ISSN: 2230-9926

Available online at http://www.journalijdr.com

IJDR

International Journal of Development Research
Vol. 12, Issue, 01, pp. 53347-53354, January, 2022
https://doi.org/10.37118/ijdr.23714.01.2022

RESEARCH ARTICLE OPEN ACCESS

QUALITY OF LIVING IN INDIA: A HOUSEHOLD LEVEL ANALYSIS

[1]Dr. Sandeep Kumar, [2]Dr. B. R. Thakur and [3]Dr. Manoj Kumar

[1]Assistant Professor, Department of Geography, Govt. College, Bhoranj, Himachal Pradesh, India
[2]Associate Professor, Department of Geography, Himachal Pradesh University, Shimla, Himachal Pradesh, India
[3]Associate Professor, Department of Geography, Govt. Degree College, Hisar, Haryana, India

ARTICLE INFO

Article History:
Received 27th October, 2021
Received in revised form
08th November, 2021
Accepted 14th December, 2021
Published online 30th January, 2022

Key Words:

Quality of Living,
Socio-economic parameters,
Composite index,
Correlation matrix.

Corresponding author: Dr. Sandeep Kumar

ABSTRACT

The present paper purports to investigate the quality of living among the Indian households at state and district level from 2001 to 2011. The study is based on secondary data collected from Registrar General Census Operations, New Delhi. The quality of living has been examined in terms of 5 main dimensions i.e. (i) housing quality, (ii) basic amenities like health, sanitation and cleanliness, electrification, fuel consumption, (iii) banking (iv) information and communication and assets ownerships covering 14 indicators. The spatial variations in quality of living have been portrayed and discussed with the help of composite index. The study portraits visible north-south divide in quality of living among the Indian households. The southern half of India especially the majority of the districts of Kerala, Tamil Nadu, Andhra Pradesh, Karnataka, Maharashtra and Gujarat have witnessed very high and high quality of living at the households level. By comparison, northern, eastern and north eastern states of country have witnessed very poor quality of living in terms of housing quality, electrification, health, sanitation and cleanliness, information, communication, banking and assets ownership. The study shows positive relationship between quality of living and urbanization (0.77), literacy (0.71) and per capita income (0.68) while negative correlation with poverty (-0.80) and population growth (-0.11). The district level analysis reveals that even after the 65 years of planning, only one-tenth districts (63 districts) of the country have witnessed very high and high quality of living whereas half of the districts (about 53% of all districts) have recorded very low or low quality of living at the household level.

Citation: ***Dr. Sandeep Kumar, Dr. B. R. Thakur and Dr. Manoj Kumar.*** "Quality of living in India: a household level analysis*", International Journal of Development Research*, 12, (01), 53347-53354.

INTRODUCTION

Quality of living is a holistic concept which includes economic, social, demographic and cultural dimensions of human life. A variety of domains such as housing, health or social relation are included to measure the quality of life (Walfgang & Hans, 1987). It is a multi-dimensional concept and influenced by an array of inter-related variables. World Health Organization (WHO) has defined it as the condition of life resulting from the combination of factors such as those determining health, happiness, education, social and intellectual attainments, freedom of action, justice and freedom from oppression (Krishnakumar, 2001). United Nations Development Programme (UNDP) has devised a composite index called Human Development Index (HDI) to measure quality of life by using three indicators i.e. life expectancy, literacy and income (Thakur & Jaglan, 2006). The quality of living is one of the most important aspect of overall quality of life. It truly reflects the standard of living space. Although, it manifests the partial picture of a broader concept of social well-being, yet it deals with the core issues of standard of living in any society.

The well-being or quality of living of population is an important concern in social sciences particularly in sociology, geography, economics and political science. It is measured by many social and economic indicators. There are some aspects which are considered important for good quality of living standard such as personal safety and security, health issues, transport infrastructure, availability of consumer goods, adequate housing, schooling and recreational opportunities. It also reflects the interaction of political, socio-economic and environmental factors in the host location (Mercer, 2007). The present study has been carried out to assess the quality of living with respect to set of 5 indicators covering (i) housing quality, (ii) basic amenities i.e. health, sanitation and cleanliness, electrification, fuel consumption, (iii) information and communication, (iv) access to banking and (v) assets ownerships. The quality of housing is a key element of a person's quality of life. This is particularly so in case of fundamental housing deficiencies, which are thus considered significant indicators of deprivation. If low housing quality is coupled with income, poverty, it reinforces social disadvantage.

Health is an important attribute of human resources and a healthy human population is the most desired national asset (Qureshi, *et al*., 1996). Health of an individual or society depends on a combination of factors including supply of quality water, sanitation and cleanliness of the living environment and its surroundings. Energy plays a vital role in human development as all the important economic activities of modern society are dependent on availability and level of consumption of energy (Rajgopal & Mishra, 1994). The household energy demand pattern is assumed to be a function of factors such as level of development of area, household size, income level, educational and occupational status, size of land holdings, cropping pattern, type of fuel available, number of cooking sessions, cooking practices, fuel preferences etc. The influence of these factors on household energy demand varies from region to region and from time to time (Jose, 2003). Energy is an important component of ecosystem and household is the major consumer of this component for various activities like cooking, water heating and lighting (Hasalkar, *et al.,* 2002). The goal of economic growth is to improve socio-economic conditions of people. Availability and accessibility of amenities like electricity, drinking water and toilets are important in this regard. Banking is important in modern times when most of transaction are made through banks. Banks also provides loans and offer different financial schemes to people. In the absence of banks people are forced to borrow money from money lenders at exorbitant rates. These days many national schemes provide benefits directly to beneficiaries through their bank accounts. Besides access to modern means of information and communication i.e. television, mobile and ownership of vehicles are also visible sign of improving standard of living.

