The Impact of Illiteracy on Population Growth Among Tribal Communities: A Study of Selected Indian States.

Dr. Sangeeta Mohan
Associate Professor (Management), Deen Dayal Upadhayaya College, Delhi University.

***Abstract*—Limited access to family planning, early marriage practices, high infant mortality replacement desires, and systemic exclusion from reproductive health infrastructure are major causes of population growth among the illiterate tribal population in India. Severe lack of education is one of the main causes of population explosion in India. A society where women are educated at a higher rate. The birth rate of children is also limited there. It is because educated girls are aware of the legal age of marriage, self-esteem, childbirth rate, causes of infant mortality, etc. The education level of the tribal people is playing a vital role in improving the earning capacity, which is the ground-level reality. The literacy of the tribal people has improved with the various tribal welfare programs, and it's revealed by the tribal opinions. The tribal population of India is 8.2 percent of the total population. The majority of the population is found in the states of Orissa, Jharkhand, Karnataka, MP, Rajasthan, Gujarat, Andhra Pradesh, and West Bengal. Governments both central and state are working together for the welfare of tribal society, and from time-to-time new programs, schemes, and policies are created as per the needs of tribal people. A study reveals women with seven or more years of schooling had an average wanted number of children 2.34 lower than women without education 5.26. The most commonly expressed motive for preferring smaller families is to be better able to meet the needs of each child. The impacts of the earning capacity are significantly improved by literacy level, which is explained by the factor analysis. The earning capacities of the people are enhanced with the opportunities of education. The biggest effect of illiteracy in India is poverty, as per our study. Poverty also happens to be the single biggest cause of illiteracy in India and a precursor to all other effects.**

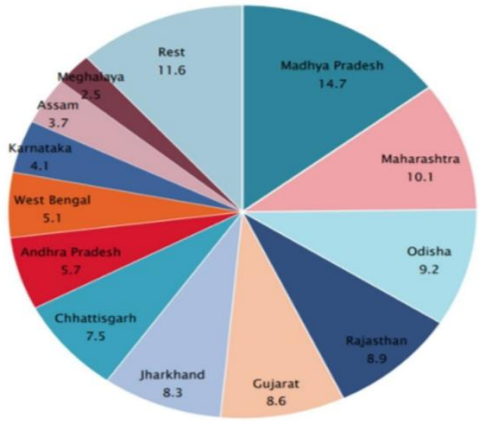
I. INTRODUCTION

Severe lack of education is one of the main causes of population explosion in India. A society where women are educated at a higher rate. The birth rate of children is also limited there. It is because educated girls are aware of the legal age of marriage, self-esteem, childbirth rate, causes of infant mortality, etc. Education brings awareness among them, thereby motivating them to control the population. The overall public education or literacy rate in India is more than 65 percent. As the education rate increases, the population rate decreases. One of the key factors influencing the overall fertility rate among tribal women is married women's illiteracy. While TFR is high in some Indian states, replacement-level fertility has been attained in many others. The Indian government focused on the states that contributed the most to the fertility pool and were categorized as Empowered Action Groups (EAGs) due to their poor health indicators.

The Registrar General of India's Annual Health Surveys (AHSs), which are carried out to monitor and expedite health results in certain EAG states, also demonstrate this. The biggest effect of illiteracy in India is poverty, as per our study. Poverty also happens to be the single biggest cause of illiteracy in India and a precursor to all other effects. The inability to attain basic nutrition and potable water are the more popularly quoted effects of poverty in India, but the issue of population growth and poverty when it comes to effects that can fracture an individual remains illiteracy. Although India's tribal literacy rate has increased from 12% at the time of independence in 1947 to 73.04% in 2021, it is still behind the global average of 84%. The Republic of India has the highest percentage of illiterate tribal people when compared to other countries. India has the world's largest overall illiterate population, with an adult illiteracy rate of 37% of the global total. However, countries in Sub-Saharan Africa and South Asia, such as Niger, South Sudan, and Afghanistan, endure the highest percentages of illiterate tribal and indigenous populations, where national literacy rates remain well

below 35% overall. To determine the effect of illiteracy on different government initiatives, a sample size of 250 respondents was chosen randomly. The majority of respondents supported male only or female-only educational institutions. Results show that compared to their illiterate counterparts, literate tribal parents have a more positive attitude toward their children's education. The results also show that tribal parents from higher socioeconomic backgrounds have a more positive attitude toward literacy than tribal parents from lower socioeconomic backgrounds. As reading and education levels rise, Indigenous people's earning potential is being significantly impacted. The factor analysis reveals that literacy level considerably improves the effects of earning capability. The chances provided by education increase people's earning potential. The government is the major supplier of education in the nation, operating or funding around 80% of all accredited elementary schools (Bhatty, 1998).

