



Perception and Approach of Rural Population Towards Rural Transformation in Tehri Garhwal District, Uttarakhand: A Geographical Analysis

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Abstract: Perceptions of rural transformation vary across different areas and over time. The primary goal of transformation is to enhance livelihoods and improve the quality of life in rural regions. A multi-dimensional approach is crucial for reducing poverty and boosting income in rural India. Government and organizational support for comprehensive rural development has been effective in improving livelihoods, reducing migration, advancing agriculture, industrial development, and enhancing education and healthcare services. Young people generally view rural transformation positively, believing it boosts capabilities, infrastructure, and the capacity of rural areas. Conversely, older individuals often perceive transformation negatively, fearing it erodes traditional, cultural, and religious values. This study focuses on understanding perceptions of rural transformation in the Tehri Garhwal District of Uttarakhand, using both primary and secondary data. Z-score analysis was employed to measure attitudes, with positive values indicating a positive attitude and negative values indicating less favorable perceptions.

Keywords: rural transformation • rural demography • people perception and attitude • rural development • livelihood resources.

Introduction

Rural transformation in India is enormously important for inclusive development in the country. In rural areas, there are various features that prerequisite to be focused such as job opportunities, better housing facilities, schools and educational institutions, medical and health care facilities, agricultural development, the nutritional requirement for the children and also focusing on the skill development in community level for trained and skilled labor. The rural population is more capable of developing a better approach to rural transformation and development at the village level for inclusive growth. A fundamental aspect of human existence is transformation. Our society has experienced cultural, technological, and economic transformation over the decades, which has improved and worsened our way of life. A variety of deviations and departures, such as disturbances, variations, distortions, conversions, or reaffirmations can occur in

human economic systems. In the field of economics, transformation is characterized as a continuous and irreversible shift in the dominant economic activity. The rapid expansion of rural economies is dependent upon the availability and provision of basic infrastructure, such as well-maintained roads, education, and health care system (Ogbunugwor & Ewelum 2022). Currently, the employment situation in rural areas is experiencing a lot of structural changes. The consensus is that because agriculture and other related occupations are seasonal, all family members shouldn't rely only on the farm for their income. As a result, it is challenging for the entire family to work on the farm for a living throughout the year. Interventions concerning rural development should provide particular consideration to the community's most vulnerable members, particularly the farmers. Interventions are needed to progressively transition them from their completely dependent on agriculture without



damaging their access to food (Barrios 2008). Although the surrounding landscapes of rural communities are easily understood, the framework and patterns of daily existence are challenging. Social process patterns differ throughout societies and even within areas these patterns are particularly helpful to cultural shifts (Barrios 2007). The youth approach and participation in rural transformation are most important in many types of activities, but certain obstacles restrict them from doing so, including a lack of information and understanding, inadequate infrastructure, expense, inequity, and exclusion in rural areas (Banajawad 2021). The farmer's perception of agricultural technology and transformation are very complex processes that are localized and involve multi-stage processes because small farmers have not adopted the advanced technology for agriculture in rural areas due to the lack of information, awareness, lack of confidence, marketing facilities, and proper storage facilities which is varied by regions (Jha et al. 2020).

Agriculture is a major driver of rural transformation in rural areas. The attitude of rural youth towards agriculture as a source of livelihood. In this study, it is observed that the majority of the rural youth have a neutral attitude while some have a negative attitude toward agriculture as a means of source of livelihood and sustainability due to various factors such as lack of awareness, lack of incentives, high risks involved due to natural hazards and absence of policy measures, etc (Gangwar et al. 2016). Rural youth need to be prepared a improve their capabilities to produce food and to conserve productive resources in the rural environment, improving their skills and abilities in carrying out income-generating activities in rural areas, relieving population pressure, and improving nutrition and the well-being of farming families and developing leadership and the ability to work well with others in group and

