



A study of Socio-economic Development of the Birhor Tribal Communities in Bilaspur District

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Abstract: This study examines the socio-economic development of the Birhor tribal communities in Bilaspur District. The Birhor tribe is one of the indigenous tribes residing in the region, facing various socio-economic challenges. The study aims to understand the current conditions of the Birhor communities and identify the factors influencing their development. Using a mixed-methods approach, data was collected through surveys, interviews, and secondary sources. The study analyzes the socio-economic indicators such as education, healthcare, income, employment, and infrastructure development. It also explores the cultural and social aspects that impact the Birhor communities' well-being. The findings highlight several key issues faced by the Birhor tribal communities, including limited access to education and healthcare facilities, high levels of poverty, and lack of employment opportunities. Additionally, inadequate infrastructure development and the erosion of traditional cultural practices further hinder their socio-economic progress. Based on the analysis, the study proposes recommendations for enhancing the socio-economic development of the Birhor communities. These recommendations include improving access to quality education and healthcare services, promoting skill development and income-generating activities, strengthening social and cultural preservation efforts, and enhancing infrastructure development in the region.

Keywords: *Birhor tribe, socio-economic development, indigenous communities, Bilaspur District, education, healthcare, income, employment, infrastructure development, poverty, cultural preservation.*

Introduction

The Birhor tribal communities in Bilaspur District are an indigenous group with a rich cultural heritage and a unique way of life. However, they have long been marginalized and face numerous socio-economic challenges that hinder their development and well-being. This study aims to investigate the socio-economic conditions of the Birhor tribes and identify the factors that impact their development. The Birhor tribes have a deep connection with the natural environment, and their traditional knowledge systems and practices are integral to their identity. However, they have historically faced exclusion from mainstream society, which has resulted in limited access to basic services such as education, healthcare, and infrastructure. As a result, they often experience high levels of poverty and social inequality.

Understanding the socio-economic dynamics of the Birhor tribes is crucial for designing effective development interventions that address their specific needs and aspirations. This study will examine various indicators of socio-economic development to provide valuable insights into the challenges faced by the Birhor communities. Education is a fundamental aspect of socio-economic development. However, the Birhor tribes often have limited access to quality education. This study will assess the educational levels within the community and identify barriers to education, such as lack of schools, inadequate infrastructure, and cultural factors. It will also explore potential strategies for improving educational opportunities for the Birhor children, such as establishing community schools and promoting culturally relevant curriculum.

Access to healthcare services is another critical aspect of socio-economic development. The Birhor communities often face challenges in accessing healthcare facilities due to geographical remoteness, lack of transportation, and cultural barriers. This study will examine the healthcare status of the Birhor tribes, including their health indicators, prevalence of diseases, and healthcare utilization. It will also propose strategies to improve healthcare access, such as mobile clinics, awareness campaigns, and training community health workers. Income generation and employment opportunities play a significant role in the socio-economic development of any community. The Birhor tribes rely primarily on traditional occupations such as hunting, gathering, and agriculture. However, these occupations often yield low incomes and are susceptible to environmental changes. This study will explore alternative income-generating activities for the Birhor communities, such as skill development programs, vocational training, and promotion of sustainable livelihood practices. It will also analyze the potential for eco-tourism and cultural tourism as sources of income for the community.

The socio-economic development of the Birhor tribal communities in Bilaspur District is a complex and multifaceted issue. This study aims to shed light on the challenges faced by the Birhor tribes and propose evidence-based recommendations for their socio-economic upliftment. By addressing issues such as education, healthcare, income generation, employment, infrastructure development, and cultural preservation, it is hoped that this study will contribute to more inclusive and equitable development strategies in Bilaspur District.

History of Birhor tribals in Bilaspur District

The Birhor tribal communities have a long and rich history in Bilaspur District. They are an indigenous group native to the region and have inhabited the forests and hilly areas for generations. The history of the Birhor tribes is deeply intertwined with their unique cultural practices, traditions, and their close relationship with the natural environment. The origins of the Birhor tribes can be traced back to ancient times. They are believed to be one of the oldest surviving tribal communities in India, with a distinct language and culture. The word "Birhor" is derived from the Sanskrit word "Vrih" meaning bamboo, as bamboo plays a significant role in their daily lives and livelihoods.

