



# punjab geographer



A PEER REVIEWED AND REFEREED JOURNAL OF APG AND ISPER INDIA

VOLUME 15

ISSN- 0973-3485

OCTOBER 2019



## QUALITY OF LIVING SPACE OF SCHEDULED CASTE POPULATION IN RURAL HARYANA

K. V. Chamar  
S. Bairagi

### Abstract

*Availability of household assets and amenities reflects a household's quality of life. In modern life, household possessions are both the sign of social status and instruments for a better life among various social groups. Therefore, the present research work is an attempt to analyze the quality of living space of scheduled caste population in rural Haryana. Tehsil-wise census data for the year 2011 on 14 select indicators have been collected and used to derive the levels of quality of living space. The analysis reveals marked regional variations in quality of living space in rural Haryana. Relatively better quality of living space among scheduled castes is observed in eastern parts of the state while low and very low quality of living space is witnessed mainly in central parts and extreme south-eastern part of the state. In respect of tehsils, Gurgaon tehsil has attained the highest position, while Punahana tehsil has witnessed lowest position in availability of household amenities among the scheduled castes in rural Haryana. Although, 95 per cent households have their own house, yet only 4 per cent households have the facility of closed drainage and only seven per cent have four or more rooms in the house.*

### Introduction

House is a social concept. Its nature and cognition vary with caste, class, religion and region. It holds a most significant place in the geographical hierarchy of phenomena, reflecting the cultural heritage of the people who build them (Unni, 1965). Environmental and economic conditions of the people are reflected in the use of building materials. The rich and well-to-do people generally build their houses with burnt bricks while the poor class lives in mud walled and grass/thatch/bamboo roofed houses.

Availability of household assets and amenities reflects a household's quality of life. In modern life, household possessions are both, a sign of social status and instruments for better

life among various social groups. 'Quality of living space' is a multi-dimensional concept, which includes economic, social, demographic and cultural dimensions of human life. Various domains of life such as housing, health and social relations are taken into consideration in order to monitor the quality of life (Glatzer and Hans, 1987). The quality of life as, 'the state of social wellbeing' of an individual or group, can either be perceived or identified by observable indicators' (Johnston et al., 1994).

The use of the term 'Scheduled Castes', for the communities placed at the lowest level of the caste hierarchy in India, was first time adopted as an official terminology in Government of India Act, 1935 and notified under the provision of Indian constitution

(Article-341). Scheduled castes, as defined by the constitution in 1950, include all the people covered under the category of *Shudras* and other castes that too had suffered similar neglect and had remained backward. Census of India has been collecting and publishing detailed data on various socio-economic and demographic characteristics of individual castes of the scheduled castes in the country since 1961. This treasure of wealth failed to attract the attention of researchers, academicians and even the government organizations (Kant, 2016).

The study on rural dwelling as a broad theme has been a popular topic of research among geographers, educationists, economists, demographers, medical practitioners, health planners, the media and government organizations. Geographers and other scholars have carried out many detailed studies on kind, conditions and quality of household amenities prevailing in rural dwellings at district, state and national levels from time to time (Bhagat and Sharma, 2001; Chamar, 2002; Singh et al., 2013; Tiwari and Nayak, 2013; Krishan, 2017 and Dave, 2018). However, most of the studies carried out are focused on the housing conditions in general and not for any particular caste group. Therefore, this study has been taken up to assess the quality of living space of the scheduled castes in rural Haryana.

### Objective of the Study

Major objective of the present study is to examine the 'quality of living space among scheduled castes living in rural areas of Haryana'.

### Study Area

The state of Haryana extending between latitudes of 27° 39' 0" to 30° 55' 5" north and longitudes of 74° 27' 8" to 77° 36' 5" east is located in the north-western part of India. The

total area of the state is 44212 km<sup>2</sup>. Physiographically, Haryana is largely plain and featureless whereas the western part is occasionally traversed by small modified sand dunes. There is Siwalik system in the northeast and the outliers of Aravallis in the southern parts. For administrative purposes, the state has been divided into 21 districts and 74 tehsils (Fig.1). The total rural population of Haryana is 165.09 lakh which resides in 30.44 lakh households. The rural population of scheduled caste in Haryana is 37.20 lakh persons residing in 7.23 lakh households. The average literacy rate among scheduled castes is 65.75 per cent in rural Haryana. The household size is recorded as 5.1 persons/household, while sex ratio is 985 females/1000 males in rural Haryana among scheduled castes.

### Database and Methodology

Tehsil-wise census data of 2011 on various aspects of housing conditions have been used for the present research work. To identify the levels of quality of living space among scheduled castes fourteen indicators such as good condition of census houses ( $x_1$ ), concrete roof ( $x_2$ ), burnt brick wall ( $x_3$ ), cement/mosaic/tile floor ( $x_4$ ), four and more rooms ( $x_5$ ), owned houses ( $x_6$ ), treated tap water ( $x_7$ ), electricity ( $x_8$ ), latrine facility within the house ( $x_9$ ), bath room with roof ( $x_{10}$ ), closed drainage outlet connection ( $x_{11}$ ), LPG/PNG as cooking fuel ( $x_{12}$ ), kitchen inside the house ( $x_{13}$ ), and permanent census houses ( $x_{14}$ ), have been taken up in this study.

