

Self-Reported Morbidity and SDG-3: An Indian Perspective (1995-2018)

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KEYWORDS

Morbidity, Prevalence of Morbidity, Burden of Diseases, CVDs, NCDs, SDG 3

ABSTRACT

Background: Health is a multifaceted concept encompassing illness, disability, and overall well-being, including physical, social, and mental dimensions. India has achieved notable progress in increasing life expectancy and reducing infant mortality. However, the rising prevalence of morbidity, driven in part by an aging population, highlights ongoing health challenges.

Objective: The study, which is to explore how trends in self-reported morbidity align with the goals of SDG 3, and how these trends can inform policy and interventions for improving health outcomes in India.

Data & Methodology: Using unit-level data from the 52nd, 60th, 71st, and 75th rounds of the National Sample Survey (NSS), this study analyzes trends, patterns, and burdens of both infectious and non-communicable diseases (NCDs) across India. Logistic regression is employed to identify the factors influencing morbidity.

Results: The study reveals a significant increase in morbidity prevalence from 1995 to 2014, followed by a decline in 2018. Key findings include higher morbidity rates among females compared to males, and among rural versus urban residents. Morbidity prevalence rises with age and decreases with higher educational attainment. Surprisingly, individuals in the wealthiest quintile reported higher morbidity rates than those in poorer quintiles. Regional disparities are notable, with Kerala reporting the highest morbidity and BIMARU states the lowest. The study also finds that younger populations are more affected by infectious diseases, while older populations experience higher rates of NCDs.

Conclusion: These findings underscore significant disparities in morbidity across India, influenced by socioeconomic status, healthcare access, and health awareness. Addressing these disparities is crucial for advancing SDG 3 objectives. The results can inform targeted policies and interventions to enhance health outcomes and achieve equitable health improvements across the country.

1.1 Introduction

The health status of a population is known by its level of morbidity and health-seeking behaviour (Duraisamy, 1998). The health of the population is an essential indicator of the country's overall development. Understanding the health transition in India has become a central focus in the ongoing discussion about the relationship between mortality and morbidity rates (Murray 1998). While there has been a substantial decline in mortality rates across India over the past three decades, resulting in significant increases in life expectancy at both national

and state levels, the impact on morbidity remains unclear. Research from developed countries suggests that morbidity can lead to a loss of healthy life years due to disability (Ghosh & Arokiasamy, 2009). So, Morbidity, rather than mortality, may provide a more accurate depiction of a population's health status (Ghosh, 2006 and Ghosh & Arokiasamy, 2009). India has significant considerable progress in enhancing the population's health status to increase life expectancy at birth and reduce the infant mortality rate (Renuka, 2021). In India, under-five mortality rates have declined from 50 in 2015-16 to 42 in 2019-21 and the infant mortality rate has declined from 41 in 2015-16 to 35 in 2019-21 (NFHS-5, 2019-21). In 1995 India's life expectancy was 60 years which increased to 69 years in 2011 (ORGI, 2011). Most of the studies show that as life expectancy increases, the rate of morbidity increases because the elderly are more prone to morbidity. This is evident in Kerala, where the morbidity rate as well as the life expectancy is higher than at the national level (Yadav, 2020). In case of sickness, people need remedial care but many times people do not take any treatment either they don't consider the illness as severe or they can't afford treatment expenditure. Thus, the measure of morbidity is vastly subjective and based on opinion and reporting (Duraismy, 1998 and Yadav, 2020). Morbidity reporting mainly depends on the consciousness of people about their health. A population that is more aware of health is likely to report a higher prevalence of morbidity in comparison to a population that has less education and awareness about health (Yadav, 2020). However, the recent decline in mortality and increase in morbidity has led to a puzzle in determining the changes in the health status of the people. Most of the developing countries are experiencing the transition of disease pattern from communicable diseases (malaria, tuberculosis, measles, pertussis, HIV, etc.) to non-communicable diseases (diabetes, cancer, arthritis, hypertension, heart disease, etc.). The near the beginning of non-communicable diseases (NCDs), a consequence of epidemiological transition, is now equally affecting both working adults and the elderly, emerging as the primary cause of mortality and morbidity. The treatment of both types of diseases is expensive which result a enormous financial load on the government as well as on the households (Kastor, 2020). Non-communicable diseases (NCDs), including cardiovascular diseases, cancer, diabetes, chronic obstructive pulmonary disease, mental disorders, and injuries, account for nearly half of all deaths in India. The global health observatory report (2012) estimated that NCDs caused 38.5 million of the 68 million total deaths worldwide. India faces a dual burden of both communicable and non-communicable diseases. While CVDs and other NCDs are on the rise, communicable diseases remain a significant public health challenge (Paul & Singh, 2017). Moreover, the country is constantly at risk from emerging and re-emerging infectious diseases. The re-emergence of these diseases

gives rise to high morbidity, high mortality, and adverse socioeconomic impact (Yadav, 2020). The rise of infectious diseases, cardiovascular diseases (CVDs), and non-communicable diseases (NCDs) can be attributed to several factors. Changes in dietary patterns, a growing urban lifestyle, poverty, poor water quality, and environmental pollution all contribute significantly to this worsening health situation (Omran, 1971; Murray et al., 1992; Baridalyne et al., 2004).

It is found from the data of NSS previous rounds that the burden of communicable and non-communicable diseases and functional limitation or disability (26.8 million, Census 2011) is accelerating its pacerapidly in India. There is growing concern about whether illness burden caused by morbidity is following the same downward trend as mortality. To address this, it is essential to analyze the different components of morbidity within the population. Understanding the changing patterns of morbidity and their underlying factors, using the most recent data, is crucial for policymakers in developing effective health interventions and revising existing policies. So, main purpose of this study is to examine the level and trends of self-reported morbidity pattern in the states level for all four rounds, to analyze the inter-state differentials in the prevalence of morbidity, overall burden of communicable and non-communicable diseases, functional limitation and its major correlates.

2.1 Data Sources

This study utilized unit-level data from the 52nd (1995-96), 60th (2004), 71st (2014), and 75th (2018) rounds of the National Sample Survey (NSS), conducted by the Government of India, to achieve the research objectives. The latest 75th round of NSS data emphasised on ‘Household Social Consumption: Health’. The previous NSS 71st round focused on ‘Social Consumption in India and health’. The other two NSS round, 60th based on ‘Morbidity and health care’ in the year of 2004 and another 52nd round health care survey was carried out 1995-1996.

2.1.1 Sub round Information

Sub-Rounds	1995-96	2004	2014	2018
sub-round 1	July-September 1995	January-March 2004	January-March 2014	July-September 2017
sub-round 2	October-December 1995	April-June 2004	April-June 2014	October-December 2017
sub-round 3	January-March 1996	-	-	January-March 2018
sub-round 4	April-June 1996	-	-	April-June 2018

Sources: NSSO report, 52nd, 60th, 71st and 75th

2.1.2 Sampling design: As usual 52nd morbidity round, a stratified two-stage design was taken for 1995-96. The first-stage units are based on complete enumeration census villages in the

rural sector (panchayat wards in case of Kerala) and the NSSO urban frame survey (UFS) blocks for urban sampling. The second-stage units are households in both the sectors.

In contrary, a stratified multi-stage design has been adopted for both rounds 60th (2004), 71st (2014) and 75th round survey (2018). The first stage units (FSU) were the 1991 census villages in the rural sector and Urban Frame Survey (UFS) blocks for urban sector. The ultimate stage units (USU) were applicable for both sectors. However, large villages/blocks required hamlet-group (hg)/sub-block (sb), one intermediate stage was the selection for two hgs/sbs from each FSUs.