The issue of quality of life has attracted a lot of attention in recent years and is increasingly becoming the growing subject of theoretical and empirical research in various disciplines. The study of the concept is based on a fundamental assumption that the social and physical environment of an area can influence the well-being of people residing in that area. Of course, the external environment does not influence everybody's life in the same way, the happiness level of people in any specific location is governed by both the quality of external world and its viewing. However, the viewing of external world is a function of a set of psychological and physiological factors that responsible for producing a sense of satisfaction or non-satisfaction from the environment that surrounds us. This internal mechanism is treated and analyzed by psychologically. Economists, on the other hand, mainly focus on the outcome of this physio-psychological mechanism, which is the observed individual behaviour and try to understand to what extent this is influenced by environment attributes. Geographers by virtue of their focus on spatial patterns and processes explore the regional variations in quality of life and its various facets including standard of living among individuals, social groups, societies and regions (Lambiri *et al.,* 2007). The quality of life in India has been observed very poor as per the international standards of living. The quality of life index (2005) shows that India ranked at 73rd out of 111 countries of the world. The quality of life score was 5.57 out of 10.

During next five years, there has not been any substantial improvement and India stood at 96th rank out of 132 countries of the world in terms of quality of life index (2010). The overall quality of life score has been observed at 5.52 out of 10. It is against this backdrop that quality of life is an important indicator of the overall development of a country like India. The issue of quality of life in India has become a subject of growing academic interest since independence due to increase in population poverty, unemployment, pollution and lack of safe drinking water (Diener & Suh, 1997). Therefore, the balanced quality of life development is still one of the major goals of government of India. Has there been an improvement in few aspects of quality of life in particular, standard of living space and basic amenities at the household level? If yes, which are the major socio-economic determining factors responsible for improvement and vice versa are some issues of present investigation?.

METHODS

Data and Description of Variables: The present study is based on secondary data obtained from Registrar General Census Operations, Government of India, New Delhi for two reference periods i.e. 2001 and 2011. The state and district constitute the units of observation for analysis.

Quality of Living Indicators: One of the important and crucial task is to identify relevant indicators which would capture overall scenario of levels of standard of living at the household level in each district. This has been done while considering the data constraints to capture the complex scenario of quality of living, single indicators cannot give the idea as quality of life or even its key dimensions living space is a complex multifaceted phenomenon. Hence, 14 indicators have been selected which are found to be relevant, although not adequate but the best out of limited data available for district level analysis. These indicators have been organised under different sets enumerated as under:

Housing

a. Proportion of Houses with concrete roofs (X_1)
b. Proportion of houses with cement and tiles floor (X_2)
c. Proportion of houses with good condition* (X_3)

Basic Amenities

a. Proportion of households having electricity to total households (X_4)
b. Proportion of households having drinking water facility within premises (X_5)
c. Proportion of households having toilet facility (X_6)
d. Proportion of households having bathroom (X_7)
e. Proportion of households having closed drainage outlet (X_8)
f. Proportion of households having LPG connection (X_9)

Banking

a. Proportion of households having access to banking (X_{10})

Information and Communication

a. Share of households having mobile phones to total households (X_{11})
b. Share of households having television facility to total households (X_{12})

Assets Ownership

a. Share of households having two wheeler ownership to total households (X_{13})
b. Share of households having four wheeler ownership to total households (X_{14})

*Census of India has categorized houses into three categories namely good, livable and dilapidated. Good houses are those which do not require any repair and are in fairly good condition. In present study, only good houses indicative of better quality of living space have been considered.

The following formula has been used to standardize the data:

$$Z = \frac{X - \vec{X}}{\sigma}$$

Where: X represents the original value of the ith variable in *j* time

$\vec{X}$ denotes the mean value of the ith variable in *j* time

σ is the standard deviation from the mean value

Composite Standard Score (C.S.S.): is prepared by using the formula mentioned as under:

$$\frac{\Sigma Z_i J}{N}$$

$Z_i J$ indicate 'Z' score of an indicator J in district $_i$
N refers to the number of indicators

In order to make a comparative analysis of quality of living descriptive statistics such as mean and standard deviation have been used to present summary of quantitative findings and classification of states and districts into following categories based on values of composite index.

Category	Composite index value
Very High	> Mean + 2 S.D.
High	Mean + 1 S.D.- Mean + 2 S.D.
Medium	Mean – Mean + 1 S.D.
Low	Mean – -1 S.D.
Very Low	< Mean – -1 S.D.

Finally, choropleth maps have been prepared to show the spatial variations in quality of living all across the country. Furthermore, to understand interrelationship between quality of living and per capita income, poverty, literacy, urbanization and population growth at the state level as per 2011 Census correlation has also been drawn using Karl Pearson's technique given as under:

$$r = \frac{\sum xy}{N \sigma X \, \sigma Y}$$

Where:

r: Karl Pearson's Correlation Coefficient

$\sum xy$: the sum total of the quality of living and other variable deviations of *x* and *y*