To find out the levels of quality of living space, 'Z score' in respect to each of the indicator in a tehsil has been calculated as under:

$$Z \text{ score} = \frac{x - \bar{x}}{\sigma}$$

where,  $x$  is percentage value of the indicator in a tehsil,  $\bar{x}$  is mean value of the indicator and  $\sigma$  is



Fig. 1

standard deviation. The 'Z scores' of all the selected 14 variables thus arrived have been added to obtain the 'composite Z score'. On the basis of 'composite Z scores', levels of quality of living space at tehsil level among scheduled castes in rural Haryana have been identified. Finally, maps were prepared with the help of Arc GIS (Arc Map Version 10.1) and tables were drawn to interpret and analyze the results.

## **Results and Discussion**

### **Levels of Quality of Living Space**

The quality of living space among scheduled castes is marked by striking regional variations in rural Haryana. A wide range of variation in composite 'Z scores' has been obtained on the basis of indicators on selected housing conditions and facilities. It varies from a maximum of 20.08 composite scores recorded by Gurgaon tehsil to minimum of minus 21.93 scores composite witnessed by Punaahana tehsil. Further, to describe the regional variations in quality of living space among scheduled castes, following six types of areas have been identified:

#### **(i) Areas of Very High Level of Quality of Living Space**

The tehsils recording composite Z score more than 10.0 are included in this category of areas of very high level of quality of living space among scheduled castes (Table 1A; Fig. 2). This category is represented by only four tehsils namely Gurgaon with a composite score of 20.08 followed by Kalka (19.89), Ambala (14.10) and Panchkula (13.82). Barring Gurgaon, all other tehsils are located in north-eastern part of Haryana. It may also be noted that while Gurgaon enjoys close proximity to National Capital Territory (NCT) of Delhi; Kalka, Ambala and Panchkula area in close vicinity of the state capital, Chandigarh. Such a high values of composite Z score recorded by

areas of very high quality of living space are mainly due to better facilities and amenities like good condition of houses, concrete roof and cement/mosaic/tile floor, four and above number of rooms, bath room with roof, closed drainage outlet connection, use of LPG/PNG and facilities of kitchen inside the house etc. available in the households. The impact of close proximity of state capital and national capital cannot be ignored in the attainment of such quality of living facilities in these tehsils.

#### **(ii) Areas of High Level of Quality of Living Space**

The tehsils that have recorded composite Z score between 5.0 and 10.0 are included in this category. This category is represented by 11 tehsils and all are located in the eastern sector of Haryana (Table 1A; Fig. 2). It may be noted that the eastern sector of the state has better transport facilities and high literacy rate (more than 70 per cent) as compared to western sector which have affected the level of quality of living space in these tehsils. Manesar tehsil with composite scores of 9.49 tops the list. This is followed by Naraingarh (9.15), Faridabad (8.38), Barara (8.26) and Thanesar (8.07) tehsils. Manesar tehsil is marked with better facilities and amenities like cement/mosaic/tile floor, use of LPG/PNG, closed drainage outlet connection, good condition houses, bath room with roof and permanent houses. Likewise in Naraingarh tehsil, the households have better facilities and amenities such as kitchen inside the house, concrete roof, four and above number of rooms in the house and facility of treated tap water. Similarly, better facilities and amenities in the households like good condition houses, cement/mosaic/tile floor, closed drainage outlet connection, permanent houses and latrine facility within the house are observed in Faridabad tehsil. Availability of kitchen facility