2.1.3 Sample Size

The National Sample Survey Organization conducts large-scale nation-wide household surveys on various socioeconomic subjects across India. The National Sample Survey Office (NSSO) was established in 1950 by the Ministry of Statistics and Program Implementation as a permanent organization dedicated to conducting nationwide sample surveys. These surveys gather data on various aspects of the Indian economy to inform socioeconomic planning and policymaking. Employing a multi-stage sampling design, the NSSO covers all Indian states and union territories. The consistent use of sampling procedures and geographical coverage across survey rounds ensures comparability of the data collected. In the 52nd round 120,942 households (Rural: 71,284 and Urban: 49,658), in 60th round 73,868 households (Rural: 47,302 and Urban: 26,566), in 71st round 65,932 households (Rural: 36,480 and Urban: 29,452), in 75th round 113,823 households (Rural: 64,552 and Urban: 49,271) were covered by the survey. In all these five rounds NSS conducted survey on morbidity and health care. Information on morbidity was collected with a reference period of 15 days whereas for hospitalized treatments.

2.2 Methodology

In 2014 and 2018, information was collected on 61 types of ailments, including chronic ailments and disability, for a period of 15 days prior to the survey. The number of ailments for which information was collected was 58, 42, 61 and 61 respectively in each of the four rounds of the survey. This study considered the level of overall morbidity for broad domains of ailments: communicable diseases, non-communicable diseases, disability, and other diseases. All the classified based on the standard way on the International Classification of Disease (ICD-10) (WHO, 2012). This was done to overcome the fluctuations during the transition. The

same categorization was followed for all the four rounds of NSS conducted in 1995-96, 2004, 2014 and 2018.

2.2.1 Prevalence of Morbidity

The change in prevalence rate of morbidity in India will be shown for all the five rounds of NSS data to understand the epidemiological change in last three decades (1987-2018). The prevalence rate is defined as

$$Mi = \frac{Ai}{Pi} * 1000$$

Where,

Ai= No. of Ailing Persons

Pi= Total number of persons alive in the sample households

The prevalence rate is the ratio between the number of ailing persons suffered at any time during the reference period and total number of persons in the households. We present the number of individuals reporting any illness within a 15-day period per 1,000 population. It is important to note that this figure does not strictly adhere to the prevalence rate definition as recommended by the World Health Organization's Expert Committee on Health Statistics (WHO, 2009).

The study completely based on two phases. First phase, bivariate or simple crosstab analysis were done between natures of background characteristics variables with dependent variable of prevalence of morbidities. And second phase is multivariate analysis.

2.2.2 Multivariate analysis:

Multivariate analysis in terms of logistic regression has been used in the analysis. The status of frequencies of no. of ailment was suffered at any time during the reference period studied using as dichotomous dependent variable. Predictor variables used in this analysis are sex, place of residence, age, education, social group, caste, religion, MPCE and regions in India.

The equation of logistic regression for multiple predictor variables is

$$\text{Logit (Y)} = \ln\left(\frac{p}{1-p}\right) = \alpha + \beta_1 x_1 + \beta_2 x_2 + \epsilon$$

Where p is the probability of the event and α is intercept, β_s are regression coefficients, x_i is set of predictors and ϵ is an error term. QGIS Mapping to show the prevalence of different types of self-reported morbidity. Lastly, the Mendeley software has been implied for scientific citation in this study.

Results

Table 1 depicts the trend of sex specific morbidity prevalence rate in India during 1995 to 2018. The morbidity prevalence rate had increased significantly from 55 to 98 during 1995 to 2014 before dropping to 75 in 2018. Similarly, an increase of morbidity prevalence had also been seen among both sexes till 2014 with a decline trend in 2018. The females exceeded males in reporting of morbidity prevalence during the aforesaid time period. The morbidity prevalence among female had found to be 57 in 1995 and 83 in 2018 whereas among males, it is 53 in 1995 and 67 in 2018. The sex differential of morbidity prevalence had greater in 2014 followed by 2018 and 2004.

Table 1: Trends of Morbidity Prevalence in India, 1995-2018.

NSS ROUNDS	Male	Female	Total
1996	53	57	55
2004	85	96	90
2014	87	110	98
2018	67	83	75

Sources: NSSO Data, 52th, 60th & 71th round and 75th round

Inter-state differentials in morbidity Prevalence

State level morbidity prevalence rates are presented in the following figures 1-4. The prevalence rate of morbidity increased in almost every state and UTs till 2014 but a sharp decrease in morbidity prevalence was observed in 2018. There is an increment of 35 points during 1995-2004 (55-90) and 8 points from 2014-2018 (98-75) in prevalence of morbidity. The states and UTs having relatively high morbidity prevalence in 2018 were Kerala (245), Andhra Pradesh (142), West Bengal (138), Punjab (112), and Lakshadweep (102). In the other end of the scale, the bottom five states or UTs with low morbidity prevalence rate were Meghalaya (4), Nagaland (8), Manipur (19), Pondicherry (22) and Assam (25). Though the prevalence rate of morbidity was reported less in 2018 in the states and UTs, 6 states and 2 UTs named Himachal Pradesh (79 to 100), Maharashtra (76 to 88), Chhattisgarh (41 to 49), Mizoram (28 to 34), Jharkhand (62 to 67), Uttar Pradesh (73 to 74), Delhi (40 to 59), and Jammu & Kashmir (59 to 71) respectively showed a slight increase in morbidity prevalence rate. The rest of the States and UTs showed negative growth in morbidity prevalence rate in 2014 to 2018. Among them the rate of morbidity prevalence in Pondicherry (207 to 22) had decreased to more than 10 times, in Daman & Diu (165 to 33) the decrease was more than 5 times followed by Goa (181 to 59), Lakshadweep (208 to 102) where the decrease was about 2 times during 2014-2018. Among all States & UTs only Manipur (19) remained same in morbidity prevalence rate during aforesaid time period.