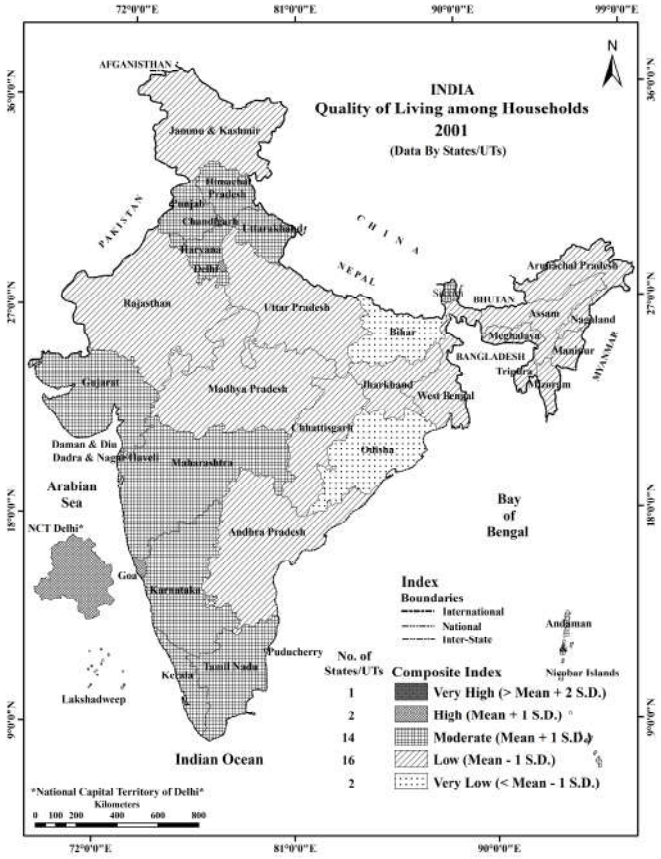
σ *X:* standard deviation of *X* series

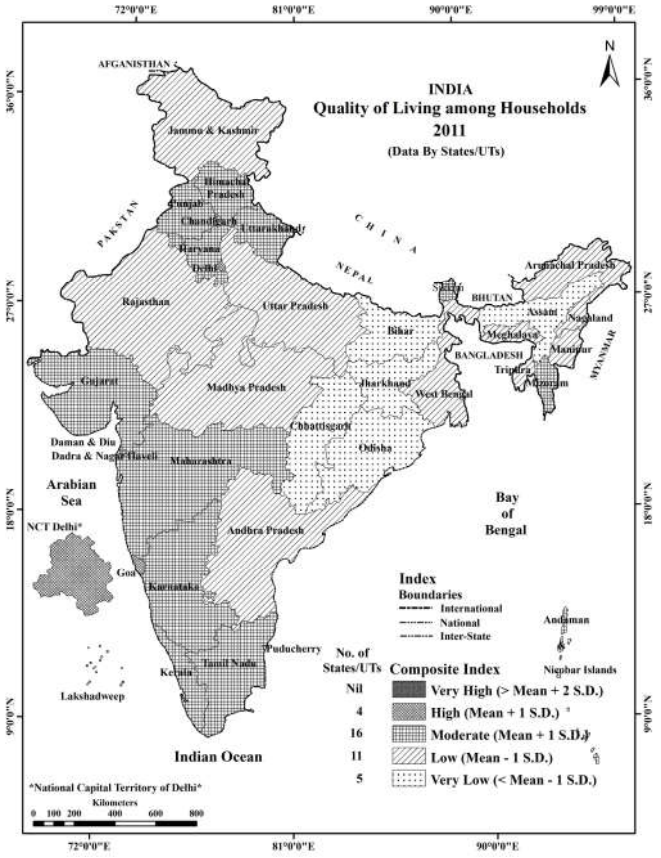
σ *Y:* standard deviation of *Y* series

N: number of pairs of items

RESULTS AND DISCUSSION

Change in Quality of Living in India at State Level (2001 and 2011): Table 1 and Fig. 1a show that the quality of living in India has shown remarkable variation at the state level. The synoptic view of Fig. 1a and Fig. 1b portrait that states namely Goa, Kerala, Punjab, Haryana and Tamil Nadu have very good or good quality of living. In contrast, the states like Bihar, Madhya Pradesh, Uttar Pradesh, Odisha, Assam, Chhattisgarh, Jharkhand and northeast Indian states have very poor and poor quality of living during both Census years. In 2001, very high standard of living at the household level has been observed in Chandigarh (2.25) followed by national capital Delhi (1.74) and Goa (1.35). On contrary, as evident from Fig. 1a that two states of country i.e. Bihar and Odisha have witnessed very low (<1.00) and 16 states low (Mean to -1 S.D.) quality of living space. It is evident from Table 1 that Bihar state (-1.22) occupied bottom place followed by Odisha (-1.09), Assam (-0.98), Jharkhand (-0.87) and Chhattisgarh (-0.87). The reaming 14 states/Uts had moderate quality of living space in 2001. In contrast, Fig. 1b portraits that in latest Census year, i.e. 2011, there were four UTs/states namely Chandigarh, Delhi, Goa and Puducherry registered high quality of living. Whereas, five states explicitly Bihar, Jharkhand, Odisha, Chhattisgarh and Assam have observed very low quality of living (Fig. 1b). Notably, 11 states geographically located in northern and north eastern parts of the country have recorded poor quality of living at the households level. The study points out that over the time period i.e. 2001 and 2011, Union territories/states like Chandigarh, Delhi, Daman & Diu, Punjab, Lakshadweep and Maharashtra have registered decline in index value as compared to 2001. It indicates the improvement in quality of living and associated indicators in relatively backward states and UTs under different development initiatives, hence the pace of development in different sets of indicators has been higher in states and Uts other than Chandigarh, Delhi, Daman and Diu, Punjab and Maharashtra during the first decade of 21st century.