community situations (Manjunath et al. 2022). The attitude and participation of rural youth in rural development activities are effective and positive. They have the potential to develop themselves physically, mentally, and economically strong for their survival and for future challenges of life in the hilly landscape (Kitturmth 2013). Farmer's perception of such a dynamic phenomenon that is currently occurring in rural regions and acts as a catalyst for economic progress is the diversification of livelihoods. It is undesirable that the rural poor would improve generally, with a special focus on enhancing farmers' capabilities to ensure their survival. The diversification of a rural population's livelihood is based upon the possibilities available to them and how they respond to them (Reddy et al 2021). Women's perception and attitude toward the traditional status and role sets disintegrate, entirely centered on achievement, self-determination, and equality begin to develop their knowledge of their socioeconomic position, rights, opportunities for advancement inside and beyond the public sector, benefits provided by the state government, skill development, along with other concerns are significantly enhanced by the awareness program. They are even capable of encouraging their children on the knowledge gained they have learned. We are capable of drawing an inference that there are differences in women's awareness, attitudes, and potential uses of knowledge based on their socioeconomic situation (Tripathi and Yadav 2018). It is concerning that a significant portion of farm women have a negative opinion of agriculture extension services. Extension authorities and policymakers must move quickly to engage farm women in capacity development programs to shift their mindset in hilly areas. The most likely cause of this negative attitude is that hilly communities are located in geographically remote areas and are hard to gain access to due to the high elevation and complex landscape (Ansari 2019).



Women are an essential component toward the transformation of a potential source for progressing the rural economy and accelerating the rate at which food production is growing in rural areas. As responsible citizens, mothers, and workers, they make up half of the population in rural towns and are crucial to the development of the economy and society (Soltani et al 2017). Programs for rural development help low-income rural households in mountainous areas become more economically capable. Positive effects appear to have been felt by rural poor households based on the relationships between the various components of rural development: housing and agriculture, health, education, training, rural connection, tourism, and communication. Changes in rural areas have a beneficial effect on reducing poverty and enhancing the socioeconomic potential of rural households (Naikoo et al 2021). People's perceptions of the local forest and natural resource protection in the highly mountainous areas are favorable for the creation of jobs and means of subsistence, but not sufficient for survival. The locals responded well to the promotion of several alternative income-generating activities to lessen reliance on

natural resources (Silori 2007). In addition to providing food security for everyone on the earth's surface, especially in remote areas, agriculture is regarded as a major source of employment. However, for numerous reasons, including their attitudes and expectations concerning the business, young people don't seem interested in the agricultural sector (Henning et al 2022). Enhancing modern Rural transportation infrastructure is an evaluation of a country's cultural and economic development. Despite the financial systems they picked, national governments around the world launched immense initiatives to create transportation networks that suited available resources and economic needs (Ahmed 2020).

Study Area: Geographical Aspects

Tehri Garhwal, in the state of Uttarakhand, is a mountainous district situated in the foothills of the Himalayas. It lies between latitudes 30°03' and 30°53' N and longitudes 77°56' and 79°04' E. The Tehri district has a total area of 3462 square kilometers. This district's head office and administrative center are located in New Tehri. 618,931 people are living in the district overall, of which 548,792 live in rural areas and 70,134 live in urban areas.