**Table 1A**  
**Rural Haryana: Tehsil-wise Z Scores of Selected Amenities of Scheduled Caste' Households, 2011**

Tehsil	x <sub>1</sub>	x <sub>2</sub>	x <sub>3</sub>	x <sub>4</sub>	x <sub>5</sub>	x <sub>6</sub>	x <sub>7</sub>	x <sub>8</sub>	x <sub>9</sub>	x <sub>10</sub>	x <sub>11</sub>	x <sub>12</sub>	x <sub>13</sub>	x <sub>14</sub>	Composite Z Score
Gurgaon	1.84	0.11	-0.63	2.04	2.00	-1.56	0.95	1.26	1.73	2.91	3.59	2.85	1.61	1.38	20.08
Kalka	2.49	4.09	-0.48	2.34	4.05	-3.58	1.46	0.63	-0.09	1.34	1.33	3.26	2.07	0.98	19.89
Ambala	1.16	1.21	-0.25	0.22	1.22	0.27	1.09	1.34	-0.20	1.57	2.21	2.06	2.12	0.06	14.10
Panchkula	2.26	2.85	-0.32	0.79	2.62	-1.69	1.71	0.61	-0.87	1.20	1.27	1.10	2.36	-0.07	13.82
Manesar	1.87	-0.09	0.15	2.49	0.10	-4.79	0.54	0.69	0.76	1.81	1.88	2.46	0.23	1.40	9.49
Naraingarh	0.85	2.19	0.29	-0.34	1.10	0.31	1.06	0.93	-1.18	0.36	0.77	0.56	2.27	-0.02	9.15
Faridabad	2.32	-0.30	-0.67	1.35	0.79	-0.38	-0.69	0.55	1.09	0.94	1.27	0.74	0.23	1.13	8.38
Barara	0.19	1.39	0.49	-0.60	0.95	0.83	1.29	1.22	-0.86	0.26	0.44	1.06	1.87	-0.27	8.26
Thanesar	0.25	1.21	0.45	-0.37	-0.33	-0.38	1.09	1.13	0.83	1.07	0.94	1.00	1.13	0.04	8.07
Farukhagar	1.06	-0.13	0.78	1.58	0.52	0.31	0.18	0.13	-0.06	0.43	0.22	1.03	0.36	1.37	7.77
Shahabad	-0.16	0.91	0.75	-0.49	-0.45	-0.05	1.60	1.18	0.36	0.78	0.11	0.48	1.39	0.15	6.56
Pataudi	1.90	0.03	0.87	1.11	-0.56	1.03	0.28	-0.33	-0.35	-0.21	0.00	0.59	0.25	1.43	6.05
Jagadhari	-0.01	2.33	0.18	-0.69	-0.10	0.67	0.71	1.31	-0.61	-0.17	-0.33	0.55	1.97	-0.03	5.78
Bahadurgarh	-0.10	-0.62	-0.10	0.69	0.48	-0.15	0.03	0.48	0.29	1.27	0.77	1.00	0.64	0.74	5.42
Karnal	-0.04	0.50	0.20	-0.38	-0.87	-0.02	0.99	1.06	1.14	0.65	0.72	1.13	0.25	-0.13	5.18
Nilokheri	0.58	0.64	0.86	-0.44	-1.03	0.60	1.39	1.09	0.60	0.56	-0.72	0.68	0.20	-0.60	4.41
Panipat	-0.07	0.05	0.51	0.14	-0.02	-1.10	-0.50	0.81	0.99	0.95	1.66	1.15	0.01	-0.18	4.40
Israna	1.52	-0.58	1.24	-0.51	0.06	0.86	-0.51	0.68	0.71	0.91	-1.27	1.26	-0.27	-0.65	3.45
Rewari	0.73	-0.07	-0.48	1.58	0.14	0.18	-0.03	-0.22	-0.41	-0.11	0.06	0.17	0.54	1.33	3.41
Kosli	-0.43	0.38	0.34	1.14	0.64	0.80	-0.16	-0.19	-0.43	-0.22	-0.22	-0.47	0.59	1.31	3.08
Jhajjar	-0.12	-0.67	0.86	0.16	0.64	0.93	-0.41	0.25	-0.24	0.43	0.06	-0.38	0.30	0.88	2.69
Sohna	0.98	-0.51	-0.02	1.30	-0.29	0.76	-0.60	-0.31	-0.43	-0.14	0.06	0.71	-0.32	1.32	2.50
Indri	-0.26	0.76	0.60	-0.99	-1.10	0.70	1.25	0.76	0.52	-0.02	-0.99	0.09	0.56	0.51	2.39
Sonapat	-0.92	-0.59	0.41	0.48	0.48	-1.10	-1.10	0.51	0.31	1.06	1.16	1.28	-0.01	0.36	2.34
Pehowa	-0.32	0.39	-0.09	-0.59	-0.91	-0.90	0.92	1.04	0.74	0.44	1.82	0.15	0.23	-0.65	2.28
Sampla	-0.24	-0.69	1.04	0.37	0.25	0.01	-0.23	0.61	-0.07	0.86	-0.44	0.08	-0.09	-0.02	1.45
Ch. Dadri	0.31	-0.18	-0.12	0.49	0.68	0.05	0.06	-0.40	-0.70	-0.23	0.88	-0.29	0.51	0.39	1.44
Bilaspur	0.07	2.30	0.27	-0.99	0.02	1.25	0.43	1.03	-1.67	-1.26	-1.27	-0.22	1.77	-0.33	1.39
Chhachhrauli	-0.35	3.33	-0.23	-0.96	-1.07	0.99	0.15	0.70	-1.31	-1.28	0.55	-0.64	1.31	0.17	1.39
Rohtak	-0.43	-0.69	0.76	-0.10	-0.02	0.99	0.40	0.81	0.13	1.05	-0.77	0.02	0.05	-0.84	1.36
Bawal	1.80	-0.45	-0.55	1.51	0.37	1.12	-1.14	0.02	-1.05	-0.76	-0.88	-0.22	0.16	1.30	1.23
Samalkha	-0.13	-0.47	0.53	-0.11	-0.14	-1.16	-0.40	0.89	0.73	0.92	-0.83	1.25	-0.08	0.21	1.19
Hisar	-0.18	-0.21	0.49	-0.73	1.14	0.08	0.85	-0.43	0.81	0.74	0.00	-0.65	0.00	-0.81	1.11
Tohana	-0.40	0.09	0.60	-1.02	-0.68	-0.05	0.46	0.62	1.32	0.60	0.00	-0.14	-0.35	-0.51	0.56
Kharkhoda	-0.40	-0.76	1.05	0.04	-0.06	0.34	-0.57	0.81	-0.02	0.91	-0.66	0.29	-0.02	-0.54	0.41
Ballabgarh	0.47	-0.62	0.06	1.28	-0.41	-0.28	-0.94	0.18	-0.13	-0.02	-0.66	0.56	-0.35	1.15	0.30
Gharaunda	-0.12	-0.12	0.09	-0.40	-0.83	-0.25	0.91	-0.21	0.60	0.40	-0.44	0.71	-0.33	0.26	0.28

