9
35	42.8	44.2	40.9	44.0	42.9	47.0	44.1	43.6	42.0	43.1
45	33.5	34.6	31.5	34.3	33.4	37.2	34.7	34.0	32.7	33.4
55	24.4	25.3	22.5	24.8	24.1	27.6	25.7	25.2	23.9	24.2
65	16.2	16.8	13.9	15.7	15.4	18.1	17.1	18.0	15.4	15.3
70+	12.0	12.6	9.6	11.5	11.2	13.6	12.9	13.4	11.2	11.0

Table 4: Potential gain in life expectancy by eliminating endocrine nutritional and metabolic diseases in southern states of India, MCCD (2020).

Age (years)	Andhra Pradesh		Karnataka		Kerala		Tamil Nadu		Telangana	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
0	6.2	5.0	6.3	4.8	5.9	3.3	9.1	0.9	6.4	6.2
5	5.3	4.2	0.6	3.9	5.4	3.2	7.8	0.2	5.5	5.3
15	5.2	4.2	5.5	3.9	5.3	3.1	7.8	0.2	5.4	5.2
25	5.3	4.1	5.1	3.7	5.1	2.9	7.5	0.0	5.2	4.9
35	4.6	3.9	4.6	3.4	4.8	2.7	6.8	0.0	4.7	4.7
45	4.0	3.5	3.9	3.1	4.2	2.4	5.8	0.0	3.9	4.1
55	2.9	2.6	2.8	2.4	3.2	2.4	4.5	0.0	2.7	2.6
65	1.0	1.0	1.0	1.1	1.4	1.1	2.6	1.0	1.0	0.9
70+	0.0	0.0	0.0	0.1	0.0	0.2	1.6	0.0	0.0	0.0

DISCUSSION

The elimination of endocrine, nutritional and metabolic diseases in the southern states of India has the potential to significantly increase life expectancy. eliminating these diseases could lead to significant increases in life

expectancy at birth, with variations observed across different states and between genders.⁸ The data from the SRS indicates that the southern states have made considerable progress in reducing the prevalence of these diseases. In the detailed analysis of deaths caused by endocrine Nutritional and Metabolic diseases, along with

life expectancy trends before and after eliminating these causes, reveals critical patterns across the five southern Indian states under study. Individuals with diabetes in urban Chennai had a 3-fold higher mortality rate compared to non-diabetic individuals. The leading causes of death among diabetic subjects were renal disease (34%), ischemic heart disease (30%) and cerebrovascular disease (11%).

The study highlighted the critical impact of diabetes on premature mortality in Southern India.⁹ The prevalence rates of Endocrine Nutritional Metabolic diseases in southern states of India over the years, 2017, 2018, 2019 and 2020. Kerala exhibits the highest mortality burden but also demonstrates the highest life expectancy across genders and age groups, reflecting its robust healthcare system, which had the highest prevalence rates among the states listed. showed a steady increase each year, escalating from 11.0 in 2017 to 15.5 in 2020. Tamil Nadu shows the highest death due to Endocrine Nutritional and Metabolic disease among all the age groups, especially in the elderly, with its prevalence rate increasing from 6.4 in 2018 to 6.3 in 2020.

On the other hand, Telangana had the lowest prevalence rates, which decreased further in contrast, Andhra Pradesh and Telangana record the lowest mortality and life expectancy values, suggesting differing healthcare challenges. Karnataka falls in between, with a noticeable increase in mortality in older age groups. Based on MCCD data from 2017, the study estimated that complete elimination of endocrine, nutritional and metabolic diseases could lead to a gain in life expectancy at birth ranging from 0.3 to 1.2 years across Indian states. In southern states like Kerala and Tamil Nadu, the gain was closer to 1 year, with males showing slightly greater gains than females.

