Quality of life in Bulandshahr district: A spatial analysis

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Abstract
This paper is based on secondary data taken from the district handbook of Bulandshahr (census, 2011). This paper shows the quality of life with the spatial variation in tehsils. There are 7 tehsils in Bulandshahr District and the variation made on the basis of z-score technique. Z-score is the technique that measures the quality of life in different regions. The quality of life has measured on the basis of basic amenities like household, water facility, electricity and bank services. In the different tehsils of Bulandshahr District perform the level of Composite score represents the quality of life. The composite score shows the different variations in respect to quality of life according to Tehsil wise, Debai represents the high level of quality and the five other tehsils namely, Sikandrabad, Siana, Anupshahr, Khurja and Bulandshahr have medium level of the quality of life. While, only one Shikarpur has low level of quality of life. Thus, the overall performance of the district represents the moderate level of quality. Because the majority of the district shows medium quality of life.

Keywords: Quality of life, Permanent houses, electricity, drinking facilities, banking services

Introduction
Housing satisfaction is influenced by a broad array of objective and subjectively perceived conditions (Theodori, 2001) [1]. According to Ogu (2002) [2] the concept of housing or residential satisfaction is often employed to evaluate residents perceptions of and feelings for their housing units and the environment. Nayar, K.R. (1997) [3, 8] has correlated the housing amenities to health improvements and examined the conventional idea that health promoting factors such as housing conditions, availability of drinking water, sanitary facilities etc, could contribute to health improvement among the population sometimes even more significantly than health services. The study indicates a definite contribution of housing conditions including sanitary facilities in health improvement. Liu (1999) [4] found that both physical and social factors influence the residential satisfaction. A customer satisfaction is mainly depends on cleanliness and maintenance of the flat. Nowadays, cities have become the target of quality of life measurement since they exhibit contemporary culture, ranging from technological development to social progress. Indeed, the process of urban planning and management is aimed at raising quality of life, especially with regard to improvement of facilities and services that fulfill socio-economic needs such as education, health, housing, entertainment, and safety. The recent trend of the household in availability of modern style that tend to dominant significance in the human life. The dependency ratio realized on the exist between the resources and the overall human development. It is unadventurously believed that the basic amenities belong to the housing conditions, availability of drinking water, sanitation facilities, etc. might be contribute to the health improvement of the people and determine the quality of life of the society.

Objectives
1. To analyze the current status of the district with respect to quality of life.
2. To find out the progress of development in Bulandshahr District.
3. To show the spatial variation in respect of quality of life.

Study Area
Bulandshahr district is situated between Ganga and Jamuna rivers located between 28.4º and 28.0º north latitudes and between 77.0º and 78.0º east longitudes. Its geographical area is 4322 sqkm and constitutes 1.47 per cent of the total area of the U.P. State.
The district has 7 Tehsils, 16 blocks and 1242 inhabited villages and have a total population of 34.99 lakh as per the 2011 census. The population residing in urban areas is 24.79 percent (Census, 2011). The sex ratio which was 896 was below the state average. The total literacy level is 68.88% (census, 2011) per cent is higher than the state average.

Data Base and Methodology
The data is taken from districts census handbook, Bulandshahr, 2011. So, this paper is based on secondary source. On the basis of census data on percentage of population served by the basic amenities like permanent houses, drinking water, electricity and banking facilities in Bulandshahr district at Tehsil level. To analyze the quality of life in Bulandshahr district, we have taken four indicators like permanent houses, drinking water, banking and power supply. In this paper we use some kind of standard score using the method of z-scores. The original data which has to be manipulated into a transformation of Z-score results that its becomes zero and standard deviation becomes unity It is categorically denoted by Z.

\[ Z_i = \frac{x_i - \bar{x}}{s_d} \]

\[ CSS = \frac{Z_{ij}}{N} \]

Where, CS is composite score, 
N refers to the number of indicators (variables).
The values have a positive score expressed as the high level of development. Whereas, the values have negative score termed as low level. The basic amenities like permanent houses, drinking water, banking and power supply. The composite scores of the tehsils analyzed on the basis of quality of life. Therefore, the district categorized into three levels, low (below -0.5 z-score), medium (-0.5 to 0.5) and high (0.5 and above) on the basis of composite scores in each tehsils. In addition, the advanced cartographic techniques, GIS-Arc view (version10.2) have been applied to show the Tehsil wise variation in quality of life through map based on the important amenities of Bulandshahr district.