However, the tribes fell behind the Scheduled Caste community and the general population in terms of literacy and education (Maharatna, 2005). Integrated development in tribal areas can be achieved through education only.



Distribution of tribal population in India

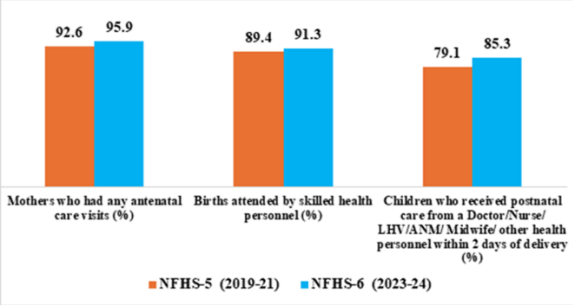
There is a provision under Article 275(1) of the constitution to allocate funds for tribes under Special Central Assistance (SCA) to Tribal Sub-Scheme (SCA) for Particularly Vulnerable Groups (PVTG) for the implementation of various schemes related to the improvement of infrastructure related to education, like the construction of hostels, schools, fencing of school walls, development of playgrounds, and separate toilets for boys and girls and for teachers also. Potable water, kitchen gardens, and arranging first aid boxes in schools, etc.

A sample size of 200 respondents was randomly selected to ascertain the impact of illiteracy on various government projects. Findings suggest there should be formal educational institutions for women. Most of the respondents are of the opinion that literate tribal parents are more inclined toward educating their children than the illiterate ones. Findings also reveal that tribal parents from high socio-economic backgrounds have better attitudes towards literacy than tribals from low socio-economic backgrounds. Tribal knowledge systems represent intergenerational wisdom of the indigenous. People passed on to the present times through centuries of experience and learning. Several studies reveal that STs are geographically isolated, socially marginalized, and economically backward communities. After independence, several sincere and targeted efforts were made by the union as well as the state governments to uplift the living and educational standards of tribes, but the results achieved are far from the expectations. The findings of the factor analysis show that increased education and literacy levels impact their earning capacity significantly. It suggests that the opportunity of education and literacy enhances earning capacity.

The data for the present study were collected from Assam, Chhattisgarh, Jharkhand, Madhya Pradesh, and Odisha. The opinion of 7 respondents suggests that improved education and literacy levels are playing an important role in increasing their earning capacity. Findings also suggest that various welfare schemes started by state and central governments have a significant impact on increasing literacy rates. The states with the most tribal communities include Lakshadweep, Mizoram, Nagaland, Madhya Pradesh, and Bihar. There are no STs in Punjab, Delhi, Chandigarh, Pondicherry, Haryana, or Jammu and Kashmir. Odisha has 9,590,756 Scheduled Tribes, making it the third-largest state in India in terms of the number of Scheduled Tribes, behind Madhya Pradesh and Maharashtra. Together, these tribal communities account for around 22.84% of the state's total population, 9.20% of the Scheduled Tribes population in the country, and roughly 0.79% of the total population of the country.

India is currently in Stage III of the Demographic Transition Model. This phase is characterized by a

rapidly declining Total Fertility Rate (TFR) dropping below the replacement level of 2.1 and significantly lowered death rates due to better public health. The population is still growing but at a steadily slowing pace. NFHS-6 highlights significant improvements in maternal and child healthcare services across the country. 95.9% of pregnant women received antenatal care (ANC), while mothers receiving ANC in the first trimester increased from 70.0% to 76.2%. Mothers receiving at least four ANC visits also increased from 58.5% to 65.2%, reflecting stronger continuity of maternal healthcare services.



Institutional deliveries increased from 88.6% to 90.6%, moving India closer towards universal coverage. Births attended by skilled health personnel improved from 89.4% to 91.3%, while postnatal care for newborns by Doctor/Nurse/Lady Health Visitor (LHV)/Auxiliary Nurse Midwife (ANM)/Midwife/other health personnel within two days of delivery improved from 79.1% to 85.3%.