The authors concluded that targeted public health interventions to reduce these diseases could significantly improve population longevity.¹⁰ Across all states, females tend to have higher life expectancy than males, emphasizing gender disparities in health outcomes. In India, a detailed overview of the life expectancy before and after the elimination of endocrine diseases demonstrates a significant impact on longevity. In a cohort of 51,217 Indian adult males followed over 12.5 years, the study found incidence rates of 0.41 per 1,000 person-years for diabetes, 0.23 for obesity and 0.12 for dyslipidaemia.¹¹ At birth (age 0), the life expectancy increases from 69.99 years to 76.47 years when endocrine diseases are eradicated. This positive effect continues across all age groups up to age 65. For example, at age 5, life expectancy improves from 66.15 years to 71.48 years and at age 15, it rises from 56.24 years to 61.52 years. Similarly, at age 25, life expectancy increases from 46.75 years to 51.77 years and at age 35, it goes up from 37.51 years to 42.12 years. The trend remains consistent, with life expectancy at age 45 improving from 28.72 years to 32.69 years and at age 55, increasing from 20.64 years to

23.59 years. However, by age 70, life expectancy remains unchanged at 10.93 years, indicating that other health factors become more significant at this stage of life. The lifetime risk of developing diabetes at age 20 was 55.5% for men and 64.6% for women in metropolitan areas. Obese individuals faced an even higher risk, with 86.9% for men and 86.0% for women.

These findings highlight the urgent need for preventive measures to address the growing diabetes epidemic in urban India.¹³ This data underscores the crucial role that endocrine diseases play in affecting mortality rates and highlights the substantial benefits of eliminating these diseases, particularly in enhancing life expectancy during the early and middle stages of life. There exists an impact of eliminating endocrine diseases on the life expectancy of females in India. The data reveals a significant increase in life expectancy across various age groups when these diseases are eradicated.

At birth, life expectancy increases from 73.42 years to 78.94 years, highlighting a substantial improvement. This positive trend continues across all younger and middle-aged groups, demonstrating the profound effect of eliminating endocrine diseases on mortality rates. For instance, at age 5, life expectancy rises from 69.73 years to 74.01 years and at age 15, it increases from 59.83 years to 64.05 years. The impact remains consistent at age 25, with life expectancy improving from 50.32 years to 54.28 years and at age 35, it rises from 40.89 years to 44.54 years. Even at age 45, life expectancy extends from 31.66 years to 34.89 years and at age 55, it goes up from 22.95 years to 25.48 years.

However, by age 70, life expectancy remains unchanged at 12.33 years before and after the elimination of endocrine diseases, suggesting that other health factors become more critical at this stage of life. The burden of diseases, mortality and morbidity in India has been assessed to understand the age and sex pattern of disability, highlighting the need for effective intervention to improve healthy ageing policies.¹⁴ This data underscores the crucial role that endocrine diseases play in reducing life expectancy among females in India.

Significant gains are also observed with the elimination of other causes, such as diseases of the respiratory system, certain infectious and parasitic diseases and injuries. The extent of these gains varies by state and gender.¹⁵ Eliminating deaths from these diseases has a significant impact on life expectancy, particularly in early age groups, with males showing greater potential gains than females in most states. If individuals can enjoy these additional years in good health and if they are supported by a suitable environment, then their ability to engage in activities they prefer may not be different from that of younger individuals.¹⁶ This underscores the importance of addressing these conditions to reduce premature mortality and enhance overall population health. While Kerala and Tamil Nadu show the highest rate of Endocrine

Nutritional and Metabolic diseases than other states, the highest gains are observed in the 0–4 age group, particularly among males in Tamil Nadu (9.1 years), indicating the significant impact of these diseases on early-life mortality. As age increases, the potential gain in life expectancy gradually decreases, with minimal impact seen in older age groups (65+ years). Most substantial improvements in life expectancy, Andhra Pradesh and Telangana have the opportunity to make greater strides by strengthening healthcare interventions. Overall findings reveal that even modest reductions in endocrine nutrition metabolic disorder related deaths could lead to significant improvements in population longevity especially among working-age adults and women.

This research underscores the urgent need for region-specific strategies that go beyond clinical treatment, embracing preventive care, nutritional awareness and early diagnosis. In a country where every extra year of life can mean more time with family, more contributions to society and more dreams fulfilled, addressing ENMDs isn't just a medical imperative it's a human one.