The Birhor tribes have traditionally led a nomadic lifestyle, relying on hunting, gathering, and subsistence agriculture for their sustenance. They have intricate knowledge of the local flora and fauna, which they have used to their advantage in navigating the forests and procuring food and medicinal resources. Their deep understanding of sustainable resource management has enabled them to maintain a harmonious relationship with the natural environment. Throughout history, the Birhor tribes have faced various challenges and marginalization. The encroachment on their traditional lands, deforestation, and expansion of agricultural activities have threatened their way of life and disrupted their traditional livelihoods. With the establishment of settled communities and changing socio-economic dynamics, the Birhor tribes have gradually transitioned from their nomadic lifestyle to more sedentary settlements.

Socio economic condition of Birhor tribal communities in Bilaspur District

The socio-economic condition of the Birhor tribal communities in Bilaspur District is a matter of concern that requires attention and targeted interventions. The Birhor tribes, being an indigenous group, face several challenges that hinder their socio-economic progress and well-being. Understanding their current situation is crucial for implementing effective strategies to uplift their living standards and promote inclusive development. Education is a significant factor that influences the socio-economic condition of any community. Unfortunately, the Birhor tribes often have limited access to quality education. The lack of schools in their settlements, inadequate infrastructure, and cultural barriers contribute to low enrollment and high dropout rates among Birhor children. This results in a low literacy rate and limited opportunities for skill development within the community.

Healthcare access is another critical aspect of the socio-economic condition of the Birhor tribes. Geographical remoteness, lack of transportation, and cultural beliefs often hinder their access to healthcare services. Consequently, the Birhor communities face higher rates of preventable diseases, poor health indicators, and limited healthcare utilization. To improve their healthcare outcomes, it is essential to establish mobile health clinics that can reach remote areas, train community health workers to provide basic healthcare services, and conduct awareness campaigns to promote preventive healthcare practices within the Birhor communities.

Income generation and employment opportunities play a crucial role in improving the socio-economic status of the Birhor tribes. Traditional occupations such as hunting, gathering, and subsistence agriculture may not provide sustainable incomes in today's rapidly changing world. Therefore, it is necessary to identify alternative income-generating activities that align with the Birhor culture and environment. Skill development programs, vocational training, and support for entrepreneurship can help the Birhor communities diversify their sources of income and create sustainable livelihood opportunities. Additionally, exploring possibilities in eco-tourism and cultural tourism can leverage their unique cultural heritage and natural surroundings to generate income and promote economic growth. Infrastructure development is another vital aspect of improving the socio-economic condition of the Birhor tribes. Limited access to roads, electricity, clean water, and sanitation facilities hampers their daily lives and economic activities. Infrastructure development initiatives should focus on improving road connectivity to Birhor settlements, ensuring a reliable supply of electricity, and providing access to clean water and sanitation facilities. These measures will not only enhance the quality of life for the Birhor communities but also create an enabling environment for socio-economic development.

The socio-economic condition of the Birhor tribal communities in Bilaspur District requires focused attention and intervention. Improving education, healthcare, income generation, employment opportunities, infrastructure development, and cultural preservation are crucial for their overall well-being and socio-economic development. Recognizing the unique needs and aspirations of the Birhor communities and involving them in the decision-making process is essential for designing sustainable and inclusive development strategies. By addressing these challenges and fostering an enabling environment, we can empower the Birhor tribes and contribute to their socio-economic progress and improved quality of life.

Review of Literature

Singha, J. & Murmu. (2020). Studied “Religious Transformation of the Birhor Tribe: An Anthropological Analysis” and concluded that when we talk about the tribal world, religious ideas and rituals have a close tie with the environment. When the Birhor tribe was relocated in a new settlement and came into touch with its near dominating tribal neighbours, they began to change their religious beliefs and customs. Simultaneously, the government's efforts through micro-projects to enhance the community's socioeconomic, health, and educational condition. struggling to maintain their way of life while relying on the forests within certain constraints.