Source: Compiled by Authors

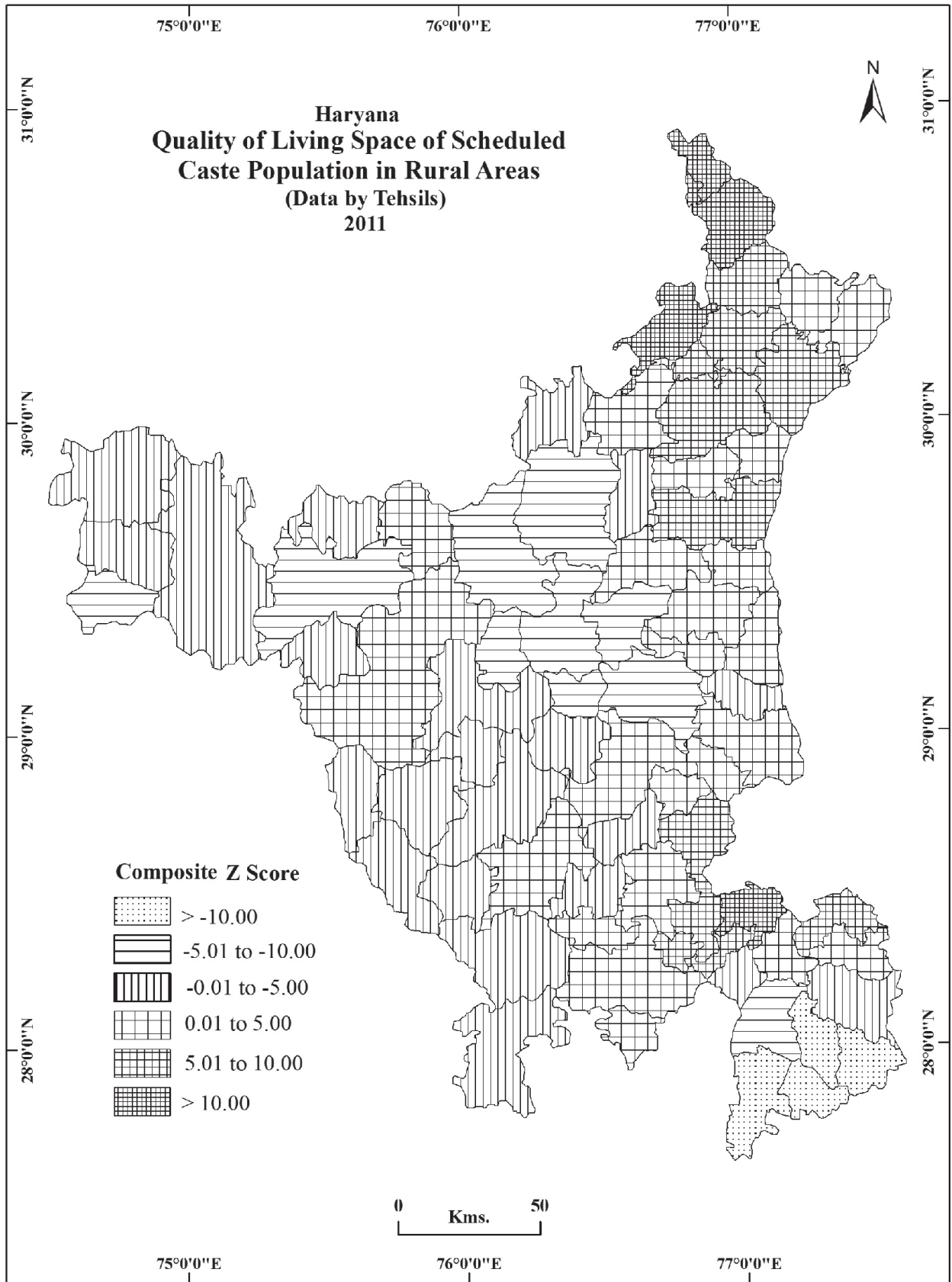


Fig. 2

inside the house, concrete roof, treated tap water, electricity and use of LPG/PNG as cooking fuel are responsible for high composite score recorded by Barara tehsil. Thanesar tehsil having good facilities like concrete roof, electricity, kitchen inside the house, treated tap water, bath room with roof and facilities of use of LPG/PNG as cooking fuel is also included in areas of high quality of living space. Apart from these tehsils, the tehsils like Farukhnagar, Shahabad, Pataudi, Jagadhari, Bahadurgarh and Karnal also fall in this category (Table 1A; Fig. 2).

### **(iii) Areas of Moderately High Level of Quality of Living Space**

The tehsils recording composite Z score of 0.01 to 5.0 are included in this category. The moderately high quality of living space is witnessed by 23 tehsils accommodating nearly 1/3rd (31 per cent) of the total scheduled caste population of rural Haryana (Fig. 2). Leaving aside, Charkhi Dadri, Hisar and Tohana, most of the other tehsils falling in this category are located in the eastern sector of Haryana. As already pointed out that eastern sector of the state has better socio-economic conditions which have affected the level of quality of living space to a considerable extent. By recording composite scores of 4.41, Nilokheri tehsil tops in this category. This tehsil has better facilities and amenities like treated tap water and electricity and moderately better position in good condition houses, concrete roof, brunt brick wall, own houses, latrine facility within the house, bath room with roof and use of LPG/PNG. This is followed by Panipat (4.40), Israna (3.45) Rewari (3.41) and Kosli tehsil (3.08). The better facilities and amenities like closed drainage outlet connection and use of LPG/PNG as cooking fuel and moderately better amenities such as brunt brick wall, electricity, latrine facility, bath room with roof