Limitations

While the potential gain in life expectancy is a useful indicator for measuring the burden of diseases, this study has several limitations. It focuses solely on eliminating specific causes of death, ignoring other factors. The reliance on MCCD data, which often has incomplete or inconsistent coverage, may compromise the accuracy of the findings. These limitations underscore the need for a more comprehensive approach, incorporating broader determinants of health, improving data quality and addressing regional disparities for more robust and actionable findings.

CONCLUSION

This study highlights the significant impact of Endocrine Nutritional and Metabolic diseases on mortality and life expectancy across southern Indian states, underlining the critical need for targeted healthcare interventions. While the elimination of these diseases demonstrates substantial potential gains in life expectancy, it also reveals gaps in healthcare systems, public health policies and program implementation. Enhanced data collection and reporting through comprehensive MCCD coverage will also improve the accuracy and reliability of health indicators, supporting evidence-based policymaking. By adopting these measures, the healthcare system can effectively reduce the burden of these diseases and achieve sustained improvements in population health and life expectancy.

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Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

- Hart JD, Sorchik R, Bo KS, Chowdhury HR, Gamage S. Improving medical certification of cause of death: effective strategies and approaches based on experiences from the Data for Health Initiative. *BMC Med*. 2020;18(1):74.
- Gulati BK, Sahu D, Kumar A, Rao MV. Potential gain in life expectancy by gender after elimination of a specific cause of death in urban India. *Int J Comm Med Publ Health*. 2020;7(5):1848-53.
- Thomas L, Arun S, Varughese DT, Soreng CK. Exploring the shift in newborn care practices among mothers and grandmothers in rural Odisha, India—a qualitative study. *BMC Pediat*. 2024;24(1):432.
- Anderson RN. Method for constructing complete annual US life tables. National Center for Health Statistics. 1999.
- Ramkumar R. Technical Demography”, New Delhi. 1986.
- Namboodiri NK, Suchindran CM. Life table techniques and their applications Academic Press INC (London) Ltd. 1987.
- Hashimoto, S., Kawado, M., Yamada, H., et al. (2012). Gains in disability-free life expectancy from elimination of diseases and injuries in Japan. *Journal of Epidemiol*. 2012;22(3):199–204.
- Gulati BK, Sahu D, Sharma S, Vardhana Rao M V. Examining the Effect of Partial and Complete Elimination of a Specific Disease on the Gain in Life Expectancy at Birth in India and Selected States. *J Comm Health Res*. 2023;12(2):263-74.
- Anjana RM, Deepa M, Pradeepa R. Causes and Predictors of Mortality in Asian Indians with and without Diabetes – 10-Year Follow-Up of the Chennai Urban Rural Epidemiology Study (CURES-150). *PLOS ONE*. 2018;13(8):200832.
- Gulati BK, Sahu D, Sharma S. Examining the effect of partial and complete elimination of a specific disease on the gain in life expectancy at birth in india and selected States. *J Comm Health Res*. 2023;4:587.
- Kumar KH, Patnaik SK. Incidence of endocrine disorders in Indian adult male population. *Indian J Endocrinol Metabol*. 2017;21(6):809-11.
- Gulati BK, Pandey A, Ubaidullah M. Potential gain in life expectancy after partial and complete elimination of specified causes of death: An analysis of Medical Certification of Causes of Death data in India and its selected states. *Int J Multidiscipl Res Dev*. 2015;2(4):508-12.
- Luhar S, Kondal D, Jones R, Anjana RM, Patel SA. Lifetime risk of diabetes in metropolitan cities in India. *Diabetologia*. 2021;64(3):521-9.
- Yadav AK, Singh A. Age-and sex-specific burden of morbidity and disability in India: a current scenario. In *Evaluation of Health Services*. 2020.
- Gulati BK, Pandey A, Ubaidullah M. Potential gain in life expectancy after partial and complete elimination of specified causes of death: An analysis

of medical certification of causes of death data in India and its selected states. *Int J Multidiscipl Res Dev.* 2015;2(4):508-12.

16. Abna A, Sandeep G, Chandran SA. Effect of Elimination of Cardiovascular diseases on Life Expectancy and Disability-Free Life Expectancy in India. *Demography India.* 2024;(53)2.

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