Maternal nutrition indicators also showed notable improvement. Mothers consuming iron folic acid supplements for 100 days or more during pregnancy increased from 44.1% to 54.9%, while those consuming supplements for 180 days or more rose from 26.0% to 37.8%.

II. REVIEW OF LITERATURE

The Indian Anthropological Survey estimates that 4,635 tribal groupings are still in existence today. Even after seven decades of independence from India, Scheduled Tribes are still historically left out of the cycle of growth and continue to participate in education at a very low level. One essential component of the nation-building process for human advancement is education, which is also a fundamental human right. It is widely accepted that development goals should be met in order for those who are economically and socially disadvantaged to rise out of poverty and fully engage in society (World Bank, 1990; Sen, 1999; Dreze, 2006). Mathew (2022): Various educational policies and government initiatives have aimed at improving the literacy rate of the tribal communities. However, even after 74 years of independence, the literacy levels of the tribal people have not risen to the desired levels.

Russell and Lim (2008): It was found that students from a lower socio-economic status were more likely to drop out from school than students from a higher socio-economic status. They also found that students who work more than 20 hours a week are more at risk of dropping out. Zehol (1988): In a study, Women in Naga Society finds that ninety percent of abortions occur in the first trimester. Malnutrition, anemia, and malaria are curses to the indigenous communities of India. The extent of dietary energy and protein inadequacy was more pronounced, reiterating the fact that it is essentially a 'food gap.' Khanum, R., Mahadi, M. S. A., & Islam, M. S. (2022): Women's economic independence is promoted via entrepreneurship, which gives them more control over family finances. Raghvendra (2020) outlines that entrepreneurship acts as a catalyst for female empowerment by systematically shifting authority across multiple key dimensions of decision-making. A study titled Literacy and Health Status of Scheduled Castes in India finds that the Scheduled Castes in India represent the most backward and deprived section in society. Illiteracy directly accelerates high population growth among Indian tribals by sustaining high fertility rates and preventing family planning awareness. According to the Ministry of Tribal Affairs, the literacy rate for Scheduled Tribes (STs) sits at 72.1% (PLFS data), keeping a massive portion of the population completely cut off from demographic education.

This structural educational gap shapes tribal demographic expansion through distinct socioeconomic and cultural pathways. The 6th National Family Health Survey (NFHS-6) on Population planning reports

A. Total Fertility Rate (TFR): Dropped from 2.0 in NFHS-5 and is holding at 2.0 in NFHS-6, which remains below the replacement level of 2.1.
B. Contraceptive Use: Overall contraceptive prevalence increased from 67% in NFHS-5 to 76% in NFHS-6 Report.

The NFHS-6 report highlights critical shifts in India's family planning landscape. It indicates that the Contraceptive Prevalence Rate (CPR) has increased to 69.1%, while the Total Fertility Rate (TFR) has successfully stabilized at 2.0. However, unmet contraceptive needs and declining modern contraceptive usage in certain urban pockets remain areas of concern

2.1 Research Methodology

A sample size of 250 respondents was randomly selected to ascertain the impact of illiteracy on various government projects. List of respondents/Government Schemes beneficiaries were obtained from state welfare departments of respective states, which were re verified at district level. Beneficiaries were identified through Direct Benefit Transfer (DBT) lists. The universe of the study is individuals, groups of people, community, society, and also organizations, comprising all adult men and women and people belonging to the ST age range of 08 to 70 years, irrespective of their education and geography from Jharkhand, Orissa, Assam, Bihar, MP, and Chhattisgarh. Instead of relying on convenience samples, random sampling was used to ensure every member of the population had an equal chance to participate in proposed study.

2.2 Research questionnaire

The research questionnaire was prepared by the researcher. It consists of various items (questions) pertaining to the issue at hand, including the general information of the respondent such as age, gender, educational qualification, etc. The questionnaire consists of both open-ended and close-ended questions as well as quantitative and qualitative types of questions. The Cronbach alpha method was applied to compute the reliability of the questionnaire. The reliability coefficient of the test as reported by the author for “Role of Illiteracy in Tribes and Its Impact on Various Government Policies." Cronbach’s alpha value is 0.329, (value is bit low because of multidimensionality of traits at once). To study the relationship between education and population growth, a correlation coefficient (r) was applied.

2.3 Objective

To study the impact of illiteracy on population growth among Indian tribes.

2.4 Hypothesis

There will be a positive relationship between illiteracy and population growth.