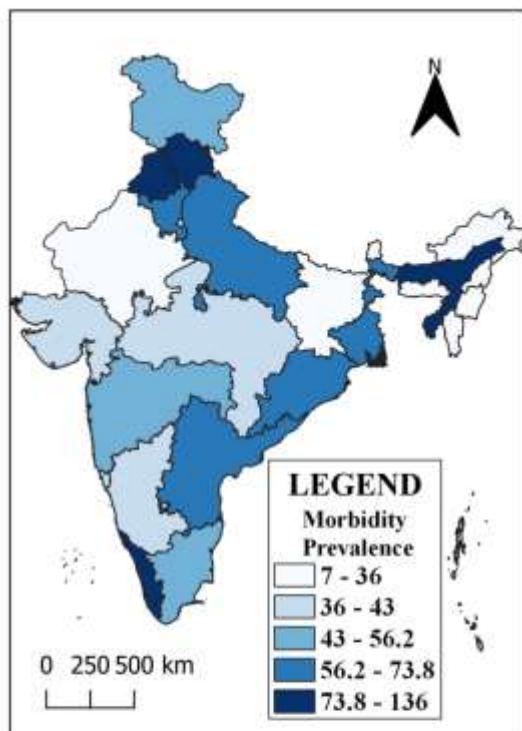


Figure 1: Total Morbidity Prevalence(per thousand) in India, 1995-96

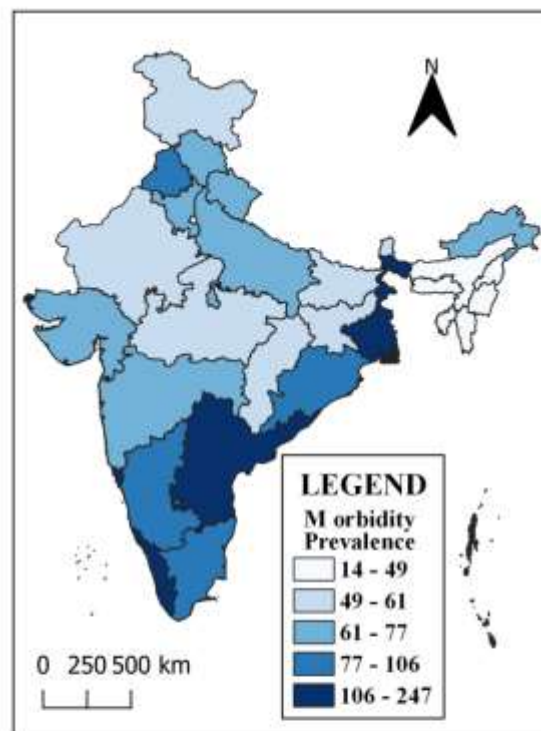


Figure 2: Total Morbidity Prevalence(per thousand) in India, 2004

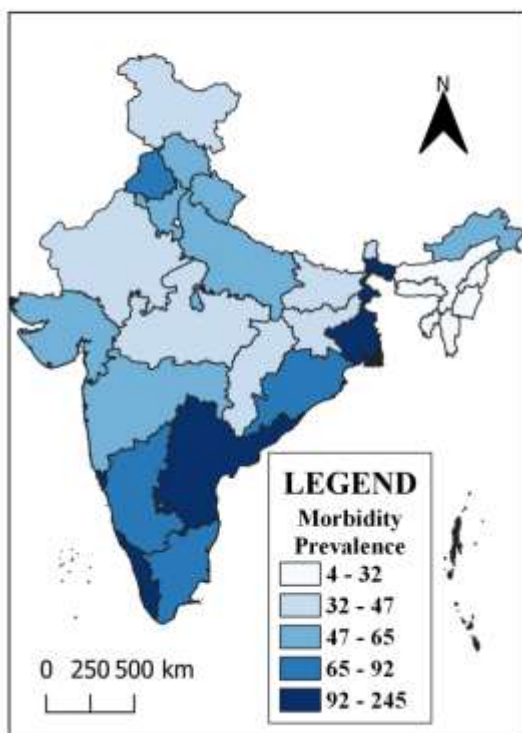


Figure 3: Total Morbidity Prevalence(per thousand) in India, 2014

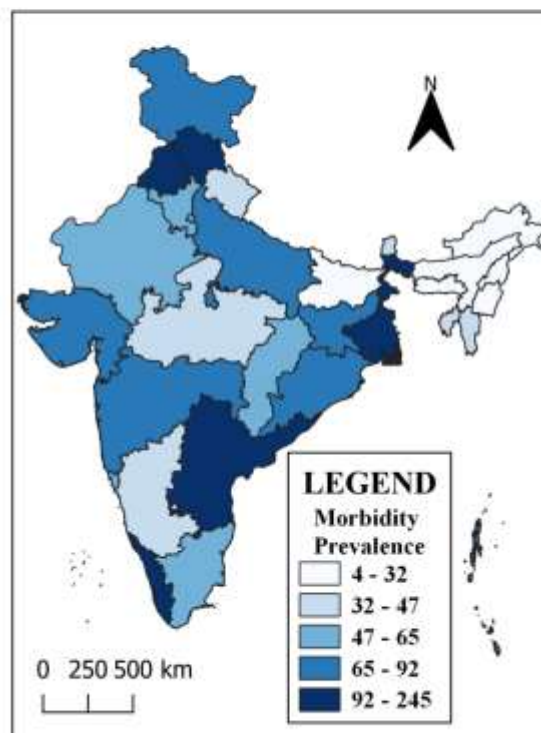
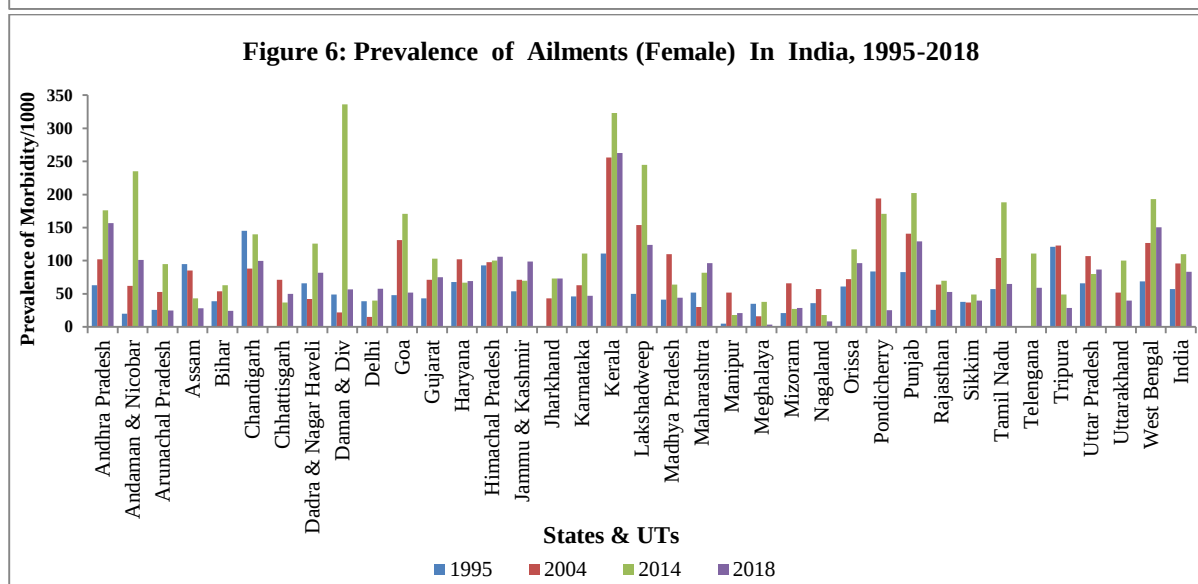
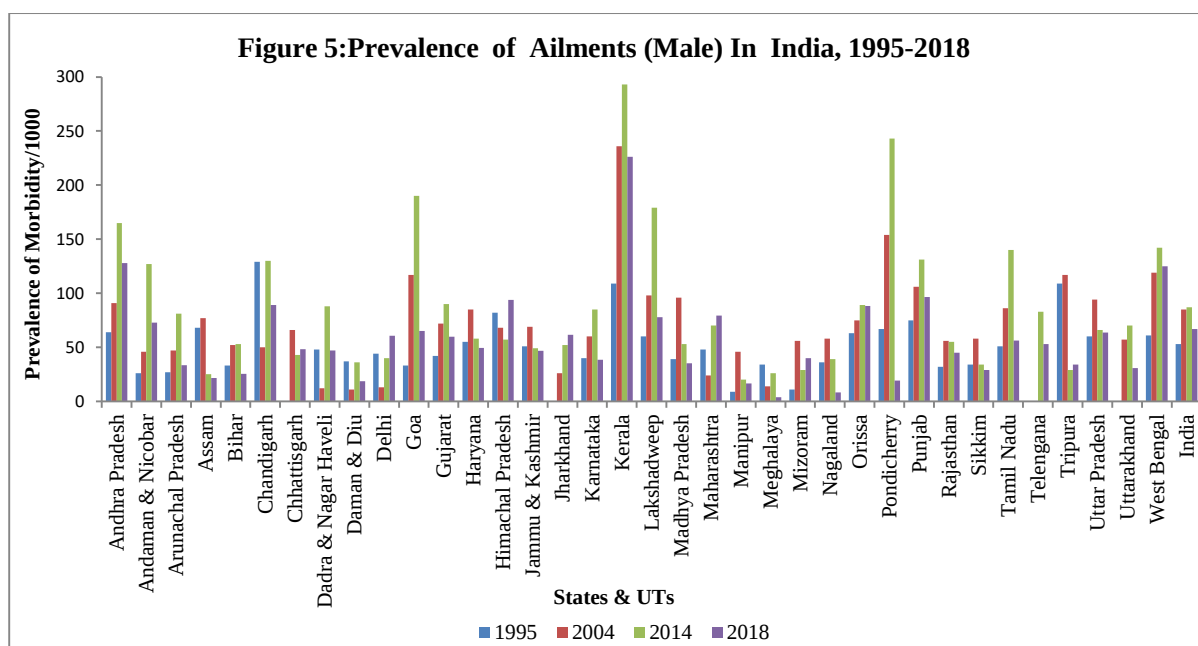