within the house are observed in the households of Panipat tehsil. The scheduled caste households in Israna tehsil have also better facilities and amenities such as good condition houses, use of LPG/PNG as cooking fuel, brunt brick wall, and moderately better facilities like own houses, electricity, latrine facility within the house and bath room with roof. The availability of facilities like cement/mosaic/tile floor, permanent houses, good condition houses and kitchen facility inside the house are responsible for witnessing moderately high composite score by Rewari tehsil. While Kosli tehsil has been included in this category due to the availability of facilities and amenities like permanent houses, cement/mosaic/tile floor, own houses, four and above number of rooms and kitchen inside the house. Similarly, the tehsils of Bilaspur and Bawal also have better facilities and amenities like concrete roof, kitchen inside the house, own houses, electricity and good condition houses, cement/mosaic/tile floor, permanent houses and owned houses respectively. Apart from the above, the tehsils like Jhajjar, Sohna, Indri, Sonipat, Pehowa, Sampla, Chhachhrauli and Rohtak are other important tehsils that also come under this category of areas having moderately high level of quality of living space (Table 1A; Fig. 2).

### **(iv) Areas of Moderate Level of Quality of Living Space**

The tehsils recording composite Z score ranging between minus 0.01 to minus 5.0 are included in this category (Table 1 B). The moderate quality of living space is recorded by 22 tehsils. Leaving aside, the tehsils of Fatehpur Pundri, Ganaur, Beri, Matenhail, Taoru and Palwal, all other tehsils of this category are located in western Haryana, which is socio-economically less developed than the eastern parts of the state due to less fertile soils