III. RESULT AND DISCUSSION

Findings suggest that the narrow vision of tribal societies can be changed into broad vision with the help of education only. However, a lot more needs to be done for their upliftment in every aspect of their lives. Literacy significantly impacts government policies towards Indian tribal communities by enabling them to better understand and access government programs, advocate for their needs, participate in decision-making processes, and ultimately achieve greater social and economic empowerment, making education a crucial tool for tribal development and inclusion within mainstream society; however, despite government initiatives, many tribal communities still face barriers to achieving adequate literacy levels.

As per data shown below, marks "t" values at 9.536, which is significant at level 0.05. The level of significance is higher than the required Critical Value (CV) (1.97 for df 198). Data also shows that there is a significant difference between the mean scores of illiterate and literate tribal parents with regard to their attitudes towards the number of children and their education.

Table-1 - Explaining Attitude Towards Childbirth

SN	Groups	N	M	SD	df	“t” Value	Significance	Result
1.	Literate	250	110	2.634	198	9.536	0.05	Significant $p \leq 0.10$
2.	Illiterate	250	102	3.278				

The mean score of the data mentioned in Table-1- Shows that literate people have positive attitudes toward their children's birth and education in comparison to illiterate tribal people.

The biggest effect of illiteracy in India is poverty, as per our study. Poverty also happens to be the single biggest cause of illiteracy in India and a precursor to all other effects. The inability to attain basic nutrition and potable water are the more popularly quoted

effects of poverty in India. But the king of the hill when it comes to effects that can fracture an individual remains illiteracy.

Table 2: Women's years of education and fertility rates

S.N	States (N=250)	Level of Education					Differences	Mean years of Education
		0	1-3	4-6	7-9	10+	0-10	
1	Assam	5.9	5.6	5.1	4.1	3.1	-2.8	4.76
2	Chhattisgarhi	7.1	6.6	6.4	6.8	4.9	-2.2	6.36
3	Jharkhand	3.8	4.0	3.6	2.8	2.6	-1.2	3.36
4	Madhya Pradesh	3.5	2.8	2.5	2.1	1.5	-2.0	2.48
5	Odisha	6.0	5.2	3.9	3.5	2.5	-3.5	4.22

After all, it is one of those things that actually lets people pick themselves up and out of poverty, even if they have to do it by way of their bootstraps. The thing about illiteracy in India and its effects is that they all compound together to form a burden that is passed on from generation to generation, and if history is any indication, it is one that has been increasing with each generational shift and with each year added to the calendar.

The findings from Table 2 reveal Chhattisgarh, an extreme case: women with ten or more years of education have an average of 4.9 children, whereas women without any education have an average of 7.1 children. Among the most consistent relationships in demography is that between the education of women and fertility: as levels of education rise, fertility nearly always decline. Research findings show the total fertility rates the average number of children that women bear by levels of education for selected study areas.

A study reveals that there is an expected tendency for fertility rates to decline as levels of education rise. Hence, the hypothesis “There will be a positive relationship between illiteracy and population growth among tribals" is accepted. How does education work its effects on a population? It has been argued that education is the “fuel of the mind," a means not only for providing education but also knowledge and know-how, but also for changing attitudes, re-thinking effects, attitudes, and values, and reviewing, where necessary, dearly held cultural assumptions. Values and education, it is argued, increase an individual’s capacity to master his or her cultural destiny and to come to terms with a universe in which diverse forms of assumptions exist. Information and abstract symbols play a growing role. If this is, indeed, the case, one would expect that the process of change would begin in the minds of parents that the intention to have fewer children would precede and largely determine that outcome.

IV. CONCLUSION

Illiterate tribal groups experience high numbers of early marriages because they lack awareness about legal age limits or the health risks of early childbearing. Entering marriages early extends the physiological window for childbearing, directly resulting in larger family sizes. Illiterate individuals rarely utilize modern contraceptives due to limited information accessibility and pervasive cultural myths. Economic Reliance on Child Labor and Children as Assets: In underdeveloped tribal economies heavily dependent on agriculture or forest gathering, children are seen as economic assets rather than liabilities.