Figure 4: Total Morbidity Prevalence(per thousand) in India, 2018



The above figures (figure 5 and 6) depict the trends of morbidity prevalence rate by gender across India during 1995-2018. It is clear from the result that at national level the prevalence of morbidity was higher in females in comparison to males in all four rounds of NSS. The gap between male and female morbidity prevalence continued to be widen from 1995 to 2014 but from 2014 to 2018 (67-83) a squeeze of 7 points was found in the gap of male-female morbidity prevalence rate. The highest sex differential in morbidity in 1995 was shown by Assam followed by Dadra & Nagar Haveli and Pondicherry; in 2004 it was shown by Lakshadweep followed by Pondicherry and Chandigarh; in 2014 Daman & Diu followed by Andaman & Nicobar Island and Punjab showed maximum sex differential in morbidity whereas in 2018 the leading state or UT in sex differential in morbidity was Jammu & Kashmir followed by Lakshadweep and Daman & Diu. In all four rounds, mainly UTs exceeded States in terms of

sex differences in self-reported morbidity. In 1995, Chandigarh and in 2004 Kerala had high rate of morbidity prevalence for both the sexes in India whereas Manipur had the lowest male and female morbidity prevalence rate in 1995 and in 2004 Daman & Diu and Delhi had the lowest male and female morbidity prevalence respectively. In 2014, when only male morbidity prevalence rate was evaluated, the highest was in Kerala (293) whereas the female morbidity prevalence was highest in Daman & Diu (336). During this time also Manipur had the lowest rate of male and female morbidity prevalence in India. In 2018 Kerala had the highest rate of male and female morbidity prevalence while Meghalaya had the lowest rate. Among the states and UTs, though Goa and Pondicherry showed a significant increase (more than 3 times and 2 times respectively) in male morbidity prevalence in 2004, in 2018 these two state and UT, the morbidity decreased about more than 3 times (190 to 65) and 12 times (243 to 19) respectively. In terms of female morbidity prevalence, Pondicherry (171 to 25) and Daman & Diu (336 to 57) decreased to more than 6 times; Tamil Nadu (188 to 65) and Andaman & Nicobar Island (235 to 101) declined to more than 2 times. Among the states and UTs, 7 states or UTs in male morbidity prevalence and 9 states or UTs in female morbidity prevalence, showed a slight increase.

Table 2: Trends of Morbidity prevalence by Sector in India, per thousand, 1995-2018

STATES & UTs	1995			2004			2014			2018		
	R	U	T	R	U	T	R	U	T	R	U	T
Andhra Pradesh	64	61	64	89	114	96	155	204	170	133	163	142
Andaman & Nicobar Islands	27	15	23	51	59	53	188	157	178	92	77	86
Arunachal Pradesh	24	42	27	50	50	50	95	49	88	28	36	30
Assam	80	86	81	81	79	81	32	47	33	22	43	25
Bihar	36	41	36	52	63	53	58	62	58	25	30	25
Chandigarh	153	133	136	51	70	67	109	135	134	41	96	94
Chhattisgarh	NA	NA	NA	68	71	69	40	44	41	45	69	49
Dadra & Nagar Haveli	57	57	57	19	35	23	56	165	106	59	69	63
Daman & Diu	43	43	43	15	24	16	39	186	165	5	43	33
Delhi	23	43	42	4	16	14	15	41	40	20	61	59
Goa	45	34	40	138	95	124	160	194	181	66	54	59
Gujarat	46	36	43	69	78	72	92	103	97	57	84	67
Haryana	61	63	61	95	87	93	56	75	63	53	71	59
Himachal Pradesh	90	66	88	86	58	83	82	51	79	95	144	100
Jammu & Kashmir	52	54	53	68	78	70	64	41	59	65	92	71
Jharkhand	NA	NA	NA	31	49	34	52	96	62	64	81	67
Karnataka	44	40	43	64	57	62	94	104	98	39	48	43
Kerala	118	88	110	250	237	247	310	306	308	254	233	245
Lakshadweep	57	48	55	112	138	127	159	219	208	98	103	102
Madhya Pradesh	41	38	40	92	118	103	53	71	58	35	54	40
Maharashtra	52	48	50	27	27	27	81	70	76	73	107	88
Manipur	9	2	7	49	48	49	26	4	19	18	20	19
Meghalaya	35	34	35	16	14	15	33	26	32	4	1	4
Mizoram	18	12	16	60	64	61	26	31	28	34	35	34
Nagaland	31	46	36	61	52	57	31	19	28	5	16	8
Orissa	62	62	62	76	52	74	104	97	103	87	118	92
Pondicherry	91	67	76	149	186	173	175	227	207	24	22	22
Punjab	76	85	79	133	102	123	162	171	165	119	99	112

Rajasthan	28	33	29	57	72	60	54	83	62	47	57	49
Sikkim	38	22	36	53	13	48	34	67	41	26	63	34
Tamil Nadu	52	58	54	95	96	95	146	184	165	65	55	61
Telangana	NA	NA	NA	NA	NA	NA	98	95	97	54	58	56
Tripura	117	96	115	128	68	120	36	51	39	30	37	32
Uttar Pradesh	61	72	63	98	106	100	68	91	73	71	87	74
Uttarakhand	NA	NA	NA	52	65	55	77	111	84	23	71	35
West Bengal	66	65	65	113	155	123	161	180	167	127	164	138
India	55	54	55	87	98	90	89	118	98	68	91	75

Sources: NSSO Data, 52th, 60th & 71th round, 75th round

Table 2 displays the trends of morbidity prevalence by sector in India during 1995-2018. The difference of self-reported morbidity prevalence between rural and urban continued to upturn since 1995 to 2018. In 1995, 55 rural and 54 urban people per thousand reported morbidity which increased to 87 rural and 98 urban people in 2004; 89 rural and 118 urban people in 2014 before dropped to 68 rural and 91 urban people per thousand in 2018 in India. At the state level the difference of self-reported morbidity prevalence between rural- urban was vivid in 2014 among the four NSS rounds. Among the states and UTs, in 1995 Chandigarh (153) had the highest and Manipur (9) had the lowest share of rural morbidity prevalence; in 2004 Pondicherry (250) and Madhya Pradesh were the highest and lowest morbidity prevalence bearing UT and state respectively; in 2014 the states having greatest and lowest rural morbidity prevalence were Assam (310) and Chhattisgarh (15) whereas in 2018 Assam (254) was again the top most state and Uttar Pradesh (4) lay in bottom position. In case of urban morbidity prevalence, in 1995 Chandigarh and Manipur remained same as rural morbidity prevalence. In 2004, the states having highest and lowest rate of urban morbidity prevalence were Assam (237) and Chhattisgarh (13) and in 2014 it was Tamil Nadu (306) and Andaman & Nicobar Island (4) respectively whereas in 2018 again Tamil Nadu (233) exceeded all the states and UTs in terms of urban morbidity prevalence and Chhattisgarh (1) remained in the bottom. Besides a 40 times decrease was found in Uttar Pradesh (160 to 4) in rural morbidity prevalence while Chhattisgarh decreased to 185 times (186 to 1) in urban morbidity prevalence in 2018. In opposite a significant increase of 7 times was found in Sikkim (19 to 144) in case of urban morbidity prevalence. Almost all the states and UTs showed some increase or decrease in rural urban morbidity prevalence only Jharkhand and Lakshadweep had no increase or decrease in rural morbidity prevalence.

Table 3: Prevalence of ailments by background characteristics in India, 1995-2018 (Per thousand populations)

Background Characteristics	1995	2004	2014	2018
Sex				
Male	53	85	87	67
Female	57	96	110	83
Place of Residence				
Rural	55	87	89	68
Urban	54	98	118	91
Education				
Illiterate	63	107	122	103
Primary	49	78	90	71
Higher Secondary	46	77	83	60
graduate & above	46	80	86	64
Age Group				
0-14	49	73	71	58
15-24	35	45	45	35
25-44	48	71	75	47
45-59	72	127	157	114
60 and above	167	307	303	277
Castes				
ST/SC	50	78	84	64
other backward class		87	98	71
Other	57	105	111	94
Religion				
Hindu	NA	87	96	72
Muslim	NA	98	94	81
Christianity	NA	148	166	105
Others	NA	101	126	102
Marital Status				
Never Married	45	66	62	49
Currently Married	59	100	115	82
Widowed/divorce/separate	12	23	25	221
Wealth Quintile				
poorest	56	92	94	77
Poor	52	80	91	64
medium	56	86	97	71
Rich	55	91	97	77
Richest	56	103	113	86
NSS Region				
North region	64	94	80	75
Central region	43	63	54	42
East region	51	81	102	80
West region	43	84	77	71
South region	62	111	161	95
North-East region	75	76	34	23