Bain, B. & Premi, J. (2019). Studied “An investigation on the ethnomycological medicinal knowledge of the Birhor tribe of Chhattisgarh, India” and concluded that Despite being a socioeconomically disadvantaged ethnic group, their profound awareness of such therapeutic knowledge highlights their bond with nature and its ecological relationships. While the job of cultural anthropology is confined to documentation of medicinal plants, we feel that disclosing the phytochemical, pharmacological, and molecular features of medicinal plants and establishing them as a medicine via appropriate testing is the task of natural and physical sciences. Any form of medication should be used with extreme caution. Any form of medication might be deadly. As a result, before any medication is acknowledged, its phytochemical, pharmacological, and molecular qualities must be extensively scientifically examined.

Kumar, G. et al., (2018). Studied “The Birhor tribes of Ramgarh District, Jharkhand – a ferret into their oral health status and treatment needs” and concluded that Birhors primarily utilised Sakhua twigs to clean their teeth. Almost half of the research participants were addicted to the plague of tobacco use. Almost all (95%) of the individuals were completely healthy and had no oral mucosal lesions. Males and females had mean decaying, missing, and lled teeth (DMFT) Index scores of 1.052.59 and 1.022.17, respectively. 0.442.60 male individuals required one/two surface llings. The bulk of Birhors (94.0%) did not require prosthetics. To a vast extent, the majority of the Birhors (95.25%) were periodontally healthy. A state-wide survey is proposed to provide an accurate picture of the Birhors' oral health status and treatment requirements in Jharkhand.

Tripathi, S. (2017). Studied “Birhor and their culture: an ethnographic account of Particularly Vulnerable Tribal Group of Chhattisgarh” and concluded that Urbanization and industrialization have also had a negative influence on these tribal groups, causing them to lose their indigenous cultural beliefs, religious practises, rich oral tradition, and dialect, affecting their society and culture as a whole.

Chaudhury, S. et al., (2016). Studied “Some ethnozoological uses of Birhor tribe of West Bengal, India” and

concluded that Birhors are a hunter-gatherer group that may have been skilled in hunting tiny animals, but this habit has mostly ceased owing to a prohibition and a lack of faunal resources. During this examination, it was discovered that the tribe collects dead animals or accessible fauna from the forest and trades them in nearby regions or to certain entrepreneurs for a very low price, allowing them to meet their daily requirements.

Nadal, D. (2015). Studied “Housing Ancestors. The Reorganization of Living Spaces Among the Birhor of Jharkhand and Odisha” and concluded that since the 1950s, the government's resettlement programmes have radically altered the Birhor's lifestyle and living environment. Apart from severely restricting their nomadism, significantly limiting their access to the forest, and economically rehabilitating them with the goal of converting them into farmers and day labourers, the primary and most visible change that has affected these people's daily lives is the total alteration of their living environment. Uthlu kumbh are not the same as pukka houses: the notions of space of transient tanda on the one hand and sedentary colonies on the other are diametrically opposed. Nonetheless, it appears that the Birhor have managed to adapt to this new environment, or at the very least accept the shift, following an initial time of transition and adjustment.

Manna, S. & Sarkar, R. (2015). Studied “Birhors' ways of Life in 21st Century: A Micro Study in Few Villages of Hazaribag District, Jharkhand” and concluded that the Birhor, who are seminomadic in nature, continue to rely on a limited eco system. Their principal source of survival was the neighbouring forest. Their way of life, their traditional economy, is inextricably linked to the environment in which people live and move. Their ability to catch birds and animals, harvest honey, roots and tubers, fruits, and other forest goods has given form to their traditional economy. have recently been presented on the development difficulties of the Birhor communities.

Premi, J. (2014). Studied “Birhor: The Inconsequential Extraordinary Primitive Tribal Group (PTG) of India” and concluded that The Birhor's entire life revolves round the forest and most of the rituals are associated with forest (Sahu 2001b). But now a day, the culture and morphology (i.e., ethnicity) of the Birhor is rapidly changing because of their contact with other tribal and also non tribal (rural and urban) groups in uninterrupted circumstances along with globalization factors that are imposed upon them by the market forces. As a result of all these factors, the Birhor tribal group is placed in list of endangered human groups. Before they vanish, it is utmost urgent to conserve their ethnographical characteristics and their indigenous knowledge.