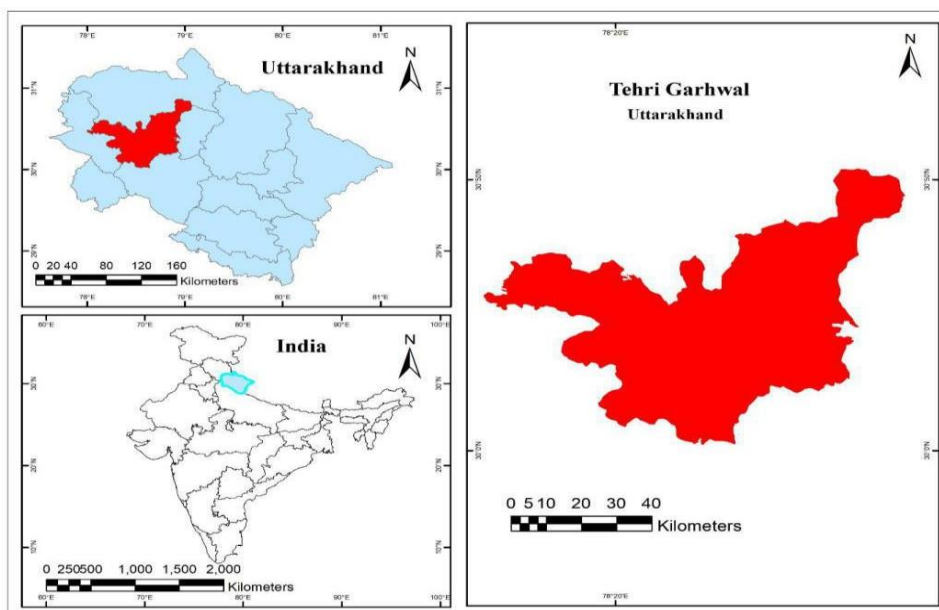


Fig 1. Location Map of Study Area (Source:- Self prepared using ArcGis)



The district's rural region has a population density of 151. During 2001 and 2011, the population increased at an average of 1.93%. The valley area's elevations range from 335 meters to 1007 meters. A significant portion of the district is covered with forests, which contributes considerably to the district's revenue generation. An enormous number of species present in the Himalayas can be found in the area covered by forests. The primary language used in the Tehri Garhwal is Garhwali. Tehri also speaks Hindi, Jaunagri, and other languages (District Census, 2011).

Objective

- To analyze the people's perception and approach towards rural transformation
- To access the level of rural transformation on perceptions

Methodology of the study

This study is based on the primary survey which was conducted in of Tehri Garhwal district of Uttarakhand. The data is collected through questionnaires and door-to-door surveys to understand the perception and approach of rural households towards the rural transformation in the study area. A total of 162 samples were collected in 18 villages (2 Villages from each block) based on the random sampling method.

Data Analysis : For the analysis of data, Jamovi open-source statistical software and Microsoft Excel software were used. A total of 162 samples were finalized for analysis of data to understand the people's perception of socio-economic transformation, demographic transformation, and agricultural and land resource transformation of the respondents in rural areas.

In this study, to analyze the perception and attitude of the rural population toward rural transformation a specific scale was developed. The perception scale consists of 10 statements

for each variable along with five scale values containing Agree, Disagree, strongly Agree, Strongly Disagree, and Neutral having weight values 5,4,3 2, and 1 respectively.

In people's perception and attitude on the rural transformation and development. we calculate the z-score value, rank value, percentage, and level of transformation (High, Medium, and Low). A higher value means people's perception is positive and a lower one means people's perception is negative on the rural services. To calculate the z-score given formula is to be used.

$$Z = \frac{x-\mu}{\sigma}$$

Where, z = Standard score

x = observed value

μ = Mean of the sample

σ = Standard Deviation of the sample

Result and Discussion

Demographic characteristics of Respondent: Socioeconomic and demographic indicators are crucial variables for measuring progress in society (Islam & Mustaqim 2015). Demographic characteristics are the most important factor for the study because they show the respondent interest in the researchers as shown in the table below 44.85% of respondents are in the age group of 31-41 years. One of the most important elements in empowering people to improve their quality of life through higher per capita income is education. In educational qualification categories, most of the respondent's education is primary (5th) and secondary (10th) which is 22.42% and 21.21% respectively.



Table 2. Socio-economic Status of Respondents

Attribute	Groups	Frequency	Percentage	Mean	Standard deviation
Age (Years)	less than 30	37	22.42	54.00	18.682
	31-41	74	44.85		
	41 above	51	30.91		
Qualification	Primary	37	22.42	27.00	10.900
	Secondary	35	21.21		
	Sr. Secondary	31	18.79		
	Graduate	17	10.30		
	professional	10	6.06		
	illiterate	32	19.39		
Income (RS)	less than 5k	62	37.576	32.40	23.201
	10-20k	52	31.515		
	20-30	23	13.939		
	30-40	15	9.091		
	Above 40	10	6.061		
Family type	Joint	95	57.576	82.5	21.92
	Single	67	40.606		

Source: - Data based on field survey

The income status of the rural respondents is not satisfactory because the majority of the respondents have a monthly income of less than 5 thousand which is 37.57% followed by 10-20 thousand which is only 31.51%. In the rural landscape most of the respondents are in favour of joint family which is 57.57% as shown in the table.