Sources: NSSO Data, 52th, 60th & 71th round and 75th round

Table 3 shows the prevalence of morbidity according to various socio-demographic characteristics in India during 1995-2018. The sex difference in reporting of morbidity was observed, as females (57 to 83) reported higher prevalence than males (53 to 67) during 1995-2018. In case of rural urban the trend of morbidity prevalence increased till 2014 before dropped in 2018. Urban exceeded rural in reporting of illness prevalence. Morbidity prevalence

and level of education was found inversely related. That's why illiterates were more prone to illness and reported highest morbidity prevalence. People with higher educational level take better healthcare thereby prevalence of any kind of ailments reduces. The prevalence of morbidity was highest among children aged 0-14, followed by a decrease in the teenage and working-age populations. However, it increased again in older age groups. Surprisingly, the analysis of caste wise diversities in illness prevalence showed a lower presence of reported ailments among the Scheduled Castes and Scheduled Tribes. Other Backward Caste and 'Other' or General Caste were found more prone to ailments. Along with variation in age group, religion differences in reporting of morbidity were analyzed, as Hindus had less prevalence of ailments followed by a rising trend at rest of the religions. In case of marital status, prevalence of morbidity increased among the widowed/divorced/separated from 12 to 221 in 2018. Wealth quintile that represents economic condition illustrated a significant relationship with morbidity. The difference was most projected between poor and richest group. The richest were found highest in reporting of ailments. The spatial distribution of morbidity provided some remarkable results. The southern region of India reported highest prevalence of any kind of ailments, followed by eastern and northern region of the country.

Table 4: Adjusted effects of selected background characteristics of self-reported morbidities in India, 1995-2018

Background Characteristics	Morbidity Prevalence			
	1995	2004	2014	2018
Sex				
male @				
Female	1.029**	1.045***	1.148***	1.133***
Place of Residence				
rural @				
Urban	0.921***	0.991	1.119***	1.137***
Education				
Illiterate @				
Primary	0.808***	0.801***	0.895***	0.943***
Higher Secondary	0.759***	0.781***	0.821***	0.886***
graduate & above	0.584***	0.580***	0.607***	0.721***
Age Group				
0-14				
15-24	0.724***	0.647***	0.684***	0.611***
25-44	0.938***	1.008***	1.041**	0.789***
45-59	1.528***	2.002**	5.666***	2.381***
60+	3.566***	5.561***	5.664***	6.636***
HH Size				
1-5				
6-10	0.661***	0.687***	0.645***	0.689***
11+	0.462***	0.509***	0.493***	0.527***
Castes				
ST/SC @				

OBC	NA	1.110***	0.962**	1.016
Other	1.125***	1.215***	1.066***	1.213***
MPCE				
poorest @				
Poor	1.13***	1.043	1.097***	0.965*
Medium	1.244***	1.119***	1.145***	1.009
Rich	1.377***	1.210***	1.290***	1.151***
Richest	1.638***	1.419***	1.536***	1.305***
NSS Region				
North region @				
West region	0.618***	0.881***	0.955**	0.906***
East region	0.811***	0.761***	1.26***	1.173***
North-East region	0.778***	0.554***	0.320***	0.262***
South region	0.924***	1.205***	2.051***	1.397***
Central region	0.646***	0.726***	0.802***	0.712***

Sources: NSSO Data, 52th, 60th, 71th round &75th round

Table 4 presents the results of a logistic regression analysis examining the independent effects of various background variables on self-reported morbidity. The dependent variable, indicating whether an individual reported any illness in the preceding 15 days, was coded as binary (1 = illness, 0 = no illness). Independent variables included sex, age, residence, education, caste, religion, marital status, monthly per capita expenditure (MPCE), and region. Findings reveal that women consistently reported higher morbidity rates than men from 1995 to 2018. While urban residents initially reported lower morbidity than rural counterparts, this trend reversed over time. Education level was inversely associated with morbidity, with higher education linked to lower prevalence. Age and morbidity exhibited a positive relationship, with the 45-59 age group reporting twice the morbidity rate and the 60+ age group reporting more than six times the rate of the 0-14 age group in 2018. Smaller household sizes (1-5 members) were associated with higher morbidity risk compared to larger households. Scheduled Castes and Scheduled Tribes had lower morbidity rates than the general population. Higher wealth quintiles (MPCE) were linked to a 30.5% increased risk of morbidity compared to the lowest quintile. Southern and eastern regions reported higher morbidity rates than the northern region and other areas. These results refute the hypothesis of no significant differences in morbidity prevalence across socio-demographic determinants in India.

Table 5: Prevalence of Different ailments by background characteristics in India, 1995-2018 (Per thousand populations)

Background Characteristics	Infectious				CVD				NCD				Disability				Others			
	1995	2004	2014	2018	1995	2004	2014	2018	1995	2004	2014	2018	1995	2004	2014	2018	1995	2004	2014	2018
Sex																				
Male	8	17	23	15	2	6	13	12	7	21	21	15	6	12	14	9	31	31	21	19
female	8	18	26	18	2	8	17	15	8	22	26	20	6	14	25	14	34	37	23	22
Place of Residence																				
Rural	9	18	24	17	2	5	11	10	7	20	18	14	6	13	19	11	33	34	22	20
Urban	7	14	25	16	3	15	24	22	9	27	36	27	5	15	21	12	30	33	24	21
Education																				
Illiterate	10	23	33	23	2	6	16	17	9	24	25	21	7	16	27	19	36	43	28	27
Primary	8	14	22	17	2	7	14	11	6	19	21	15	5	11	17	9	30	30	23	22
Higher Secondary	6	12	20	13	3	10	14	12	7	22	23	16	5	11	15	8	27	26	18	15
graduate & above	5	10	18	10	4	17	18	17	11	25	30	22	5	10	15	8	22	22	14	13
Age Group																				
0-14	8	19	27	23	0.1	0.2	2	0	5	12	8	3	3	4	4	2	34	39	31	31
15-24	5	9	16	12	1	1	1	0	4	10	7	4	3	5	7	3	22	21	15	16
25-44	7	14	22	12	2	4	7	5	7	16	16	9	5	9	17	8	28	29	16	14
45-59	9	22	29	15	5	18	32	29	12	34	51	39	9	20	38	21	37	38	22	18
60 and above	21	35	40	27	15	57	94	102	37	104	98	96	36	88	83	58	70	60	31	26
Castes																				
ST/SC	8	18	24	17	1	3	10	7	6	17	17	12	5	11	17	10	31	32	21	19
O	NA	16	24	15	NA	6	15	12	NA	20	24	16	NA	13	19	10	NA	35	23	20
Other	8	19	26	18	2	13	21	22	8	28	29	26	6	17	23	14	33	35	23	21
Religion																				
Hindu	NA	17	25	16	NA	7	14	13	NA	21	23	17	NA	13	19	11	NA	34	21	20
Muslim	NA	20	22	19	NA	8	14	13	NA	23	22	19	NA	13	19	12	NA	39	25	22
Christianity	NA	18	33	18	NA	22	33	31	NA	51	63	41	NA	28	30	17	NA	45	39	20
Others	NA	19	25	32	NA	14	22	18	NA	30	29	18	NA	17	26	15	NA	28	28	21
Marital Status																				
Never Married	7	16	23	18	0.3	1	2	1	5	12	7	4	3	5	6	3	31	34	25	24
Currently Married	9	17	25	14	3	12	21	19	9	27	33	25	7	17	26	14	32	32	19	15
Widowed/div/separate	13	32	37	27	9	35	69	68	25	69	74	66	22	64	79	52	54	58	28	29
Wealth Quintile																				
poorest	8	19	26	19	1	4	11	10	7	18	17	15	7	15	21	12	34	39	23	24
Poor	8	18	25	15	1	4	11	8	7	17	17	13	5	12	19	12	33	32	24	19
medium	8	16	25	17	2	5	14	12	7	20	25	15	6	12	18	9	33	36	21	21
Rich	8	18	24	16	2	8	15	15	7	23	26	19	6	11	20	11	32	34	20	21
richest	8	16	24	16	4	16	23	22	10	30	36	27	6	16	20	12	30	31	22	16
NSS Region																				
North region	11	22	22	21	2	5	7	6	9	21	15	12	5	12	16	10	37	37	21	27
Central region	5	14	15	17	1	3	6	4	4	12	10	7	2	9	7	5	28	27	16	13
East region	8	19	29	18	2	6	10	14	7	17	20	17	5	9	22	13	30	33	26	22
West region	6	15	24	9	2	8	11	14	6	21	18	16	5	16	14	9	25	27	12	17
South region	6	12	29	12	3	13	38	27	9	33	50	33	9	19	33	17	36	41	33	18
North-East region	19	27	13	12	1	4	1	2	7	12	3	3	4	7	6	4	45	28	10	6