**Table 1B**  
**Rural Haryana: Tehsil-wise Z Scores of Selected Amenities of Scheduled Caste' Households, 2011**

Tehsil	x <sub>1</sub>	x <sub>2</sub>	x <sub>3</sub>	x <sub>4</sub>	x <sub>5</sub>	x <sub>6</sub>	x <sub>7</sub>	x <sub>8</sub>	x <sub>9</sub>	x <sub>10</sub>	x <sub>11</sub>	x <sub>12</sub>	x <sub>13</sub>	x <sub>14</sub>	Composite Z Score
Assandh	-0.41	-0.24	0.39	-0.64	-0.76	0.80	-0.06	0.63	0.98	0.58	-0.33	0.15	-0.23	-0.83	0.03
Matenhail	-0.38	-0.65	0.50	0.31	0.21	0.34	0.05	-0.45	-0.62	-0.09	0.11	-0.43	0.09	0.93	-0.08
Dabwali	0.48	-0.71	-1.44	-1.61	0.87	-0.25	2.00	-0.17	2.92	-0.25	0.33	-1.35	-1.14	0.05	-0.26
Ganaur	-0.49	-0.62	0.89	0.19	-0.02	0.08	-0.86	0.69	-0.29	0.25	-0.83	0.99	-0.43	0.05	-0.39
Loharu	0.76	-0.69	-0.68	1.44	0.83	0.08	-1.35	-1.29	-0.75	-0.14	0.55	-1.05	0.96	0.83	-0.51
Tosham	-0.29	-0.31	0.27	0.25	0.33	0.86	0.59	-0.58	-1.02	-0.36	-0.44	-0.89	0.56	-0.46	-1.48
Adampur	0.85	-0.28	-0.94	-1.30	1.34	-0.12	1.86	-1.57	0.91	-0.59	-0.77	-1.06	0.28	-0.29	-1.68
Beri	-0.50	-0.65	0.08	-0.17	-0.17	0.31	-0.39	-0.19	-0.06	0.54	-0.06	-0.75	0.34	-0.12	-1.80
Sirsa	-0.30	-0.15	-0.97	-1.40	0.48	-0.54	1.39	0.21	1.95	-0.50	-0.22	-1.01	-0.70	-0.21	-1.97
Badhra	0.39	-0.58	-0.03	1.20	-0.21	0.96	-1.28	-0.90	-1.04	-0.31	-1.38	-0.72	0.75	1.03	-2.12
Bawani Khera	-1.57	-0.60	1.03	-0.64	0.72	1.09	0.85	-0.15	-0.06	0.42	-0.94	-0.65	-0.34	-1.38	-2.22
Taoru	1.64	-0.36	-0.60	1.50	-0.68	0.44	-0.89	-1.81	-1.24	-1.26	-0.44	0.49	-0.65	1.15	-2.71
Meham	-1.03	-0.76	0.95	-0.33	-0.21	0.44	-0.22	0.16	-0.10	0.56	0.17	-0.40	-0.55	-1.42	-2.76
Mahendergarh	0.35	0.06	-0.19	1.27	-0.33	0.44	-1.00	-1.84	-0.91	-0.88	-0.55	-0.67	0.03	1.18	-3.05
Ratia	0.38	-0.34	0.58	-1.25	-0.83	0.11	0.17	-0.19	2.04	-1.12	-0.83	-0.86	-1.05	0.01	-3.18
Guhla	-0.66	0.20	-0.11	-1.04	-0.83	-0.22	-0.73	1.00	0.66	0.34	0.50	-0.97	-0.27	-1.23	-3.36
Rania	0.18	-0.19	-1.78	-1.55	0.41	-0.05	1.75	-0.14	2.21	-0.95	-0.55	-1.12	-1.19	-0.40	-3.39
Hansi	-1.31	-0.65	1.14	-0.97	0.91	0.76	0.02	-0.37	0.20	0.65	-0.77	-0.72	-0.45	-2.12	-3.68
Bhiwani	-0.64	-0.56	0.35	-0.01	0.33	0.27	-0.66	-0.46	-0.78	-0.33	-0.50	-0.43	-0.33	-0.71	-4.46
F. Pundri	-0.75	-0.14	0.04	-0.69	-1.26	0.27	-0.59	1.00	-0.03	-0.13	0.17	-0.51	-0.68	-1.26	-4.58
Palwal	0.18	-0.70	0.07	0.38	-0.76	0.90	-0.89	-0.72	-1.09	-1.07	-0.83	-0.21	-0.95	1.06	-4.64
Narnaul	1.13	-0.08	-3.44	1.89	0.25	-0.12	-1.43	-1.42	-1.13	-1.27	0.22	-0.24	-0.34	1.29	-4.67
Siwani	-1.34	-0.58	-0.91	-0.25	0.48	0.47	0.81	-1.47	-0.65	-0.52	-0.44	-0.98	0.27	0.40	-4.70
Jind	-0.55	-0.43	0.79	-0.68	-0.56	-0.15	-0.98	0.46	0.19	0.13	0.06	-0.38	-1.07	-1.98	-5.14
Fatehabad	-0.60	-0.42	-0.25	-1.15	0.52	-1.03	1.17	-0.69	0.68	-0.77	-0.88	-0.75	-0.45	-0.54	-5.15
Safidon	-0.36	-0.50	0.55	-0.60	-1.18	-1.69	-0.92	0.02	0.46	-0.08	2.21	-0.54	-1.11	-1.52	-5.26
Gohana	-1.07	-0.70	1.02	-0.46	-0.64	0.11	-0.84	0.52	-0.58	-0.11	-0.33	-0.38	-0.86	-1.00	-5.32
Narwana	-1.14	-0.40	0.86	-0.88	-0.41	-0.44	-0.49	0.07	-0.29	-0.16	0.55	-1.06	-1.22	-1.98	-6.98
Julana	-1.04	-0.64	0.48	-0.63	-0.76	-1.29	-1.26	-0.32	0.27	0.09	1.93	-1.02	-1.17	-1.89	-7.25
Ellonabad	-0.84	-0.13	-2.67	-1.67	1.41	-1.10	0.75	-0.32	2.10	-0.86	-0.99	-1.27	-1.00	-0.76	-7.36
Kaithal	-0.75	-0.37	0.01	-0.88	-1.34	0.37	-0.90	0.76	-0.12	-0.39	-0.33	-0.67	-0.94	-1.90	-7.44
Narnaund	-1.24	-0.66	1.04	-0.89	0.48	0.60	-1.30	-0.44	-0.24	-0.04	-0.99	-0.86	-1.06	-2.21	-7.81
Nuh	-1.54	-0.38	-0.69	0.30	-1.22	0.01	-1.23	-1.42	-1.26	-1.69	-0.22	-0.36	-1.10	0.85	-9.95
Hodal	-1.15	-0.79	0.59	0.25	-1.61	0.57	-0.93	-1.48	-1.54	-2.05	-1.22	-0.82	-1.58	1.20	-10.56
Hathin	-1.18	-0.78	-0.13	-0.15	-1.45	0.96	-0.40	-2.17	-1.58	-2.16	-1.60	-0.94	-1.66	1.08	-12.18
F. Jhirka	-1.54	-0.56	-3.89	0.10	-1.69	0.44	-1.89	-3.13	-1.61	-2.73	-1.38	-1.34	-1.98	0.29	-20.91
Punahana	-1.68	-0.65	-2.85	-0.63	-2.03	-0.41	-2.45	-3.09	-1.55	-2.74	-1.05	-1.46	-1.94	0.60	-21.93

Source: Compiled by Authors

and lack of transport facilities. The tehsil Matenhail with composite score of minus 0.08 tops in this category followed by tehsils of Dabwali (-0.26), Ganaur (-0.39) and Loharu (-0.51). Out of 14 indicators taken in this study, Matenhail tehsil has witnessed moderate to moderately high facilities and amenities in eight indicators like treated tap water, kitchen inside the house, closed drainage outlet connection, four and above number of rooms, cement/mosaic/tile floor, own house, burnt brick wall and permanent houses. Similarly, Dabwali tehsil recorded moderate to highly better facilities and amenities in six indicators such as permanent houses, closed drainage outlet connection, good condition houses, four and above number of rooms, treated tap water and availability of latrine facility. Likewise, in Ganaur tehsil, the households have moderately better facilities and amenities such as use of LPG/PNG, burnt brick wall and electricity along with moderate conditions like bath room with roof, cement/mosaic/tile floor, own houses and permanent houses. The availability of facilities like cement/mosaic/tile floor, kitchen inside the house, four and above number of rooms, permanent houses, good condition houses and closed drainage outlet connection is responsible for moderate composite score recorded by Loharu tehsil. Besides that some other important tehsils like Adampur, Badhra, Bawani Khera, Taoru, Mahendergarh, Narnaul, Tosham, Beri, Sirsa, Meham and Ratia by recording moderate to better facilities and amenities in five or above indicators also come in the category of moderate level of quality of living space.