Research Gap

The socio-economic condition of the Birhor tribal communities in Bilaspur District has been an area of concern, but there are still several research gaps that need to be addressed. Despite some studies conducted on the Birhor tribes, there are significant gaps in our understanding of their socio-economic condition and the factors that contribute to their marginalization and exclusion. One research gap is the limited availability of up-to-date and comprehensive data on the socio-economic indicators of the Birhor communities. The existing studies often rely on outdated information or small sample sizes, making it difficult to accurately assess the current socio-economic status of the Birhor tribes. Conducting large-scale surveys and data collection efforts specifically targeting the Birhor communities would help fill this gap and provide a clearer picture of their socio-economic condition.

Objective of the study

To study the Socio-economic Development of the Birhor Tribal Communities in Bilaspur District.

Methodology

A purposive sampling technique was used to collect primary data from Birhor tribal community in Bilaspur district. Ensured the research adheres to ethical guidelines, such as obtaining informed consent from participants, maintaining confidentiality, and protecting the privacy of participants.

Sample Size: 200 tribal people from Birhor tribe were randomly selected for the study from Bilaspur District.

Data Analysis

Gender of the Respondents

Gender of respondents	Frequency
Male	121
Female	79
Total	200

In the study of Socio-economic Development of the Birhor Tribal Communities in Bilaspur District, researchers collected data from a total of 200 respondents to understand various aspects of the community's socio-economic development. Among these respondents, 121 were identified as male and 79 were identified as female.

Age of the Respondents

Age	Frequency
Below 20 years	19
20-40 years	99
40-60 years	55
Above 60 years	27
Total	200

In the study of Socio-economic Development of the Birhor Tribal Communities in Bilaspur District, researchers collected data from a total of 200 respondents and categorized them based on their age groups. The frequency distribution of respondents based on age is as follows:

This data provides insights into the age distribution of the respondents in the study. The majority of the participants fall within the age group of 20-40 years, with 99 individuals representing this category. There is a relatively smaller proportion of respondents below the age of 20 (19 individuals) and above the age of 60 (27 individuals). By collecting data from various age groups, researchers can analyze how socio-economic development impacts different stages of life within the Birhor Tribal Communities. Understanding the perspectives and challenges faced by individuals across different age groups can help formulate more targeted and effective development strategies and policies for the community.

Education of the Respondents

Education of the Respondents	Frequency
Illiterate	43
Primary	89
Secondary	55
Graduation	13
Total	200

This data provides insights into the educational background of the respondents in the study. The majority of the participants have completed primary education, with 89 individuals falling into this category. There are 55 respondents with secondary education, indicating a higher level of educational attainment compared to primary education. A smaller proportion of respondents have achieved higher education, with 13 individuals having completed graduation.

Understanding the educational levels of the respondents is essential in assessing the current state of education within the Birhor Tribal Communities. It helps researchers and policymakers identify educational gaps and potential areas for improvement in order to enhance the overall socio-economic development of the community.

Occupation of the Respondents

Occupation of the Respondents	Frequency
Self employed	64
Employed	119
Business	17
Total	200

This data provides insights into the various occupations of the respondents in the study. The largest group of participants (119 individuals) are employed, indicating that they work for someone else or an organization. The second-largest group (64 individuals) are self-employed, meaning they work for themselves and are not employed by others. Finally, there are 17 respondents who are engaged in some form of business, suggesting that they run their own businesses or enterprises.

Monthly Income of the Respondents

Monthly Income of the Respondents	Frequency
Below 10,000	81
10,000-20,000	83
Above 20,000	36
Total	200

This data provides insights into the income levels of the respondents in the study. The largest group of participants (83 individuals) have a monthly income ranging from 10,000 to 20,000. The second-largest group (81 individuals) have a monthly income below 10,000, while a smaller group of respondents (36 individuals) reported having a monthly income above 20,000.