Sources: NSSO Data, 52th, 60th & 71th round

Table 5 presents prevalence of various ailments according to various socio-demographic characteristics in India during 1995-2018. As a whole, prevalence of various ailments namely infectious, CVD, NCD, Disability and others increased till 2014 before dropped in 2018. In case of these five diseases, female possessed more prevalence than males. It was seen that rural people were more likely to have infections while people in urban had risk to CVD, NCD, Disability and Other diseases. People having lower educational level had the highest prevalence of all these diseases whereas people with higher educational level had more inclination to report diseases except infectious disease. With the increase of educational level, only disability decreased among these five disease categories. Infectious and other diseases were more common among children aged 0-14. As age increases, the prevalence of all diseases specially,

CVD, NCD and disability became more likely among old aged 60 above people. The caste difference shows that 'Others' caste had more prevalence of these diseases in comparison with SC/ST and OBC. Besides, widow/divorced/separates were more vulnerable to these diseases than currently married and never married. Poorest were more prone to infectious disease as against of richest who were more prone to CVD, NCD, Disability and Other diseases. In addition to the above socio demographic characteristics, NSS region shows that northern region had great risk to infectious and others diseases while southern region possessed higher value in CVD, NCD and Disability throughout all the rounds.

Table 6: Adjusted effects of selected background characteristics of self reported morbidities in India, 1995-2018

Background Characteristics	Infectious				CVD				NCD				Disability				Others			
	1995	2004	2014	2018	1995	2004	2014	2018	1995	2004	2014	2018	1995	2004	2014	2018	1995	2004	2014	2018
Sex																				
male @																				
female	0.89***	0.90***	0.1	1.03	1.39***	1.28***	1.21***	1.08***	1.01	1.02	1.23***	1.21***	1	1.03	1.34***	1.29***	1.06***	1.11***	1.07***	1.12***
Place of Residence																				
rural @																				
Urban	0.89***	0.84***	1.03	0.99	1.17***	1.47***	1.39***	1.19***	1.05	1.03	1.25***	1.28***	0.83***	0.93**	0.97	0.99	0.90***	0.98	1.01	1.07**
Education																				
Illiterate @																				
Primary	0.65***	0.69***	0.62***	0.71***	1.52***	1.60***	1.48***	1.26***	0.86***	0.95*	1.20***	1.32***	0.96	0.98	1.08**	0.967	0.80***	0.66***	0.73***	0.74***
Higher	0.61***	0.65***	0.61***	0.64***	1.51***	1.50***	1.27***	1.12***	0.77***	0.91***	1.17***	1.27***	0.74***	0.81***	0.76***	0.77***	0.77***	0.67***	0.76***	0.71***
Secondary graduate & above	0.42***	0.47***	0.47***	0.45***	1.24*	1.34***	0.1	0.92*	0.69***	0.70***	0.98	1.15***	0.64***	0.55***	0.45***	0.503***	0.55***	0.47***	0.60***	0.62***
Age Group																				
0-14																				
15-24	0.67***	0.61***	0.57***	0.58***	1.93***	1.72***	0.69***	1.07	0.87***	0.86***	1.01	0.97	1.18**	1.48***	2.45***	2.45***	0.70***	0.56***	0.57***	0.56***
25-44	0.86***	0.89***	0.69***	0.57***	7.73***	9.73***	2.67***	9.23***	1.31***	1.45***	2.00***	2.18***	1.85***	2.63***	5.09***	4.27***	0.80***	0.69***	0.55***	0.43***
45-59	1.26***	1.33***	0.85***	0.76***	34.26***	50.07***	15.49***	71.77***	2.35***	3.25***	7.10***	10.43***	3.66***	5.43***	10.70***	10.62***	1.09***	0.91***	0.66***	0.50***
60+	2.24***	2.08***	1.15***	1.20***	104.40***	160.38**	42.36***	225.43***	6.76***	8.98***	14.36***	27.89***	13.19***	22.60***	20.54***	25.27***	1.84***	1.44***	0.80***	0.71***
HHs Size																				
1-5																				
6-10	0.70***	0.79***	0.67***	0.73***	0.55***	0.64***	0.69***	0.64***	0.61***	0.68***	0.68***	0.69***	0.64***	0.77***	0.67***	0.71***	0.70***	0.70***	0.67***	0.77***
11+	0.57***	0.63***	0.54***	0.59***	0.34***	0.46***	0.49***	0.39***	0.43***	0.52***	0.48***	0.57***	0.46***	0.59***	0.60***	0.57***	0.50***	0.55***	0.50***	0.65***
Castes																				
ST/SC @																				
OBC	NA	1.01	0.90***	0.99	NA	1.30***	0.96	1.03	NA	1.08***	1.02	1.02	NA	1.12***	0.92***	1.01	NA	1.15***	1.03	1.07***
other	1.12***	1.07*	0.98	1.07**	1.19**	1.68***	1.17***	1.49***	1.18***	1.23***	1.09***	1.33***	1.20***	1.26***	1.03	1.11***	1.09***	1.14***	1.04	1.08***
MPCE																				
poorest @																				
poor	1.18***	0.94	1.05	0.95	1.67***	1.37***	1.13**	1.03	1.25***	1.10**	1.09*	1.04	1.03	1.02	1.11**	1.10**	1.08***	0.99	1.06	0.83***
medium	1.26***	0.87***	1.07	0.94	2.22***	1.53***	1.29***	1.21***	1.40***	1.27***	1.20***	1.12***	1.29***	1.04	1.20***	1.07	1.14***	1.1***	1.03	0.89***
rich	1.30***	0.92*	1.20***	1.00	3.04***	2.21***	1.48***	1.63***	1.72***	1.41***	1.40***	1.42***	1.40***	1.05	1.27***	1.13**	1.23***	1.11***	1.13***	0.92**
richest	1.45***	0.92*	1.28***	1.12***	4.91***	3.00***	1.98***	1.98***	2.35***	1.78***	1.83***	1.69***	1.79***	1.24***	1.43***	1.17***	1.33***	1.15***	1.21***	0.89***
NSS Region																				
North region @																				
West region	0.58***	0.79***	1.11***	0.78***	0.75***	1.42***	1.39***	1.421***	0.58***	0.1	1.08**	1.18***	0.82***	1.19***	0.83***	0.73***	0.62***	0.74***	0.60***	0.75***
East region	0.80***	0.74***	1.36***	0.89***	0.85**	0.98	1.36***	1.843***	0.80***	0.76***	1.30***	1.471***	0.92	0.74***	1.18***	1.14***	0.81***	0.80***	1.17***	0.95*
North-East region	1.13***	0.99	0.52***	0.39***	0.48***	0.55***	0.22***	0.187***	0.62***	0.45***	0.17***	0.28***	0.59***	0.40***	0.27***	0.24***	0.79***	0.53***	0.40***	0.21***
South region	0.67***	0.60***	1.38***	0.70***	1.25***	2.20***	3.73***	2.747***	0.95	1.44***	2.56***	2.46***	1.29***	1.45***	1.68***	1.29***	0.92***	1.14***	1.71***	0.99
Central region	0.58***	0.71***	0.95	0.63***	0.47***	0.92	0.75***	0.878**	0.46***	0.65***	0.89**	0.88**	0.44***	0.80***	0.67***	0.65***	0.76***	0.78***	0.77***	0.65***

Source: NSSO data, 52nd, 60th, 71st and 75th round

Table 6 presents the results of a logistic regression analysis examining the factors associated with different types of ailments. Women were more likely to report any ailment compared to men. Infectious diseases and other ailments were more prevalent among rural residents and those with lower education, while cardiovascular diseases (CVDs) and non-communicable diseases (NCDs) were more common in urban areas and among the educated. Age, caste, and household size were positively associated with all ailment types. Older individuals, those from the "other" caste category, and smaller households reported higher prevalence rates. Higher wealth quintiles were associated with increased risk of all ailments except infections, while the lowest quintile had lower risk for CVDs, NCDs, and disabilities. The southern region had a higher prevalence of all ailments (except infections), compared to other regions, while the northern region had a higher burden of infectious diseases. These findings support the rejection of the hypothesis that there are no significant differences in morbidity prevalence across socio-demographic determinants in India.