Source: *Prepared by Authors Based on Census Data, Government of India 2001 and 2011*

Fig. 1a **Fig. 1b**

Table 1. India: State-wise/UTs Composite Score of Quality of Living, 2001 and 2011

States/UTs	2001	Rank	States/UTs	2011	Rank	Change (2001-2011)
Chandigarh*	2.25	1	Chandigarh*	1.75	1	-0.50
Delhi*	1.74	2	Delhi*	1.50	2	-0.23
Goa	1.35	3	Goa	1.40	3	0.05
Puducherry*	0.94	4	Puducherry*	1.00	4	0.06
Daman & Diu*	0.87	5	Daman & Diu*	0.81	5	-0.05
Punjab	0.71	6	Punjab	0.68	6	-0.03
Himachal Pradesh	0.29	7	Himachal Pradesh	0.67	7	0.37
Kerala	0.32	8	Kerala	0.62	8	0.30
Lakshadweep*	0.71	9	Lakshadweep*	0.60	9	-0.12
Andaman & Nicobar Islands*	0.34	10	Andaman & Nicobar Islands*	0.49	10	0.15
Haryana	0.25	11	Haryana	0.44	11	0.19
Uttarakhand	0.21	12	Uttarakhand	0.42	12	0.20
Gujarat	0.35	13	Gujarat	0.37	13	0.02
Tamil Nadu	0.25	14	Tamil Nadu	0.35	14	0.10
Sikkim	0.01	15	Sikkim	0.25	15	0.24
Maharashtra	0.28	16	Maharashtra	0.22	16	-0.06
Karnataka	0.04	17	Karnataka	0.21	17	0.17
Dadra &Nagar Haveli	-0.25	18	Dadra & Nagar Haveli	0.09	18	0.35
Mizoram	-0.11	19	Mizoram	0.08	19	0.18
Jammu & Kashmir	-0.14	20	Jammu & Kashmir	-0.06	20	0.08
Andhra Pradesh	-0.21	21	Andhra Pradesh	-0.09	21	0.12
Rajasthan	-0.46	22	Rajasthan	-0.41	22	0.05
Nagaland	-0.57	23	Nagaland	-0.56	23	0.02
Arunachal Pradesh	-0.39	24	Arunachal Pradesh	-0.56	24	-0.17
Tripura	-0.74	25	Tripura	-0.60	25	0.13
Manipur	-0.61	26	Manipur	-0.62	26	-0.01
Uttar Pradesh	-0.62	27	Uttar Pradesh	-0.69	27	-0.07
West Bengal	-0.59	28	West Bengal	-0.82	28	-0.23
Madhya Pradesh	-0.54	29	Madhya Pradesh	-0.86	29	-0.32
Meghalaya	-0.71	30	Meghalaya	-0.86	30	-0.15
Jharkhand	-0.87	31	Jharkhand	-1.03	31	-0.16
Chhattisgarh	-0.84	32	Chhattisgarh	-1.08	32	-0.24
Assam	-0.98	33	Assam	-1.13	33	-0.15
Odisha	-1.09	34	Odisha	-1.24	34	-0.14
Bihar	-1.22	35	Bihar	-1.36	35	-0.14

Source: *Computed by authors from Census Data, Govt. of India 2001 and 2011*
**Union Territories of India*

Table 2. India: Correlation between Quality of Living and Other Socio-Economic Parameters, 2011

Variables	X_1	X_2	X_3	X_4	X_5	X_6
X_1	1					
X_2	.676**	1				
X_3	-.800**	-.331	1			
X_4	-.114	-.351*	-.041	1		
X_5	.775**	.499**	-.577**	.128	1	
X_6	.712**	.413*	-.617**	-.186	.652**	1

Source: Calculated and Complied by the Authors.
** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
X_1: index of quality of living, X_2: Per-Capita income, X_3: Population below poverty line,
X_4: Decadal Growth Rate, X_5: level of Urbanisation,
X_6: Proportion of literate population to Total population

Furthermore, the states/UTs namely, Goa, Puducherry, Himachal Pradesh, Kerala, Andaman and Nicobar Islands, Haryana, Uttarakhand, Gujarat, Tamil Nadu, Sikkim, have witnessed improvement in quality of living with respect to mean score of other states. The Dadra and Nagar Haveli and Mizoram shifted from low category to moderate category in 2011 with improvement in all indicators above mean. The states like Jammu and Kashmir, Andhra Pradesh, Rajasthan, Nagaland and Tripura displayed poor or very poor quality of living. However, they recorded improvement in quality of living with comparison to previous Census year. It is also evident from table 1 that the quality of living remained very poor and poor in states namely Bihar, Odisha, Assam, Chhattisgarh, Jharkhand, Meghalaya, Madhya Pradesh, Uttar Pradesh and West Bengal during study period. It is interesting to note that it does not means that these states have not observed improvement in quality of life and its indicators during both periods i.e. 2001 and 2011 but it indicates that the improvement in various indicators of quality of living in these states are not pace to other states or mean.

Determinants of Quality of living Space and Other Indicators: It is now widely accepted view point among the social scientists that the per capita income is one of the prime factors which determines the level of quality of living in any society. However, this too is dependent on other socio-economic and cultural factors and these variables tend to increase or decrease the standard of living. Hence, the quality of living in any society is the net result of a complex set of interrelated factors. An analysis of the correlation between quality of living and related socio-economic factors can give a clear picture as shown in Table 2. It is evident from table 2 that there is positive and significant relationship between quality of living index and urbanization (0.77), literacy (0.71) and per capita income (0.68) whereas negative correlation between poverty (-0.80) and population growth (-0.11). It is more evident from the fact that the states/UTs namely Goa, Kerala, Punjab, Haryana, Himachal Pradesh, Tamil Nadu, Delhi, Chandigarh, Andaman and Nicobar islands have high quality of living and high per capita income. By comparison, the states like Bihar, Jharkhand, Odisha, Madhya Pradesh, Uttar Pradesh, Assam and Chhattisgarh have poor quality of living and low per capita income. Similarly, the states which have high literacy and

urbanization have shown high standard of living also. The study exhibits that states having high share of population below poverty line and population growth like Bihar, Odisha, Arunachal Pradesh, Assam, Chhattisgarh, Madhya Pradesh, Manipur, Uttar Pradesh have witnessed low quality of living. It may be mentioned that high per capita income, literacy and urbanization are indicative of better quality of living whereas poverty and high population growth result into poor quality of living.