Type of House

Type of House	Frequency
Pucca	38
Semi-Pucca	119
Kutchha	43
Total	200

This data provides insights into the housing conditions of the respondents in the study. The term "pucca" refers to houses made of durable and permanent materials, such as concrete or brick, with solid walls and a permanent roof. The largest group of participants (119 individuals) live in semi-pucca houses, which may be made of a combination of durable and non-durable materials. A smaller group of respondents (43 individuals) live in kutchha houses, which are made of temporary and less durable materials like mud, thatch, or bamboo.

Ownership of the House

Ownership of House	Frequency
Own	157
Rented	43
Total	200

This data provides insights into the housing ownership status of the respondents in the study. The majority of the participants (157 individuals) own the houses they live in, indicating that they have legal ownership and control

over their dwelling. A smaller group of respondents (43 individuals) reported living in rented houses, suggesting that they pay rent to a landlord or property owner for their accommodation.

Type of Family

Type of Family	Frequency
Joint	23
Nuclear	177
Total	200

This data provides insights into the family structure of the respondents in the study. In a joint family, multiple generations (such as grandparents, parents, and children) live together under one roof and share resources and responsibilities. A nuclear family, on the other hand, consists of parents and their children living independently of other relatives.

The overwhelming majority of the participants (177 individuals) belong to nuclear families, indicating that the prevailing family structure in the Birhor Tribal Communities in Bilaspur District is nuclear in nature. Only a smaller group of respondents (23 individuals) reported living in joint families.

Type of Cooking

Type of Cooking	Frequency
Firewood	145
Kerosene	-
Bio-gas	-
LPG	55
Electricity	-
Total	200

This data provides insights into the cooking fuel preferences of the households in the study. The majority of the households (145 individuals) use firewood for cooking, which is a traditional and commonly used cooking fuel in many rural areas. A significant number of households (55 individuals) use LPG, a more modern and cleaner cooking fuel option.

It is worth noting that there are no respondents using kerosene, bio-gas, or electricity for cooking, according to the data collected in the study.

Type of drinking water

Type of drinking water	Frequency
Draw well/open well	31
Tube well	59
Tap water	82
Surface water	17
Mineral/filtered water	11
Total	200

This data provides insights into the drinking water sources preferred by the households in the study. The respondents reported using various water sources for drinking:

- Draw well or Open well: 31 households rely on water from draw wells or open wells, which are traditional water sources.
- Tube well: 59 households use tube wells, which are typically drilled wells that access groundwater.

- Tap water: 82 households have access to piped tap water, which is likely provided by a municipal or local water supply system.
- Surface water: 17 households use surface water sources, such as rivers, ponds, or lakes, for drinking.
- Mineral/Filtered water: 11 households prefer mineral or filtered water, which may be commercially packaged drinking water or filtered at home.

Does any member of the household have a Bank Account?

Bank Account	Frequency
Yes	169
No	31
Total	200

This data provides insights into the prevalence of bank account ownership within the Birhor Tribal Communities. The majority of the households (169 out of 200) reported having at least one member with a bank account, indicating a relatively high level of financial inclusion within the community. However, there are still 31 households that do not have any member with a bank account, suggesting some level of financial exclusion.

Is any female member of the household a member in SHG?

Ownership of House	Frequency
Yes	179
No	21
Total	200

This data provides insights into the housing ownership status within the Birhor Tribal Communities. The majority of the households (179 out of 200) reported owning the houses they reside in, indicating that they have legal ownership and control over their dwellings. However, there are still 21 households that do not own the houses they live in, suggesting that they may be renting or living in accommodations owned by others.

KMO & Bartlett's Test

KMO Measures of Sampling Adequacy	0.923	
Barlett's Test of Sphericity	Approx. Chi-Square	1463.82
	Degree of freedom	149
	Significance	0.045

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is a statistic used in factor analysis to assess the suitability of data for factor analysis. It indicates how well the observed variables in the dataset correlate with each other, and a value closer to 1.0 indicates that the data is highly suitable for factor analysis. In this case, the KMO measure of sampling adequacy is 0.923, which is considered excellent. The "Approx. Chi-Square" value of 1463.82 and the "Degree of freedom" of 149 are related to the Bartlett's test of sphericity. This test is used to determine whether the observed variables in the dataset are significantly correlated, making the data suitable for factor analysis. The higher the chi-square value and the lower the degrees of freedom, the more likely it is that the data is suitable for factor analysis.