Demographic transformation perception of rural household

Table 2 shows the people's perception of the demographic transformation of rural households in the Garhwal District. It is shown positive z-score value indicates that people's perception and attitude toward the transformation is positive while a negative value indicates that people's perception is low toward the statement. The below table indicates that some perception has negative z-score values which are demographic shift reduced economic growth (-0.38), developmental activities (-0.81), impact of migration on demography (-0.05), and unemployment (-0.39). These are the perception in which rural respondents have a negative attitude on demographic

transformation factor while on the other hand, rural respondents have a positive attitude on age, size, and structure (0.24), rural households think that demographic shift cannot affect the health and education (1.06), there is no effect on old age population in rural area and z value indicating positive responses of the respondent (0.38).

An individual's lifestyle is completely determined by their level of education. Life expediency in rural areas is better than the urban areas because of the open surroundings, clean and green environment, and more recreation towards nature. The Z- score value indicates a positive value (0.72) on life expectancy in rural areas. Rural people's perception of morality and fertility is positive (1.24). In the rural area, there is no effect of demographic transformations on the literacy rate and z- value shows a positive result on literacy which is (0.98) as shown the Table 2.



Table 2. Shows the people's perception of demographic transformation

SN	Perceptions Statement	Standard deviation	z-score	Rank	Level
1	Demographic change affects the Age, Size, and structure in a rural area.	11.01	0.24	VI	Medium
2	Do you think that demographic shift reduced economic growth?	14.84	-0.38	VIII	Low
3	Is there any impact of demographic change seen in the health and education of rural areas?	9.96	1.06	II	High
4	Demographic transformation affects the old-age population.	6.88	0.38	V	Medium
5	Developmental activities are suffering due to demographic transformation.	9.40	-0.81	IX	Low
6	Does migration change the demography structure?	11.30	-0.05	X	Low
7	Life expectancy in rural areas is better.	11.97	0.72	IV	Medium
8	Unemployment affects the demography.	11.41	-0.39	VII	Low
9	Morality and fertility in rural areas are increase or decrease.	10.95	1.24	I	High
10	Literacy rate increase or decrease.	8.73	0.98	III	High

Source: - Data based on field survey

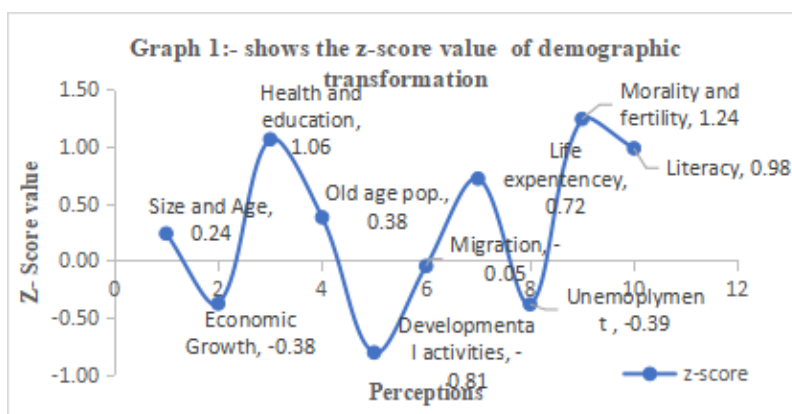


Fig 1. Z Score value of Demographic transformation

Socio-economic change perception of rural households:

Although several variables affect the socioeconomic changes of rural communities, assessing them can be complex. In current times, socio-economic transformation is the most important factor, particularly in developing countries. In recent years, socioeconomic conditions in rural communities have tended to improve. Nowadays, rural communities have a positive attitude toward socio-economic factors that are developed in the areas. In Table 3, people's perception of socio-economic transformation either positive or negative depends on the localities. The z-score value indicates the

positive responses of the respondents on quality of life in rural areas (0.65), community participation in rural development (0.25), electricity and water facilities in rural areas (1.40), rural housing infrastructure (1.58), social and cultural changes in the societies (1.17) and youth participation in various developmental and agricultural activities (0.23). Rural people believe that these factors in rural localities have gained more attention for changing the rural surroundings and improving the lifestyle of rural communities.