Change in quality of living in India at District Level (2001 and 2011): It is evident from Table 3 that there has been remarkable variations in quality of living at the district level in India. In 2001, the number of districts with very high composite index more than 2 S.D. was 15 (2.53% of all districts) while their number decreased to 5 (0.84%) during next Census year i.e. 2011. In contrast, the number of districts with very low composite index increased from 27 (4.55%) to 40 (6.75% of all districts) during the same periods. The study reveals that in 2001 near about 63 districts (11% of the districts) have very good and good quality of living which remained almost same during the next reference period i.e. 2011. In contrast, there were 331 districts (56% of all districts) which have witnessed very low or low quality of living. Notably, in 2011, the districts with very low and low quality of living marginally decreased to 316 (53% of all districts).

Table 3. India: Number of Districts by Composite Index of Households, 2001-2011

Composite Index	Number of Districts	
	2001	2011
Very High (> Mean + 2 S.D.)	15 (2.53)	5 (0.84)
High (Mean + 1 S.D. to Mean + 2 S.D.)	48 (8.09)	61 (10.29)
Moderate (Mean to Mean + 1 S.D.)	199 (33.56)	211 (35.58)
Low (Mean to -1 S.D.)	304 (51.26)	276 (46.54)
Very Low (< Mean to - 1 S.D.)	27 (4.55)	40 (6.75)
Total	593 (100)	593 (100)

Source: Computed from Households and Amenities Data, Census of India 2001 and 2011.
Figure in parentheses show the percent to total districts.

Table 4. India: Top 25 Districts by Very Good Quality of Living, 2001 and 2011

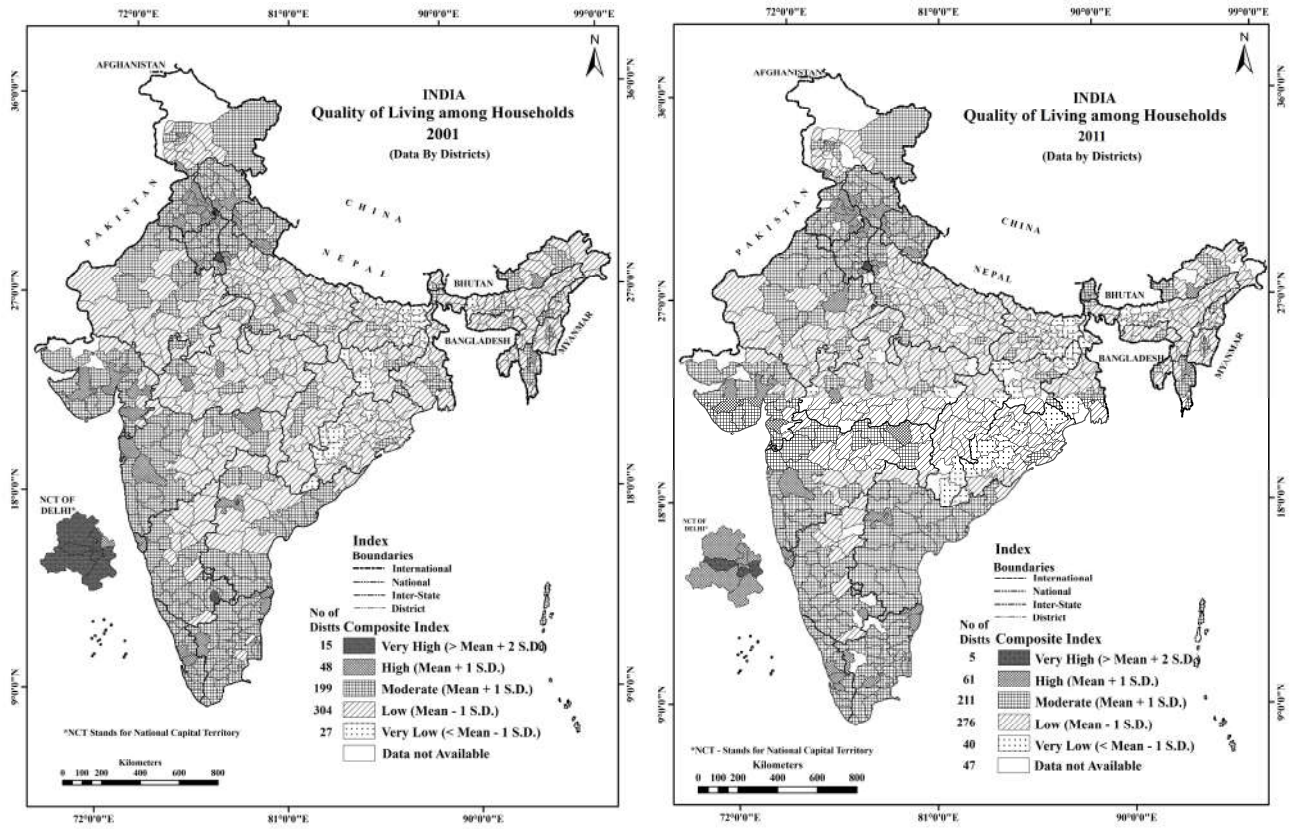
Sr. No.	Districts	States/UTs	2001	Districts	State/UTs	2011
1	Chandigarh	Chandigarh	2.88	East	NCT of Delhi	2.18
2	East Delhi	NCT of Delhi	2.80	Chandigarh	Chandigarh	2.16
3	West Delhi	NCT of Delhi	2.77	Chennai	Tamil Nadu	2.15
4	New Delhi	NCT of Delhi	2.68	New Delhi	NCT of Delhi	2.08
5	Chennai	Tamil Nadu	2.59	West Delhi	NCT of Delhi	2.06
6	Hyderabad	Andhra Pradesh	2.53	Bangalore	Karnataka	2.00
7	Central	NCT of Delhi	2.44	South West	NCT of Delhi	1.99
8	South	NCT of Delhi	2.40	South Delhi	NCT of Delhi	1.91
9	South West	NCT of Delhi	2.35	Central Delhi	NCT of Delhi	1.90
10	Mumbai	Maharashtra	2.30	Hyderabad	Andhra Pradesh	1.90
11	Bangalore	Karnataka	2.26	South Goa	Goa	1.81
12	Panchkula	Haryana	2.20	North Goa	Goa	1.78
13	North West	NCT of Delhi	2.19	North Delhi	NCT of Delhi	1.77
14	North	NCT of Delhi	2.14	Mumbai	Maharashtra	1.76
15	Kolkata	West Bengal	2.09	Panchkula	Haryana	1.72
16	South Goa	Goa	1.96	North West Delhi	NCT of Delhi	1.70
17	Mumbai (Suburban)	Maharashtra	1.96	Dehradun	Uttarakhand	1.69
18	Ahmadabad	Gujarat	1.94	Ahmadabad	Gujarat	1.66
19	North Goa	Goa	1.84	Pune	Maharashtra	1.63
20	Rupnagar	Punjab	1.83	Mumbai (Suburban)	Maharashtra	1.62
21	Jalandhar	Punjab	1.83	Kolkata	West Bengal	1.57
22	Dehradun	Uttarakhand	1.80	North East	NCT of Delhi	1.54
23	Ludhiana	Punjab	1.75	Jalandhar	Punjab	1.48
24	Mahe	Puducherry	1.72	Patiala	Punjab	1.47
25	Indore	Madhya Pradesh	1.70	Ludhiana	Punjab	1.47