#### **(v) Areas of Low Level of Quality of Living Space**

The tehsils with the values of composite Z score ranging from minus 5.01 to minus 10.0 are included in this category. Ten tehsils,

spreading over most of the central and western parts of the study area come under this category. The tehsils namely Jind (-5.14), Safidon (-5.26), Gohana (-5.32), Narwana (-6.98), Julana (-7.25), Kaithal (-7.44) and Narnaund (-7.81) forming single largest contiguous patch are located in central part of the study area (Fig. 2). In addition, three pockets of low level of quality of living space each represented by one tehsil of Ellenabad, Fatehabad and Nuh can be seen in western and southeastern parts. The scheduled castes in these tehsils are largely engaged in agricultural sector. In general, the standard of living among the scheduled castes is poor in these tehsils. This can further be seen in relation with very low level of urbanization and low literacy rate within the area. None of the indicators could record Z score value of more than 2.0 in the tehsils falling in this category except than Ellenabad tehsil which has recorded more than 2.0 Z score in latrine facility within the house (Table 1 B). Among these tehsils the highest negative Z score (-9.95) is recorded by Nuh tehsil. Nuh tehsil is a part of Mewat region which, in general, did not attract developmental activities at par with other regions of the state. A significant portion of the population is Muslim known for low level of social and economic development, hence, overall quality of life is very poor. Thus, in terms of, good condition houses, number of dwelling rooms, facilities of treated tap water, electricity, latrine, bath room with roof and inside kitchen among scheduled castes households Nuh tehsil ranks the lowest. Similarly, Julana tehsil is also marked with poor condition in the facilities like good condition houses, own houses, treated tap water, use of LPG/PNG as cooking fuel, kitchen inside the house and permanent houses. In fact, poor availability is also observed in the facilities like kitchen inside the house and permanent houses in majority of the tehsils of this category.

However, moderate condition is found in the facility of concrete roofs in the households of all the ten tehsils forming this category as mud houses are being replaced with pucca houses with concrete roofs.

**(vi) Areas of Very Low Level of Quality of Living Space**

Only four tehsils, namely Punahana (-21.93), Ferozpur Jhirka (-20.91), Hathin (-12.18) and Hodal (-10.56) recording Z score more than minus 10.0 fall under this category (Table 1 B). All the four tehsils are located in extreme southeastern part of the study area. It may also be noted that this part of the study area is dominated by Muslim population. In general, the standard of living among the scheduled castes is very poor in these tehsils. This can further be seen in relation to very low level of urbanization and low literacy rate within the area. None of the indicators could attain Z score more than 2.0 in all the four tehsils. The very high negative composite Z scores recorded by these tehsils is because of very poor conditions and lack of facilities and amenities in the houses like good condition houses, number of dwelling rooms, facilities of latrine, closed drainage waste water and kitchen inside the house. Likewise, extremely poor condition is

observed in the facility of bath room with roof in the houses in all the four tehsils of this category.

**Availability of Household Amenities**

Tehsils recording highest and lowest positions in availability of different household amenities are presented in Table 2. The study on the whole reveals that Kalka tehsil witnessed highest Z scores in amenities like material of roof, number of dwelling rooms, fuel used for cooking and condition of house. Thus, out of 14 variables, Kalka tehsil attained highest position in four variables. Kalka tehsil is followed by Gurgaon tehsil with highest position in two amenities like waste water disposal and bathroom with roof facility. However, it must be cleared that taking in to account all the amenities under study, Gurgaon tehsil has attained highest position in the state followed by Kalka tehsil (Table 1A). Like Gurgaon tehsil, Dabwali tehsil also recorded highest position in availability of latrine and treated tap water facilities in the house. However, there are tehsils like Manesar, Panchkula, Pataudi, Ambala, Bilaspur and Israna which have respectively recorded highest position only in one amenity such as material of floor, kitchen inside the house, permanent house, source of

**Table 2**  
**Rural Haryana: Tehsils Recording Highest and Lowest Position in Quality of Amenities, 2011**

Household Amenities	Quality of Amenities	Tehsils and Z Score Value			
		Tehsils	Maximum	Tehsils	Minimum
Material of Roof	Concrete	Kalka	4.09	Hodal	-0.79
Number of Dwelling Rooms	Four & Above	Kalka	4.05	Punhana	-2.03
Waste Water (Outlet Connection)	Closed Drainage	Gurgaon	3.59	Hathin	-1.60
Fuel Used for Cooking	LPG/ PNG	Kalka	3.26	Punhana	-1.46
Latrine Facility	Available	Dabwali	2.92	Bilaspur	-1.67
Bathroom Facility	Bathroom with Roof	Gurgaon	2.91	Punhana	-2.74
Material of Floor	Cement/ Mosaic/Tile	Manesar	2.49	Ellenabad	-1.67
Condition of House	Good Condition	Kalka	2.49	Punhana	-1.68
Kitchen Facility	Inside House	Panchkula	2.36	F. Jhirka	-1.98
Source of Drinking Water	Tap water (Treated)	Dabwali	2.00	Punhana	-2.45
Status of Census House	Permanent	Pataudi	1.43	Narnaund	-2.21
Source of Lighting	Electricity	Ambala	1.34	F. Jhirka	-3.13
Ownership Status	Own House	Bilaspur	1.25	Manesar	-4.79
Material of Wall	Burnt Brick	Israna	1.24	F. Jhirka	-3.89