This study offers a comprehensive analysis of morbidity prevalence in India, examining its levels, trends, differentials, and determinants. Notably, the prevalence of morbidity decreased in 2018, breaking the upward trend observed over the past three decades. Significant variations in morbidity prevalence were found across different states. Socio-demographically advanced states such as Kerala, Andhra Pradesh, and West Bengal reported the highest levels of morbidity (Paul et al., 2020). These states have high literacy rates and well-developed medical policies. Conversely, socio-economically poorer states like Bihar, Madhya Pradesh, and Rajasthan, which are still developing, exhibited the lowest morbidity rates. The lack of health awareness in these states may contribute to their lower morbidity prevalence. However, the north-eastern states, including Manipur, Assam, Arunachal Pradesh, Mizoram, Tripura, Meghalaya, and Nagaland, have consistently reported the lowest morbidity rates among all states and union territories since the 52nd round, despite also having high literacy rates. The study highlights that demographic, social, and economic factors are significant determinants of health in India. There is a notable gender gap in morbidity prevalence, with females at a higher risk than males. Previous research has identified hypertension among women as a significant factor contributing to this disparity, particularly in urban areas (Singh, 2017; Paul and Singh, 2018). The gap in morbidity prevalence between rural and urban areas has also widened since 1995. Individuals with higher educational levels are less likely to experience morbidity due to greater health awareness and better self-care practices. Conversely, younger and older age groups are more vulnerable to morbidity, often due to increased dependency on others. Those

from poorer economic backgrounds also face a higher risk of morbidity compared to their more affluent counterparts (Anushree & Mishra, 2022).

The study reveals that the southern regions of India are more susceptible to morbidity than the northern regions. Women are at a higher risk for various diseases compared to men. Rural populations and those with lower education levels are more prone to infectious diseases due to limited knowledge about hygiene. In contrast, urban residents and individuals with higher educational levels are more likely to suffer from non-communicable and cardiovascular diseases related to lifestyle factors (Shabnam & Saikia, 2023). As people age, the types of diseases they encounter change: younger children (ages 0-14) and the economically disadvantaged are more affected by infectious diseases, while older adults and those from wealthier backgrounds are more prone to cardiovascular issues. The southern region shows the highest burden of non-communicable and cardiovascular diseases, whereas the northern region faces a greater burden of infectious diseases (Singh, Paul & Pradhan, 2022). It is important to note that self-reported morbidity may be subject to underreporting by individuals who are unaware of their health issues or do not perceive them as serious, and over reporting by those who are more health-conscious. Additionally, variations in sample size from the 52nd to the 75th round, as well as inconsistencies in disease classifications across rounds, may have affected morbidity prevalence estimates.

Conclusion:

This study examines the trends in morbidity prevalence in India from 1995-96 to 2018, highlighting significant shifts in health patterns and their implications for Sustainable Development Goal 3 (SDG 3), which aims to ensure healthy lives and promote well-being for all at all ages.

The analysis reveals an initial upward trend in morbidity prevalence until 2014, followed by a subsequent decline. Throughout these two decades, a consistent gender disparity was observed, with females exhibiting higher morbidity rates compared to males. Early in the period, rural areas reported higher morbidity than urban areas; however, this trend reversed over time as morbidity rates in urban areas gradually increased. Educational attainment emerged as a key factor influencing morbidity, with higher levels of education associated with lower prevalence of ailments. Additionally, younger and older age groups faced greater health risks compared to the working-age population. Contrary to expectations, the general category reported the highest prevalence of morbidity, with Scheduled Castes (SC), Scheduled Tribes (ST), and Other

Backward Classes (OBC) following. Among wealth quintiles, poorer individuals exhibited lower morbidity rates compared to their wealthier counterparts.

Regionally, the southern region of India had the highest morbidity prevalence, followed by the eastern and western regions. In terms of infectious diseases, both younger and older age groups, as well as rural and illiterate populations, were at higher risk. Conversely, the prevalence of cardiovascular diseases (CVD), non-communicable diseases (NCD), and disabilities increased with age, affecting urban populations more significantly. Those with higher educational and economic status were also more susceptible to CVD and NCD. The northern region of India showed a higher prevalence of infectious diseases, while the southern region experienced a greater burden of CVD, NCD, and disabilities.

Despite India's significant improvements in life expectancy and overall health status, the current morbidity trends indicate a need for enhanced health strategies and policies. To align with SDG 3, there is a pressing need to focus on the health of vulnerable groups, including females, children, and older adults. Additionally, expanding health awareness programs, particularly in rural areas, is crucial. These programs should emphasize hygiene and sanitation to combat infectious diseases in rural and economically disadvantaged communities, while promoting healthy lifestyles in urban areas to address the rise in non-communicable diseases. By addressing these disparities and focusing on targeted health interventions, India can better progress towards achieving SDG 3 and ensuring improved health and well-being for all its citizens.

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Availability of data and materials

The dataset used in this study is available in the Ministry of Statistics and Programme Implementation, Government of India, website (<https://www.mospi.gov.in/national-sample-survey-officensso>).

Author Contributions

Conceived and designed the experiments: KP. Performed the experiments: KP SM JG KRK AB . Analyzed the data: KP AB JG KRK SM. Contributed reagents/materials/analysis tools: KP SM JG AS BG & NB. Wrote the paper: KP SM AB KRK BG & PD.

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Appendix 1: Morbidity Prevalence by gender in India, 1995-2018

STATES & UTs	1995			2004			2014			2018		
	M	F	T	M	F	T	M	F	T	M	F	T
Andhra Pradesh	64	63	64	91	102	96	165	176	170	128	157	142
Andaman & Nicobar Islands	26	20	23	46	62	53	127	235	178	73	101	86
Arunachal Pradesh	27	26	27	47	53	50	81	95	88	34	25	30
Assam	68	95	81	77	85	81	25	43	33	22	28	25
Bihar	33	39	36	52	54	53	53	63	58	26	25	25
Chandigarh	129	145	136	50	88	67	130	140	134	89	100	94
Chhattisgarh	NA	NA	NA	66	71	69	43	37	41	48	50	49
Dadra & Nagar Haveli	48	66	57	12	42	23	88	126	106	47	82	63
Daman & Diu	37	49	43	11	22	16	36	336	165	19	57	33
Delhi	44	39	42	13	15	14	40	40	40	61	58	59
Goa	33	48	40	117	131	124	190	171	181	65	52	59
Gujarat	42	43	43	72	71	72	90	103	97	60	75	67
Haryana	55	68	61	85	102	93	58	67	63	49	69	59
Himachal Pradesh	82	93	88	68	98	83	57	100	79	94	106	100
Jammu & Kashmir	51	54	53	69	71	70	49	70	59	47	99	71
Jharkhand	NA	NA	NA	26	43	34	52	73	62	62	73	67
Karnataka	40	46	43	60	63	62	85	111	98	39	47	43
Kerala	109	111	110	236	256	247	293	323	308	226	263	245
Lakshadweep	60	50	55	98	154	127	179	245	208	78	124	102
Madhya Pradesh	39	41	40	96	110	103	53	64	58	35	44	40
Maharashtra	48	52	50	24	30	27	70	82	76	79	96	88
Manipur	9	5	7	46	52	49	20	18	19	17	21	19
Meghalaya	34	35	35	14	16	15	26	38	32	4	3	4
Mizoram	11	21	16	56	66	61	29	27	28	40	29	34
Nagaland	36	36	36	58	57	57	39	18	28	8	8	8
Orissa	63	61	62	75	72	74	89	117	103	88	97	92
Pondicherry	67	84	76	154	194	173	243	171	207	19	25	22
Punjab	75	83	79	106	141	123	131	202	165	97	129	112
Rajasthan	32	26	29	56	64	60	55	70	62	45	53	49
Sikkim	34	38	36	58	37	48	34	49	41	29	40	34
Tamil Nadu	51	57	54	86	104	95	140	188	165	56	65	61
Telangana	NA	NA	NA	NA	NA	NA	83	111	97	53	59	56
Tripura	109	121	115	117	123	120	29	49	39	34	29	32
Uttar Pradesh	60	66	63	94	107	100	66	80	73	64	87	74
Uttarakhand	NA	NA	NA	57	52	55	70	100	84	31	40	35
West Bengal	61	69	65	119	127	123	142	193	167	125	151	138
India	53	57	55	85	96	90	87	110	98	67	83	75