Source: *Computed by authors from Census of India Data, 2001 and 2011*

Fig. 2a and Fig. 2b portrays the spatial variations and patterns of quality of living of Indian households at district level in 2001 and 2011. The study shows that there has been remarkable variations in the quality of living at the households level in India. On the basis of the variations and deviation from the mean the quality of living has been assessed by using following five categories:

Areas of Very Good Quality of Living (> Mean + 2 S.D.): It is evident from table 3 and Fig. 2a and Fig. 2b that in 2001, there were 15 districts (2.53% of all districts) which experienced very high composite score i.e. >2 S.D which decreased to 5 (0.84%) in 2011. This decline in share of districts mainly attributed to different pace of development in various segments of quality of living at the districts. It is evident from Fig. 2a and 2b that the districts with very good quality of living didn't form any clear and contiguous geographic pattern and scattered over different part of the study area. The study shows that the majority of these districts have been confined to national capital territory of New Delhi and state headquarters. Table 4 shows that in 2001, Chandigarh district registered very good quality of living at the national level followed by East Delhi, West Delhi, New Delhi, Chennai and Hyderabad districts. On contrary, in 2011, East Delhi district of national capital territory of Delhi replaced the Chandigarh followed by Chennai (Tamil Nadu), New Delhi, West Delhi (NCT of Delhi) and Bangalore districts of Karnataka. The study shows that all these districts do not form any uniform geographic pattern and rather are located in different pockets of the country. The study brings out that the majority of these districts are state headquarters which also experienced earlier initiatives in development activities.

Areas of High Quality of Living (Mean + 1 S.D. to Mean + 2 S.D.): In 2001, there were 8% districts with high quality of living space which increased to 10% in 2011. It is clear from Fig. 2a that concentration of districts with high quality of living were lays near the districts of very good quality of living. A small pockets of districts covering central parts of Gujarat & Kerala and north western parts of Maharashtra have witnessed moderate quality of living in 2001. Besides, eastern parts of Punjab, few districts in the vicinity of national capital territory of New Delhi and Chandigarh also fell in this category. In 2011, as evident from Fig. 2b that almost entire Kerala, Tamil Nadu, and a belt along the Karnataka, Maharashtra and Gujarat coast has registered good quality of living.



Source: Prepared by Authors Based on Census Data, Government of India, 2001 and 2011

Fig. 2a **Fig. 2b**

In 2011, as evident from Fig. 2b that almost entire National capital territory of New Delhi, eastern part of Punjab, central parts of Gujarat and Kerala have recorded good quality of living. In addition, few individual districts with high quality of living were also scattered over the different parts of the country.