Table 3: - Shows the people's perception of socio-economic changes

Sr.no	Perceptions statement	Standard deviation	z-score	Rank	Level
1	Quality of life in rural areas is better than in urban area	14.57	0.65	IV	Medium
2	Level of education infrastructure	15.98	-0.46	VIII	Low
3	Community participation in rural development	14.36	0.25	V	Medium
4	Electricity and water facilities are suitable for survival.	12.54	1.40	II	High
5	Transportation and road quality are	11.41	-0.38	IX	Low
6	Income opportunities	12.22	-0.19	X	Low
7	Rural housing infrastructure is suitable for living.	17.39	1.58	I	High
8	Level of healthcare services	12.40	-0.75	VII	Low
9	Social and cultural transformation affect the socio-economic condition	9.04	1.17	III	High
10	Youth participation in developmental activities	11.10	0.23	VI	Medium

Source: - Data based on field survey

Some factors have a negative z-score value resulting in the fact that people do not agree with such factors, their perception that these factors yet do not gain more attention from the people and the government. Such factors including the level of education infrastructure and development in rural areas are not better as we compare if from an urban area, transport infrastructure, services and quality of roads are

not well developed in rural areas, income opportunities are very less and the level of health care facilities are very poor in rural areas. Respondents believe that these are the basic amenities that improve the rural structure but yet it not gaining more attention resulting is that their negative perception and z-score analysis indicates a low and negative value on these factors as shown the Table 3.

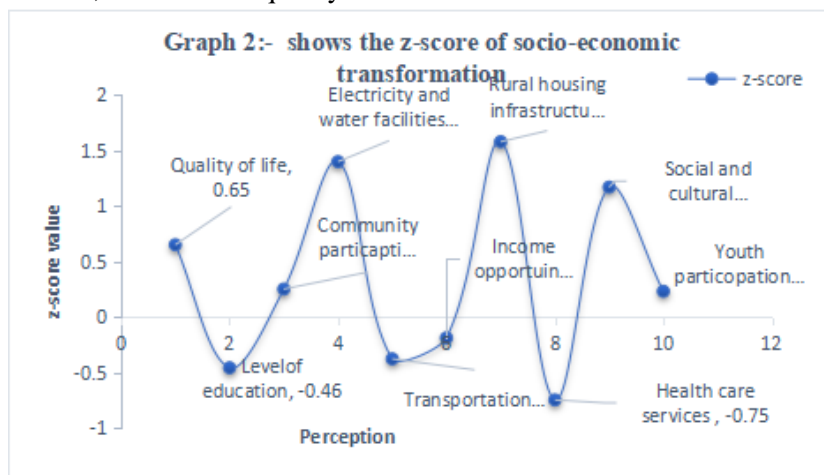


Fig 2. Z Score value of Socio-economic transformation

Agricultural and productivity perception of rural households

Agricultural Productivity tends to be capacity-based because it indicates how the effectiveness and changes in technology influence the process of transformation of commodities into services. However, productiveness and technological developments could occasionally not be responsible for greater or less production

(FAO 2017). Agriculture is considered one of the major income resources of the rural population and it plays a key role in economic development. Some factors of agriculture have a positive People perception of agricultural transformation and some factors have a negative perception and attitude. Positive attitude indicates that people are more focused on these factors that are contributing the rural development positive z-score analysis factors



are agricultural for commercial use in a rural area (1.62), subsidiary schemes are more beneficial for agricultural changes(1.10), skilled labor is more capable for productivity (0.64), youth participation in agriculture will

enhance the agricultural business in the rural area(1.36), the local agricultural market is more beneficial for local product and income earning(1.15) as shown in table 4.