The "Significance" value of 0.045 indicates the p-value associated with the Bartlett's test. It represents the probability of obtaining the observed chi-square value by chance if the null hypothesis is true (i.e., the variables are uncorrelated). In this case, the significance value is less than 0.05, which is commonly used as the threshold for statistical significance. Therefore, the result is statistically significant, suggesting that the data is suitable for factor analysis. Overall, based on the KMO measure and the significance of the Bartlett's test, the data appears to be appropriate for conducting factor analysis, and the variables in the dataset show sufficient intercorrelations to proceed with this type of analysis.

Socio Economic requirement of tribal people

S. No.	Socio Economic requirement of tribal people	Factors Loadings	Eigen values	Percentage of variance	Reliability
1.	Land and Resource Rights	0.871	(Cronbach α = 8.241)	21.9725	(0.355)
2.	Education and Skill Development	0.899			
3.	Healthcare Services	0.825			
4.	Livelihood Opportunities	0.850			
5.	Basic Infrastructure	0.811			
6.	Nutrition and Food Security	0.873			
7.	Cultural Preservation	0.892			
8.	Social Security and Welfare	0.811			
9.	Community-Based Institutions	0.803			

The table presents the results of a factor analysis conducted to understand the socio-economic requirements of tribal people. Let's discuss and interpret the findings:

Land and Resource Rights:

- Factor Loading: 0.871
- Eigenvalue: 21.9725
- Percentage of Variance: 35.5%
- Reliability (Cronbach's α): 0.824

The first factor, labeled "Land and Resource Rights," has a high factor loading of 0.871. This indicates a strong correlation between this factor and the variables related to land ownership and resource rights within the tribal communities. The high eigenvalue of 21.9725 suggests that this factor explains a substantial amount of variance in the data, accounting for 35.5% of the total variance. The reliability (Cronbach's α) of 0.824 indicates good internal consistency among the variables related to land and resource rights, suggesting that they form a coherent and reliable factor.

Education and Skill Development:

- Factor Loading: 0.899

The second factor, labeled "Education and Skill Development," has a high factor loading of 0.899. This indicates a strong correlation between this factor and the variables related to education and skill development within the tribal communities. However, the table does not provide eigenvalue, percentage of variance, or reliability information for this factor.

Healthcare Services:

- Factor Loading: 0.825

The third factor, labeled "Healthcare Services," has a factor loading of 0.825, indicating a strong correlation between this factor and the variables related to healthcare services. Again, we don't have additional information about eigenvalue, percentage of variance, or reliability for this factor.

Livelihood Opportunities:

- Factor Loading: 0.850

The fourth factor, labeled "Livelihood Opportunities," has a factor loading of 0.850, indicating a strong correlation between this factor and the variables related to livelihood opportunities for the tribal communities. However, we don't have additional information about eigenvalue, percentage of variance, or reliability for this factor.

Basic Infrastructure:

- Factor Loading: 0.811

The fifth factor, labeled "Basic Infrastructure," has a factor loading of 0.811, indicating a strong correlation between this factor and the variables related to basic infrastructure needs within the tribal communities. Again, we lack information about eigenvalue, percentage of variance, or reliability for this factor.

Nutrition and Food Security:

- Factor Loading: 0.873

The sixth factor, labeled "Nutrition and Food Security," has a factor loading of 0.873, indicating a strong correlation between this factor and the variables related to nutrition and food security within the tribal communities. However, we don't have additional information about eigenvalue, percentage of variance, or reliability for this factor.

Cultural Preservation:

- Factor Loading: 0.892

The seventh factor, labeled "Cultural Preservation," has a high factor loading of 0.892. This indicates a strong correlation between this factor and the variables related to cultural preservation efforts within the tribal communities. However, we don't have additional information about eigenvalue, percentage of variance, or reliability for this factor.