V. PRACTICAL IMPLICATION OF STUDY

Ensuring proper access to inclusive education would result in prospects for good health practices, increase in living standards and consequent reduction in fertility rate among tribal populations there would be a positive impact of literacy on the implementation of government schemes. Literacy will reduce the number of infant mortality and STDs (sexually transmitted diseases) among tribal women. Literacy will also increase occupational activity and engagement. There will be a positive relationship between illiteracy and population growth among tribals. Education is the only primary agent that can help individuals overcome income barriers and expand the horizon of the community when it comes to making career choices, personal growth, and sustained development and well-being. It is a vital parameter for better living standards of the tribal population.

VI. RECOMMENDATIONS FOR FUTURE RESEARCH

Future studies should investigate the socioeconomic and demographic variations between different tribal groups within the same state. Research can contrast the literacy-fertility dynamic of mainstreamed Scheduled Tribes (STs) against Particularly Vulnerable Tribal

Groups (PVTGs) who face extreme isolation. Researchers can utilize Geographic Information Systems (GIS) mapping to visually overlay the physical distance of tribal habitations from schools against localized fertility hotspots, evaluating the role of geographical accessibility as a confounding variable. Investigate how the "digital divide" affects illiterate tribal communities in accessing telemedicine and mobile-health (mHealth) family planning applications, identifying ways to bridge information gaps through audio-visual or vernacular media. Explore how the gradual transition from subsistence forest economies to wage labor or cash-crop farming changes the perceived economic value of children among illiterate households, and how this shifts population trends.

VII. LIMITATIONS OF THE STUDY

Tribal communities often speak distinct dialects. Relying on standardized translation or interpreters during primary data collection (interviews/questionnaires) can lead to data distortion or social desirability bias. The study may establish a statistical correlation between high illiteracy and high population growth, but it cannot definitively prove that illiteracy causes population growth without controlling for these socioeconomic elements. India has over 700 distinct Scheduled Tribes, each with its own language, cultural marriage norms, and family structure. Grouping them under a broad umbrella masks the unique behaviors of specific Particularly Vulnerable Tribal Groups (PVTGs).

ACKNOWLEDGMENT

This research was funded by the Indian Council of Social Science and Research (ICSSR). Under the project title Role of Illiteracy in Tribes and Its Impact on Various Government Policies. This project was funded by ICSSR in 2023 as a part of a major research project. The project report is submitted.

REFERENCES

[1]. K. Bhatty, "Educational Deprivation in India: A Survey of Field Investigations," Economic and Political Weekly, 1998. [Online]. Available: https://www.jstor.org/stable/4406962

[2]. R. Khanum, M. S. A. Mahadi, and M. S. Islam, "Empowering Tribal Women Through Entrepreneurship in the Sylhet Region of Bangladesh," GeoJournal, vol. 87, no. 4, pp. 3387–3402, 2022, doi: 10.1007/s10708-020-10361-7.

[3]. M. Fletcher, "Pandemic Management and Tribal Sovereignty," in Pandemics in Indian Country: The Making of the Tribal State. HeinOnline, 2022. [Online]. Available: https://heinonline.org/hol-cgi-bin/get_pdf.cgi?handle=hein.journals/usthomlj18&section=17

[4]. R. V. Mohan, "Educating Tribal Children: Issues," in Tribal Development in India: Challenges and Prospects in Tribal Education, pp. 149–166, 2020, doi: 10.4135/9789354791710.

[5]. R. H. Raghavendra, "Literacy and Health Status of Scheduled Castes in India," SAGE Open, vol. 12, no. 1, 2020, doi: 10.1177/2455328X19898449.

[6]. R. V. Russel, The Tribes and Castes of the Central Provinces of India, vol. III, 2008, doi: 10.5281/zenodo.5167116.

[7]. World Bank, World Development Report, 1990.

[8]. A. Sen, Development as Freedom. Oxford University Press, 1999.

[9]. J. Drèze, 2006.

[10]. United Nations Educational, Scientific and Cultural Organization (UNESCO). [Online]. Available: https://www.unesco.org/en

[11]. L. Zehol, Ed., Women in Naga Society. New Delhi: Regency Publications, 1998. [Online]. Available: https://www.semanticscholar.org/paper/Women-in-Naga-society-Zehol/daab77ade3d0f81be982d5e6748f3fe201aa80e0

[12]. Ministry of Tribal Affairs, Government of India, National Policy on Tribes. [Online]. Available: https://www.mcrhrdi.gov.in/87fc/policies

[13]. Ministry of Health and Family Welfare, Government of India, National Family Health Survey (NFHS-6). [Online]. Available: https://master-mohfw-dohfw.digifootprint.gov.in/documents/publications?page=1