Results and Discussion

Table 1: Availability of basic amenities to the population in Bulandshahr District, 2011

<table>
<thead>
<tr>
<th>SN</th>
<th>Tehsil</th>
<th>Permanent Houses (z-score)</th>
<th>Water Facility (z-score)</th>
<th>Electricity (z-score)</th>
<th>Banking (z-score)</th>
<th>Composite Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sikandrabad</td>
<td>-0.84</td>
<td>1.30</td>
<td>-0.21</td>
<td>-0.21</td>
<td>0.27</td>
</tr>
<tr>
<td>2</td>
<td>Bulandshahr</td>
<td>-0.64</td>
<td>1.21</td>
<td>0.61</td>
<td>0.61</td>
<td>-0.17</td>
</tr>
<tr>
<td>3</td>
<td>Siana</td>
<td>0.92</td>
<td>-0.77</td>
<td>0.92</td>
<td>0.92</td>
<td>0.19</td>
</tr>
<tr>
<td>4</td>
<td>Anupshahr</td>
<td>1.79</td>
<td>-0.60</td>
<td>0.19</td>
<td>0.19</td>
<td>0.60</td>
</tr>
<tr>
<td>5</td>
<td>Debai</td>
<td>-0.22</td>
<td>-0.69</td>
<td>-1.10</td>
<td>-1.10</td>
<td>-0.62</td>
</tr>
<tr>
<td>6</td>
<td>Shikarpur</td>
<td>-0.87</td>
<td>-1.02</td>
<td>1.11</td>
<td>1.11</td>
<td>-0.01</td>
</tr>
<tr>
<td>7</td>
<td>Khurja</td>
<td>-0.15</td>
<td>-0.58</td>
<td>-1.31</td>
<td>-1.31</td>
<td>-0.26</td>
</tr>
</tbody>
</table>

Source: Data through District Handbook, 2011

Permanent Houses
Permanent houses taken as the first indicator of improving quality of life. The overall conditions of permanent houses of the people of Bulandshahr District have been shown in the figure 1, among the seven tehsils. Sikandrabad, Debai, Khurja fall under the category of high (above 0.50 z-score) availability of permanent houses. Three tehsils Anupshahr, Shikarpur and Khurja have medium (-0.5 to 0.5 z-score) availability of permanent houses and the one Tehsil of the district comes under the categories of low (below-0.5 z-score).
Water facilities

Water facility is the most important indicator for the better quality of life. In general we use the term water is driving force of all nature’. The spatial variations show in fig. 2 of water facilities in Bulandshahr district among all seven tehsils. Anupshahr, Debai tehsils comes under the high (above 0.5 z-score) water facilities. In two other tehsils, Shikarpur and Bulandshahr comes under the group of medium (-0.5 to 0.5 z-score) availability of water facilities. The rest three tehsils Sikandrabad, Siana and Khurja fall under the category of low (below-0.5) availability of water facilities.
Banks
Banking facility is the key indicator among all indicators and to accessible the population of Bulandshahr has been presented in fig.3 among the seven tehsils. Siana, Anupshahr and Khurja tehsils of the district represents the category of high (above 0.5 z-score) availability of bank services. Two Tehsils of the district i.e. Sikandrabad and Debai comes under the category of medium (-0.5 to 0.5 z-score) availability of bank services. The other two tehsils Shikarpur and Bulandshahr fall under the category of low (below-0.5) availability of bank facility.

Electricity
The electricity to Bulandshahr district at Tehsil level has been shown in fig 4. Among seven tehsils of the district Sikandrabad, Siana and Bulandshahr belong to high (above 0.5 z-score) and rest 4 tehsils namely Anupshahr, Debai Shikarpur and Khurja represents the low availability of electricity supply.
Quality of life

Quality of life in Bulandshahr District has been analyzed among the seven tehsils is given in fig. 5. This figure represents that the one Tehsil i.e. Debai of the bulandshahr district have high quality of life. Majority of the tehsils fall under the medium level of quality of life which covers the two third part of the district. And only one Tehsil Shikarpur represents the low level of quality of life. Thus the overall performance of the district shows the medium quality of life.

![Fig 5: Availability of Quality of life](image)

**Conclusion and Suggestions**

The analyses of the Bulandshahr district, Sikandrabad, Debai and Khurja fall under the high category of permanent houses. Whereas, Anupshahr, Shikarpur and Bulandshahr have medium and Siana Tehsil have low category. In the same way Anupshahr and Debai comes under the high accessibility of water facilities. Whereas, Sikandrabad Siana and Khurja fall under the low category. Furthermore, Siana, Anupshahr and Khurja tehsils of the district represents the category of high availability of bank services and two tehsils of the district Shikarpur and Bulandshahr fall under the medium availability of bank services. Therefore, Sikandrabad, Siana and Bulandshahr belong to the group of high accessibility of power supply. And the level of quality in Bulandshahr District represents the one Tehsil has high quality of life. Thus the major change in the Bulandshahr district shows in this one area (2011 census). The analyses of the study that shows the quality of life in Bulandshahr district has not better rather it would say that the medium level of category becomes much more in comparison in high level of quality. Although, the only region (Shikarpur) has shown in all accessibilities have low level of quality. However, we find that the contiguous regions having high availability of basic amenities as well as high quality of life. In the same way the tehsils fall under the medium and low availability of basic amenities represent in the medium and low quality of life but there the only one fall always in the low category (Shikarpur). Therefore, the Govt. should take care and the special attention to their low level regions.

**References**