Social Security and Welfare:

- Factor Loading: 0.811

The eighth factor, labeled "Social Security and Welfare," has a factor loading of 0.811, indicating a strong correlation between this factor and the variables related to social security and welfare services within the tribal communities. However, we don't have additional information about eigenvalue, percentage of variance, or reliability for this factor.

Community-Based Institutions:

- Factor Loading: 0.803

The ninth factor, labeled "Community-Based Institutions," has a factor loading of 0.803, indicating a strong correlation between this factor and the variables related to community-based institutions within the tribal communities. However, we don't have additional information about eigenvalue, percentage of variance, or reliability for this factor.

Overall, the factor analysis identifies several important factors representing the socio-economic requirements of tribal people. The high factor loadings indicate strong relationships between the factors and their respective variables. These factors cover a wide range of aspects, including land and resource rights, education and skill development, healthcare services, livelihood opportunities, basic infrastructure, nutrition and food security, cultural preservation, social security and welfare, and community-based institutions.

However, to gain a comprehensive understanding, it would be helpful to have additional information on eigenvalues, percentage of variance, and reliability for all factors. Eigenvalues help assess the importance of each factor in explaining the variance in the data, while the percentage of variance indicates how much of the total variance is accounted for by each factor. Reliability (Cronbach's α) measures the internal consistency of the variables within each factor, ensuring that the variables that load onto a factor are indeed measuring the same underlying construct.

Nonetheless, the factor analysis provides valuable insights into the underlying structure of the socio-economic requirements of tribal people, which can inform targeted interventions and policies to address their unique needs and promote their overall well-being and development.

Perception for development of tribal communities

S. No.	Perception for development of tribal communities	Factors Loadings	Eigen values	Percentage of variance	Reliability
1.	Sustainable Livelihoods	0.789	(Cronbach $\alpha = 1.1425$)	9.7841	(0.761)
2.	Access to Basic Services	0.792			
3.	Land and Resource Rights	0.711			
4.	Community Empowerment	0.763			
5.	Environmental Conservation	0.781			
6.	Respectful Engagement	0.801			
7.	Infrastructure Development	0.796			
8.	Health and Nutrition				
9.	Education and Skill Development				

The table presents the results of a factor analysis conducted to understand the perception of stakeholders regarding the development of tribal communities. Let's discuss and interpret the findings:

Sustainable Livelihoods:

The first factor, labeled "Sustainable Livelihoods," has a high factor loading of 0.789. This indicates a strong correlation between this factor and the variables related to sustainable livelihood opportunities for tribal communities. The factor loading signifies that the perception of sustainable livelihoods is significantly associated with the variables included in this factor. The eigenvalue of 9.7841 suggests that the "Sustainable Livelihoods" factor explains a considerable amount of variance in the data, accounting for 76.1% of the total variance. This indicates that this factor plays a crucial role in shaping stakeholders' overall perception of the development of tribal communities. The reliability (Cronbach's α) of 0.761 indicates good internal consistency among the variables related to sustainable livelihoods, suggesting that they form a coherent and reliable factor. A higher Cronbach's α value indicates that the items in the factor are strongly interrelated and reliably measure the same underlying construct of sustainable livelihoods.

Factors 2 to 7 represent additional perceptions for the development of tribal communities, covering aspects like access to basic services, land and resource rights, community empowerment, environmental conservation, respectful engagement, and infrastructure development. The factor loadings for these factors range from 0.711 to 0.801, indicating strong correlations between these factors and their respective variables.

However, the table does not provide eigenvalues, percentage of variance, or reliability information for these factors (Factors 2 to 7). As such, we are unable to assess the amount of variance they explain or their reliability. Factors 8 and 9, related to health and nutrition and education and skill development, respectively, are present in the table but do not have their factor loadings, eigenvalues, percentage of variance, or reliability listed. This information is essential for understanding the contribution of these factors to stakeholders' perceptions of the development of tribal communities.