Areas of Moderate Quality of Living Space (Mean to Mean + 1 S.D.): It is evident from Figs. 2a and 2b that there has been continues increase in the share of districts with moderate quality of living. In 1971, there were one-third of total districts have witnessed moderate quality of living which marginally increased to 36% in 2011. The study shows that there were two identifiable clusters of districts with moderate quality of living. The first cluster of districts sprawl over southern part of the study area and included almost entire Kerala, Tamil Nadu, central & western parts of Karnataka and western parts of Maharashtra and Gujarat. Another cluster of districts has been registered in northern parts of the study area and covered whole of Haryana, Punjab, Himachal Pradesh, Uttarakhand and northern parts of Rajasthan. The Fig. 2b portraits that in 2011, there has been small expansion in the area under moderate category especially in northern and eastern parts of Andhra Pradesh and Rajasthan. In addition, almost entire Sikkim, western parts of Arunachal Pradesh and central parts of Mizoram also witnessed moderate quality of living.

Areas of Low Quality of Living Space (Mean to -1 S.D.): The proportion of the districts with low quality of living has shown almost similar pattern during study period (Fig. 2a to 2b). In 2001, 304 districts (about half of all districts) have witnessed low quality of living space which slightly decreased to 276 districts (about 47% of all districts) in 2011. Fig 2a shows that large portion of the northern parts of the country covering almost whole of Madhya Pradesh, Uttar Pradesh, Chhattisgarh, western parts of Bihar, southern and western parts of Rajasthan and western parts of West Bengal have recorded low quality of living. Besides, eastern parts of Maharashtra, northern parts of Karnataka, coastal parts of Odisha and Andhra Pradesh have also witnessed low quality of living among households. Notably, in northeast part of the study area, majority of the districts (except headquarter districts) experienced low quality of living space.

The study reveals that in 2011, by and large almost similar pattern has been observed in the study area. The study brings out that the large portion of the study area geographically located in central and northern parts of the country continued with low quality of living among the households.

Areas of Very Low Quality of Living Space (< Mean to - 1 S.D.): The study reveals that in 27 districts (about 5%) the quality of living was very low in 2001 which slowly increased to 40 districts (7%) in 2011. The study reveals that this increase in number of districts could be attributed to slow pace of development of various segment of quality of living in relation to other districts. Fig 2a exhibits that major concentration of districts registering (above -0.50) very low quality of living has been observed in eastern parts of Bihar, western parts of Jharkhand, south western parts of Odisha. In 2011, as evident from Fig. 2b that eastern parts of Bihar, Odisha and Jharkhand continued to be with very poor quality of living. Notably, in north east India almost entire Assam, Tripura, Meghalaya and Manipur have registered very low quality of living. By comparison, in 2011, 195 districts (about one third of all districts) have experienced very low composite score or very poor quality of living among the households. Notably, the majority of the districts of densely populated northern plain of India are characterized by very poor quality of living Space. It is evident from Fig. 2b that almost entire Bihar, Jharkhand, northern and eastern Madhya Pradesh, Chhattisgarh and central parts of Uttar Pradesh have witnessed very poor quality of living in 2011. Table 5 represents the bottom 25 districts of the country which have shown very low quality of living at the households level in 2001 and 2011. It is evident from the table 5 that Araria district of Bihar has witnessed very poor quality of living at the household level followed by Sheohar (Bihar), Nabarangpur (Odisha), Pakaur (Jharkhand) and Malkangiri (Odisha) districts (Table 5). The study also brings out that majority of the bottom ranked districts belongs to two states namely Bihar and Odisha. The study brings out that these two states have also recorded very low level of socio-economic development. In contrast, in 2011, Nabarangapur district of Odisha replaced the Araria district of Bihar and ranked at bottom position among all districts of country with composite score of -1.38 followed by Malkagiri (Odisha), Araria (Bihar), Kalahandi (Odisha).

Table 5. India: Bottom 25 Districts by Very Poor Quality of Living, 2001 and 2011

S.No.	Districts	States/UTs	2001	Districts	State/UTs	2011
1	Araria	Bihar	-1.14	Nabarangapur	Odisha	-1.38
2	Sheohar	Bihar	-1.13	Malkangiri	Odisha	-1.33
3	Nabarangapu	Odisha	-1.12	Araria	Bihar	-1.31
4	Pakaur	Jharkhand	-1.11	Kalahandi	Odisha	-1.30
5	Malkangiri	Odisha	-1.11	Pakur	Jharkhand	-1.30
6	Nuapada	Odisha	-1.11	Nuapada	Odisha	-1.26
7	Kishanganj	Bihar	-1.10	Dhubri	Assam	-1.26
8	Supaul	Bihar	-1.10	Baudh	Odisha	-1.26
9	Garhwa	Jharkhand	-1.09	Kishanganj	Bihar	-1.26
10	Madhepura	Bihar	-1.08	Debagarh	Odisha	-1.25
11	Debagarh	Odisha	-1.08	Madhepura	Bihar	-1.23
12	Baudh	Odisha	-1.07	Purnia	Bihar	-1.22
13	Kalahandi	Odisha	-1.06	Sahibganj	Jharkhand	-1.21
14	Purnia	Bihar	-1.05	Katihar	Bihar	-1.20
15	Pashchim Champaran	Bihar	-1.05	Kandhamal	Odisha	-1.19
16	Sitamarhi	Bihar	-1.05	Gumla	Jharkhand	-1.19
17	Gumla	Jharkhand	-1.04	Garhwa	Jharkhand	-1.19
18	Kokrajhar	Assam	-1.04	Supaul	Bihar	-1.18
19	Khagaria	Bihar	-1.02	Dakshin Bastar Dantewada	Chhattisgarh	-1.15
20	Sahibganj	Bihar	-1.02	Mayurbhanj	Odisha	-1.14
21	Dhubri	Assam	-1.02	Subarnapur	Odisha	-1.14
22	Saharsa	Bihar	-1.02	Saharsa	Bihar	-1.13
23	Katihar	Bihar	-1.02	Balangir	Odisha	-1.12
24	Balangir	Odisha	-1.02	Godda	Bihar	-1.11
25	Chatra	Jharkhand	-1.01	Sitamarhi	Bihar	-1.10