Table 4. Shows the people's perception and attitude on agricultural and productivity

SN	Perceptions Statement	Standred deviation	Z-score	Rank	Level
1	Agriculture for commercial use only	12.054	1.62	I	High
2	Agriculture improves your income	13.538	-0.17	IX	Low
3	Do you think traditional agriculture practices are good for production	11.157	-0.98	VI	Low
4	Primary rain-fed agriculture can offer better livelihood support	11.104	-0.14	X	Low
5	Agricultural technology improves soil fertility	10.31	-0.73	VII	Low
6	Is Governmental subsidiary schemes being beneficial for agriculture	13.24	1.10	IV	High
7	Skilled farmers are more capable of agriculture in rural area	16.425	0.64	V	Medium
8	Youth participation in the agriculture business is beneficial for changes	13.612	1.36	II	High
9	Agricultural market for local product	12.641	1.15	III	High
10	Do you think that climatic variation and wild animal threads affect productivity	12.7	-0.28	VIII	Low

Source: - Data based on field survey

On the other hand, some factor has negative responses from the respondents on the agricultural and productivity perception and placed a negative z-score value such perception is agriculture is not improving the income (-0.17) because it is only for commercial use, traditional agricultural methods are easy to use but these methods are not for good production(-0.98), Primary rain-

fed agriculture not offer better livelihood support (-0.14), agricultural technology and infrastructure reduced the workload but it is not beneficial for soil fertility(-0.73), climatic varication and wild animals are threads for the agricultural but productivity is always low and hence they are not much effect the productivity (-0.28) as shown in Table 4.

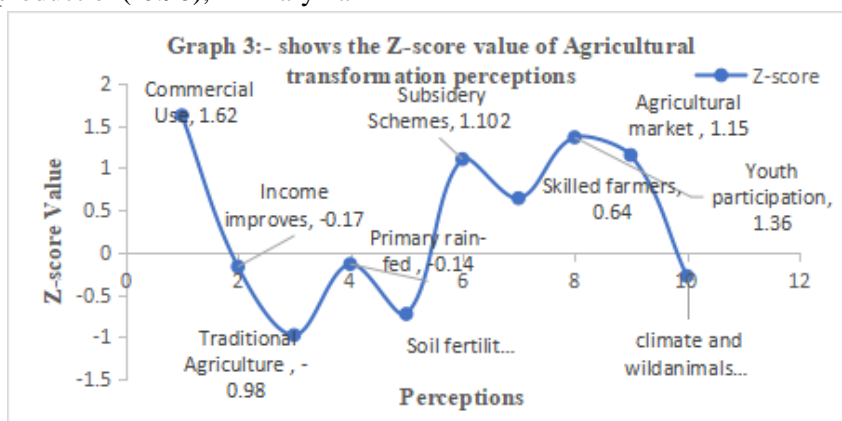


Fig 3. Z Score value of Agricultural transformation perceptions



Conclusion

People's attitudes toward rural change and development are considered an effective indicator of their behavior either positively or negatively. People's perceptions of rural transformation depend on the available rural infrastructure on their surroundings. Demographic transformation is one of the major factors that affects the rural household's socio-economic conditions and lifestyle in the rural area. Respondents have strong and negative opinions on economic growth, developmental activities, migration, education and health care facilities, road and transport, unemployment, income, soil fertility and productivity, and climate and wild animal threats in overall factors while various statements have a positive perception. Since socioeconomic factors affect people's income levels, skill levels, and knowledge, they are the most important determinants of livelihoods. A good and positive lead indication of the results of rural change and development is household perceptions. Household perceptions can serve as an initial assessment of resultant aspects that determine developmental outcomes to be achieved. These developmental outcomes empower the rural people's demands and minimize the challenges of rural households. Improvements in accessibility and connectivity are the primary means of achieving optimal rural development in the rural landscape through improving the rural transportation and conditions of roads, and agricultural business, and generating new income resources. Perceptions of agriculture are connected with rural inhabitants which are associated with the agricultural and non-agricultural business. Development and change in the population are interactive processes. Development growth is closely linked to the three main variables that contribute to changes in population size and age structure: migration within and between entities, fertility, and death (Ahmed et al 2016).

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