The factor analysis identifies the "Sustainable Livelihoods" factor as the most prominent perception among stakeholders when considering the development of tribal communities. This factor emphasizes the importance of sustainable livelihood opportunities in shaping perceptions of community development. However, to gain a comprehensive understanding, it is essential to have complete information, including eigenvalues, percentage of variance, and reliability, for all factors. With this information, policymakers and stakeholders can better address the identified priorities and needs, and work towards fostering the socio-economic development and empowerment of tribal communities effectively.

Conclusion

The study of Socio-economic Development of the Birhor Tribal Communities in Bilaspur District provides valuable insights into the current socio-economic conditions and needs of the Birhor tribal communities residing in the region. Through primary data collection and rigorous analysis, the study sheds light on various key socio-economic factors affecting the community, helping to inform targeted development interventions and policies. One of the significant findings of the study is related to the gender distribution within the community. The data shows that out of the 200 respondents, 121 were male, and 79 were female. This information is crucial for understanding gender dynamics within the community and identifying potential disparities or opportunities for empowering women and promoting gender equality.

The study also assesses the age distribution of respondents, revealing that the majority (99 individuals) fall within the age group of 20-40 years. Understanding the age distribution is vital for designing age-specific programs and services that cater to the diverse needs of different age groups within the community, including youth and elderly members. Education and occupation are crucial factors affecting socio-economic development. The data indicates that a significant proportion of respondents have attained primary education (89 individuals) and are employed (119 individuals). However, the relatively low number of respondents with graduation-level education (13 individuals) highlights the need for improved educational opportunities and skill development initiatives to enhance human capital within the community.

The study also explores the housing conditions of the Birhor tribal communities. A large number of respondents (119 individuals) live in semi-pucca houses, while a smaller group (38 individuals) live in pucca houses. This finding indicates that there is room for improvement in terms of providing durable and permanent housing options to improve the living conditions and overall well-being of the community members. Regarding income levels, the data reveals that the majority of respondents (83 individuals) earn a monthly income ranging from 10,000 to 20,000. This information is crucial for understanding the economic status of the community and can guide targeted efforts to uplift those with lower incomes and improve overall economic conditions.

Suggestion

Based on the study of Socio-economic Development of the Birhor Tribal Communities in Bilaspur District, here are 12 suggestions for targeted interventions and policies to improve the well-being and socio-economic conditions of the community:

- **Enhance Educational Infrastructure:** Invest in building and improving educational facilities within the community, ensuring access to quality education for all age groups. Provide resources and incentives to encourage school enrollment and reduce drop-out rates.
- **Skill Development Programs:** Establish skill development programs tailored to the needs of the community. Offer vocational training and capacity-building initiatives to equip community members with relevant skills for better employment opportunities.
- **Promote Livelihood Diversification:** Encourage the development of sustainable livelihood opportunities beyond traditional occupations. Introduce modern agricultural techniques, entrepreneurship training, and support for small-scale enterprises.
- **Healthcare Access:** Improve access to healthcare services by setting up healthcare centers and mobile clinics within the community. Strengthen health infrastructure and provide necessary medical supplies and equipment.
- **Nutrition and Food Security:** Implement nutrition programs focused on ensuring adequate and balanced diets for all community members. Introduce agriculture-related schemes and initiatives to enhance food security.
- **Clean Drinking Water:** Develop safe and reliable sources of drinking water, including piped water supply and water purification systems, to reduce the burden of waterborne diseases and ensure clean water access for all.
- **Clean Cooking Fuel Promotion:** Promote the use of cleaner cooking fuel alternatives such as LPG and biogas, providing subsidies and awareness campaigns to reduce the reliance on firewood and mitigate indoor air pollution.
- **Housing Infrastructure:** Initiate housing development projects to improve housing conditions, focusing on constructing durable and permanent houses with adequate sanitation facilities.
- **Women Empowerment:** Implement programs to empower women within the community, including skill training, access to credit, and support for income-generating activities. Promote gender equality and women's involvement in decision-making processes.

These suggestions aim to address the various socio-economic challenges faced by the Birhor Tribal Communities and promote sustainable and inclusive development. To achieve the desired outcomes, collaborative efforts from the government, civil society organizations, and community members are essential. Regular monitoring and evaluation of the implemented programs will also be crucial to assess their impact and make necessary adjustments for continuous improvement.

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