Source: Compiled by Authors

**Table 3**  
**Rural Haryana: Households having Availability of Selected Amenities, 2011**

Household Amenities	Quality of Amenities	Households (Per cent)
Condition of House	Good Condition	33.6
Material of Roof	Concrete	12.8
Material of Wall	Burnt Brick	85.3
Material of Floor	Cement/ Mosaic/Tile	28.7
Number of Dwelling Rooms	Four & Above	07.3
Ownership Status	Own House	95.0
Source of Drinking Water	Tap water (Treated)	54.9
Source of Lighting	Electricity	80.7
Latrine Facility	Available	45.4
Bathroom Facility	Bathroom with Roof	39.4
Waste Water (Outlet Connection)	Closed Drainage	03.6
Fuel used for Cooking	LPG/ PNG	11.5
Kitchen Facility	Inside House	35.4
Status of Census House	Permanent	57.0

Source: Compiled by Authors

lighting in the house, ownership of house and material of wall used for construction of house (Table 2).

On the other hand, Punahana tehsil registered lowest position in five household amenities like number of dwelling rooms, fuel used for cooking, bathroom facility, condition of house and source of drinking water (Table 2). It is followed by Ferozpur Jhirka tehsil with lowest Z score in three household facilities like kitchen facility, source of lighting in the house and material used for construction of walls. Otherwise also, taking into account all the amenities under study Punahana tehsil emerged at the bottom and it is followed by Ferozpur Jhirka tehsil (Table 1B). Other tehsils having lowest position in only one amenity are Hodal, Hathin, Bilaspur, Ellenabad, Narnaund and Manesar (Table 2). Thus, this study highlights that on the basis of availability of household amenities Gurgaon tehsil and Punahana tehsil attained the top and bottom positions respectively in rural Haryana.

The study further highlights that 95 per cent scheduled castes households have their own house to live in. It is also found that more than 85 per cent households have walls made of burnt bricks, while only 12.8 per cent houses

have concrete roof (Table 3). Similarly, nearly 81 per cent households have facility of electricity for lighting, 55 per cent use treated tap water for drinking and 45 per cent households have latrine facility inside the house. Although 35 per cent households have kitchen inside the house, yet only 11 per cent households are using LPG/PNG as fuel for cooking. The study also reveals that only four per cent households have closed drainage system, while seven per cent have the facility of four or more rooms in the house.

### Conclusions

It is concluded that a relatively better quality of living space among scheduled castes is observed in eastern parts of the state due to better transport facilities, high literacy rate and better socio-economic conditions of the people in general. On the other hand, low quality of living space is witnessed mainly in central parts. The scheduled castes in this part of the state are largely engaged in agriculture and allied activities. The extreme southeastern part of the study area reported the worst situation with regard to quality of living space among scheduled castes. Overall standard of living in this area is very poor due to low level of socio-

economic development. A very low level of urbanization, wide spread illiteracy rate and very large size of occupancy unit characterize this area. There appears to be a marked correspondence between spatial dimensions of quality of living space among scheduled castes and overall patterns of development in rural Haryana. Government investments in household infrastructural facilities particularly in the tehsils located in extreme southeastern and central parts of the study area may bring about a more balanced development in the living space among the scheduled castes in rural Haryana.

### References

- Bhagat, R. B. and Sharma, S. 2001. Quality of life, gender bias and fertility behaviour in urban Haryana: a case study of Rohtak city. *Annals of the National Association of Geographers, India*, 21 (2): 47-57.
- Chamar, K. V. 2002. Rural dwellings and house types in desert land of Haryana: a case study of Bhiwani district. *Transactions, Institute of Indian Geographers*, 24 (1-2): 53-62.
- Dave, B. 2018. *Mapping the Quality of Living Spaces in India*. Indian Research Academy, New Delhi: 1-14.
- Glatzer, W. and Hans, M. M. 1987. Quality of life: concepts and measurement. *Social Indicators Research*, 19 (1):15-23.
- Johnston, R.J., Gregory, D. and Smith, D.M. 1994. *The Dictionary of Human Geography*. Blackwell Publishers Ltd. UK: 493.
- Krishan, G. 2017. *The Vitality of India: A Regional Perspective*. Rawat Publications, New Delhi: 119-120.
- Singh, B.K., Rashmi and Rambilas. 2013. Housing conditions, housing stocks and housing shortage in Uttar Pradesh: an inter district analysis. *The National Geographical Journal of India*, 59 (I): 31-52.
- Kant, S. 2016. Demonolithing scheduled caste population in India. *Annals of the National Association of Geographers, India*, 36 (1): 1-16.
- Tiwari, R. and Nayak, S. 2013. Drinking water and sanitation in Uttar Pradesh: a regional analysis. *Journal of Rural Development*, 32 (1): 61-74.
- Unni, K. R. 1965. Social factors in housing. In *Rural Habitat*, eds., Oakley, D. and Unni. K.R. The School of Planning and Architecture, New Delhi: 3.

**Dr. K.V. Chamar**, Professor,  
Email:chamar\_kv@yahoo.com  
(Author for Correspondence)  
Department of Geography,  
M.D. University, Rohtak (Haryana)

**Dr. S. Bairagi**, Assistant Professor,  
Department of Geography,  
Govt. College, Bound Kalan,  
Charkhi Dadri (Haryana).

# punjab geographer