Sources: NSSO Data, 52th, 60th & 71th round,75th round

Appendix 2 Classification of disease based on ICD (WHO, 2012)

1995(52 nd)	2004(60 th)	2014(71 st)& 2018 (75 th)
Infectious Disease		
<i>Diarrhoea/ dysentery</i> <i>Tetanus</i> <i>Diphtheria</i> <i>Whooping Cough</i> <i>Meningitis and Viral Encephalitis</i> <i>Chicken pox</i> <i>Measles/German Measles</i> <i>Mumps</i> <i>Acute respiratory infection (Including pneumonia)</i> <i>Chronic Ameobiosis</i> <i>Pulmonary Tuberculosis</i> <i>Sexually transmitted diseases</i> <i>Guinea Worm</i> <i>Filariasis (elephantiasis)</i> <i>gastritis/hyper-acidity gastric/peptic ulcer</i>	<i>Diarrhoea/ dysentery</i> <i>Gastritis/gastric or peptic ulcer</i> <i>Worm infestation</i> <i>Amoebiosis</i> <i>Tuberculosis</i> <i>Diseases of skin</i> <i>Sexually transmitted diseases(STD)</i> <i>Malaria</i> <i>Eruptive</i> <i>Mumps</i> <i>Diphtheria</i> <i>Whooping cough</i> <i>Tetanus</i> <i>Filariasis/Elephantiasis</i>	<i>Fever with loss of consciousness or altered consciousness</i> <i>Fever with rash/ eruptive lesions</i> <i>Fever due to Diphtheria, Whooping cough</i> <i>Tuberculosis</i> <i>Filariasis</i> <i>Tetanus</i> <i>HIV/AIDS</i> <i>Other sexually transmitted diseases</i> <i>Diarrheas/ dysentery etc.</i> <i>Worms infestation</i> <i>Discomfort/pain in the eye with redness or swellings/ boils</i> <i>Acute upper respiratory infections (cold, runny nose etc.)</i> <i>Cough with sputum with or without fever and NOT diagnosed as TB</i> <i>Skin infection (boil, abscess, itching)</i>
Cardio Vascular Disease		
<i>Heart failure</i> <i>diseases of heart</i> <i>high/low blood pressure</i>	<i>Heart disease</i> <i>Hypertension</i>	<i>Stroke/ hemiplegia</i> <i>Hypertension</i> <i>Heart disease: Chest pain, breathlessness, Cardio-vascular diseases</i>
Non communicable Disease		
<i>Cerebral Stroke</i> <i>Cough and Acute bronchitis</i> <i>Ailment relating to pregnancy & child birth</i> <i>Jaundice</i> <i>Cancer</i> <i>Other tumours</i> <i>(General debility) Anemia</i> <i>Goitre & thyroid disorders</i> <i>diabetes</i> <i>beriberi</i> <i>rickets</i> <i>other malnutrition diseases</i>	<i>Hepatitis/Jaundice</i> <i>Respiratory including ear</i> <i>Bronchial asthma</i> <i>Diseases of kidney/urinary system</i> <i>Prostatic disorders</i> <i>Gynaecological disorders</i> <i>Neurological disorders</i> <i>Psychiatric disorders</i> <i>Conjunctivitis</i> <i>Glaucoma</i> <i>Cataract</i> <i>Goitre</i>	<i>Jaundice</i> <i>Cancer</i> <i>Anaemia (any cause)</i> <i>Bleeding disorders</i> <i>Diabetes</i> <i>Under-nutrition</i> <i>Goitre and other diseases of the thyroid</i> <i>Others (including obesity), High Cholesterol</i> <i>Cataract</i> <i>Glaucoma</i> <i>Earache with discharge/bleeding from ear/ infections</i> <i>Bronchial asthma etc.</i>

1995(52 nd)	2004(60 th)	2014(71 st)& 2018 (75 th)
<i>epilepsy</i> <i>other diseases of nerves</i> <i>piles</i> <i>diseases of kidney/urinary system</i> <i>prostrate disorder</i>	<i>Diabetes mellitus</i> <i>Under-nutrition</i> <i>Anaemia</i> <i>Cancer and other tumours</i>	<i>abnormality in urination</i> <i>Pelvic region/reproductive tract infection</i> <i>Change/irregularity in menstrual cycle</i> <i>Pregnancy with complications before or during labour</i> <i>Complications in mother after birth of child</i> <i>Illness in the newborn/ sick newborn</i>
Disability Disease		
<i>Diseases of eye</i> <i>Acute diseases of ear</i> <i>Diseases of mouth, teeth and gum</i> <i>Injury due to accident and violence</i> <i>mental and behavioural disorder</i> <i>visual disability (other than cataract)</i> <i>cataract</i> <i>other diseases of eye</i> <i>hearing disability</i> <i>other diseases of ear</i> <i>speech disability</i> <i>diseases of mouth, teeth and gum</i> <i>hydrocele</i> <i>pains in joints</i> <i>other disorder of bones and joints</i> <i>locomotor disability</i> <i>other congenital deformities (excluding disability)</i>	<i>Disorders of joints and bones</i> <i>Locomotor</i> <i>Visual including blindness (excluding cataract)</i> <i>Speech</i> <i>Hearing</i> <i>Diseases of Mouth/Teeth/Gum</i> <i>Accidents/Injuries/Burns/Fractures/Poisoning</i>	<i>Mental retardation</i> <i>Mental disorders</i> <i>Headache</i> <i>Seizures or known epilepsy</i> <i>Weakness in limb muscles and difficulty in movements</i> <i>Others including Impaired cognition, memory loss, confusion</i> <i>Decreased vision</i> <i>Others (including disorders of eye movements)</i> <i>Decreased hearing or loss of hearing</i> <i>Diseases of mouth/teeth/gums</i> <i>Joint or bone disease/ pain or swelling in any of the joints</i> <i>Back or body aches</i> <i>Accidental injury, road traffic accidents and falls</i> <i>Accidental drowning and submersion</i> <i>Burns and corrosions</i> <i>Poisoning</i> <i>Intentional self-harm</i> <i>Assault</i>
Others Disease		
<i>Fever of Short duration</i> <i>other diagnosed ailment (of less than 30 days)</i> <i>Undiagnosed ailment (of less than 30 days)</i> <i>other diagnosed ailment (of more than 30 days)</i> <i>Undiagnosed ailment (of more than 30 days)</i>	<i>Fever of unknown origin</i> <i>Other diagnosed ailments</i> <i>Other undiagnosed ailments</i>	<i>All other fevers(Includes malaria, typhoid and fevers of unknown origin,)</i> <i>Pain in abdomen: Gastric and peptic ulcers/ acid reflux/ acute abdomen</i> <i>Lump or fluid in abdomen or scrotum</i> <i>Gastrointestinal bleeding</i> <i>Contact with venomous/harm-causing animals and plants</i> <i>Symptom not fitting into any of above categories</i> <i>Could not even state the main symptom</i>