Source: *Computed by authors from Census of India Data, 2001 and 2011*

Notably, in 2011, majority of the bottom ranked districts belongs to five states of India i.e. Odisha, Bihar, Jharkhand, Chhattisgarh and Assam. The study points out that among the 25 bottom ranked districts 19 belongs to two states i.e. Odisha (10 districts) and Bihar (nine districts) states. The comparative analysis of Figs. 2a and 2b shows that by and large almost similar pattern has been emerged in 2011. The study brings out that those districts which were performing well in 2001 continued with further advancement in housing amenities and quality of living while those which were performing poorly in 2001 continued with their poor quality of living at the households level. The study finds out that although they have recorded advancement in various indicators of quality of living but not in pace with other districts during study period. The Figs. 2a and 2b also portraits clear north and south divide in quality of living among the Indian households. The southern half of India especially the majority of districts of Kerala, Tamil Nadu, Andhra Pradesh, Karnataka, Maharashtra and Gujarat have very high and high quality of living at household level. By comparison, northern, eastern and north eastern states of country like Bihar, Odisha, Jharkhand, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, West Bengal and Assam and their districts have witnessed very poor quality of living in terms of housing quality, electrification, health, sanitation cleanliness, information, communication, banking and assets ownership.

CONCLUSIONS

The overall study indicates that the quality of living space in India has shown some qualitative improvement in housing quality, health, sanitation and cleanliness, electrification, fuel consumption, information, communication and banking access and assets ownerships from 2001 to 2011. However, there are still considerable gaps at the state and district levels which need to be addressed. Notably, the spatial variations in the quality of living space may be attributed to increasing population, poor economic conditions, low level of social development and varying geographical conditions in the country. The study finds out that the states/UTs namely Goa, Kerala, Punjab, Haryana, Tamil Nadu, Delhi and Chandigarh have very good and good quality of living whereas the states like Bihar, Madhya Pradesh, Uttar Pradesh, Odisha, Assam, Chhattisgarh, Jharkhand and north Indian states have very poor and poor quality of living during both Censuses years. It is evident from study that there is positive and significant relationship between quality of living and urbanization (0.77), literacy (0.71) and per capita income (0.68) while negative correlation between quality of living and poverty (-0.80) and population growth (-0.11). Therefore, it can be infer from the study that per capita income, literacy and urbanization promoted quality of living whereas poverty and high population growth tend to low the quality of living. The district level analysis reveals that almost similar pattern has been emerged during study period. It is evident from the study that those districts which were performing well in 2001 continued with advancement in housing amenities and quality of living space while those which were performing poorly continued with their poor quality of living at the household level during the study period. The study indicates that although they have recorded advancement in various indicators of quality of life but not in pace with other districts. The study finds out that even after the 68 years of independence, only one-tenth of districts (63 districts) of the country has witnessed very good and good quality of living. Surprisingly, half of the districts (about 53% of all districts) have very low or low quality of living among the households. The study also portraits clear north and south divide in quality of living among the Indian households. The southern half of India especially the majority of districts of Kerala, Tamil Nadu, Andhra Pradesh, Karnataka, Maharashtra and Gujarat have good and moderate quality of living among households. By comparison, northern, eastern and north eastern states of country like Bihar, Odisha, Jharkhand, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, West Bengal and Assam and their districts have witnessed very poor or poor quality of living in terms of housing quality, electrification, health, sanitation cleanliness, information, communication, banking and assets ownership. It may be suggested that for the better quality of living space, the existing socio economic and political system are need to be improved and strengthened. The study also call for the detailed investigation of the process responsible for varying quality of living space at the micro level during the study period.

REFERENCES

Census of India. 2001. As per the CD Issued by the Office of Registrar General. New Delhi: Government of India.

Census of India. 2011. As per the CD Issued by the Office of Registrar General. New Delhi: Government of India.

Diener, E. and Suh, S. 1997. Measuring quality of life: Economic, social and subjective indicators. Social Indicators Research, 40: 189.

Hasalkar, S. E. 2002. A micro view of energy consumption in the households ecosystem. Journal of Human Ecology, 13 (6): 437-41.

Krishnakumar, P. 2001. "The quality of life of low-income groups: A micro level study". Discussion Paper (34), Centre for Development Studies, Thiruvananthapuram, Kerala.

Lambiri, *et al*. 2007. Quality of life in the economic and urban economic literature. Social Indicators Research, 84: 1-25.

Mercer, 2007. Human Resource Consulting. LLC. New York, NY.

P, Jose, Chacko. 2003. Regional variations in household energy consumption: Empirical evidences from rural Kerala. Indian Journal of Regional Science, 35(1): 109-121.

Qureshi, M.H. *et al*. 1986. Housing and sanitation in rural areas: A micro level analysis. The Indian Geographical journal, 71 (2): 81-93.

Rajgopal, L.S. and Mishra, N. 1994. Fuel energy consumption pattern in selected households in Orissa state. Research Highlights, 4(1): 65-69.

Thakur, B.R. and Jaglan, M.S. 2006. Quality of Life of gaddi tribal community in Bharmaur region of Himachal Pradesh. Indian Journal of Social Research, 47 (1): 7-25.

Walfgang, G. and Micro, M. H. 1987. Quality of life: Concept and measurement. Social Indicator Research, 19(1): 15-23.

****