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Assessment of the inclusiveness of health services and challenges in the context of scheduled tribes in Kerala

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ABSTRACT

This study investigates the health challenges faced by scheduled tribes (S.T.s) in Kerala, a state renowned for its progressive health indicators. Despite significant advancements in healthcare, S.T.s remains marginalised, with a population of 484839 as per the 2011 census. The paper aims to assess the inclusiveness of health services, explore the stagnation of health outcomes in tribal areas, evaluate the effectiveness of health policies, and examine the adequacy of existing health infrastructure. Employing a mixed-methods approach, the study reveals high illiteracy rates and limited access to employment as primary barriers to social and economic progress. Approximately 90 percent of the tribal population engages in seasonal, low-income labour, and around 80 percent live below the poverty line. Health issues prevalent among these communities include malnutrition, anaemia, and high rates of infectious diseases, exacerbated by inadequate sanitation and water facilities. The study highlights a concerning reliance on traditional practices, leading to underutilisation of available health services. Key findings indicate that maternal health and hygiene are critical areas needing intervention, particularly regarding menstrual health issues. The functioning of community health workers, such as ASHAs, requires enhancement to ensure timely access to healthcare information and services. Recommendations emphasise the need for targeted educational initiatives, improved employment opportunities, and better maintenance of health infrastructure to foster inclusivity and address the pressing health challenges faced by scheduled tribes in Kerala.

1. Introduction

The main determinant of the welfare of any community is the health of its population. A minimum acceptable level of health standard is essential to have other benefits of life. Only a healthy person can realize the full potential of life and all productive activities are built upon the foundation of health.[1] From the perspective of economics, human health is a consumer good as well as a capital good. As a consumer good, it provides satisfaction to individuals who possess it, enabling the consumption of other goods and services, while as a capital good, it generates income.[2]

In Kerala, the health status of different population groups is different. Those living in the mainstream enjoy a better health status, while the situation of those who are backward, especially "Adivasis" or scheduled tribes, is worse.[3] The term 'ADIVASIS' is generally used for a heterogeneous and socially cohesive unit associated with a territory. The tribes in India form an important part of its total population, constituting nearly 8% of the total population. Tribes in Kerala are the indigenous population found in southern India. Most of the tribal people of Kerala live in the forest and mountains of the Western Ghats bordering Karnataka and Tamil Nadu.[4] According to the 2001 census of India, the S.T. population in Kerala is 3, 64,189. Later, according to the 2011 census, the tribal population in Kerala increased

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to 4, 84,839. Wayanad, Idukki and Palakkad are the districts that occupy the lion portion of the native tribal population in the State.[5]

Kerala has achieved international acclaim for its successful development model and for its better performance in various health and development indicators. But the scheduled tribes in Kerala always stand as an outlier; the pace and momentum of the development process among the S.T.s in Kerala are languid compared to other population groups. The health status of scheduled tribes is a critical area that must be analyzed and addressed carefully from time to time. The assessing of the inclusiveness of health services in Kerala, particularly in the context of scheduled tribes and analysis of any challenge to health status of them is relevant to the State's aspirations for inclusive growth.

1.1. Review of literature

Rajasenan D, Sunitha A S, and Rajeev B (2016) stated that the exclusion of tribes in Kerala is a part of its history, and they have been continuously suffering from the threats of development instead of enjoying the benefits of development activities. Hedge (2014) and Manikandan A. D (2014) observed that the nutrition of tribal children is appalling in Attapadi, one of the backward tribal blocks in Kerala. Roy Burman B K (2006) points out that the highly dispersed nature of the tribal population and their regular migration to different interior parts of the forest prevent access to sufficient medical facilities in exact time. Nishi Dixit K (2006) explained maternal and infant healthcare practices were largely neglected in various tribal groups. Craig Johnson and Danniel Start (2004) pointed out that marginalized communities are infected and affected by epidemics and contagious diseases more than the elites in society. Astekar S and Druv M (2001) pointed out that PHCs offer an inferior level of care in most tribal areas.

1.2. Objectives

The objectives are (1) to assess the degree of inclusiveness of health services in the context of S.T.s in Kerala, (2) to identify the health challenges faced by the scheduled tribal population in Kerala, (3) to analyze the effectiveness of government measures related to health in ensuring the inclusiveness of scheduled tribes, and (4) to identify the inter-regional and inter-tribal factors that act as obstacles to accessing health services in the context of S.T.s.

2. Materials and Methods

The study employs an exploratory design, integrating both qualitative and quantitative methods, and uses primary and secondary data sources. Primary data is collected from 300 households across three tribal panchayats in the Attapadi tribal block. A structured questionnaire is used for a house-to-house survey, complemented by personal interviews and participant observation within the selected tribal clusters. Secondary data is drawn from the National Family Health Surveys, Economic Surveys, Human Development Reports, IBRD development reports, and Panchayat Development Reports. The analysis focuses on three critical dimensions; quantity, quality, and accessibility of health services; to assess inclusiveness in tribal health. The quantity dimension examines the proportion of medical staff and health expenditure in tribal areas, quality assesses performance in health indicators, and accessibility evaluates the availability of basic health infrastructure, including sanitation. Descriptive statistics, including means and percentages and diagrammatic representations, such as bar charts and pie charts, are used to analyse and visually present healthcare access, quality, and infrastructure data.

3. Results and Discussion

Lack of access to good food rich in iron, protein, and micronutrients such as iodine and vitamins causes very high incidents of nutritional deficiency diseases like Anaemia, diarrhoea, night blindness, and goitre among Adivasis in Kerala (Rajasenan and Nikitha, 2013). There exist a visible gap in health indicators between tribal areas and the more developed parts of the state due to a lack of access to essential health services. The rate of incidents of tuberculosis, malaria, Anaemia, sickle-cell Anaemia, etc., among the tribal is higher than the general population.[6] The highly dispersed nature of the tribal population and their regular migration to different interior parts of the forest prevent the availability of sufficient medical facilities in exact time. The primary healthcare centres (PHC) and sub-centres have been located within a distance, and the patients have to travel kilometres to seek treatment, are relevant.[7]

In all social and health indicators, the status of tribal women is worse (Reddy, 2008). An acute health issue faced by tribal women is nutritional Anaemia. The heavy workload and health issues like Anaemia profoundly affect the psychological and physical health of tribal women in Kerala.[8] Anaemia lowers fatigue resistance, affects their working capacity under stress conditions and increases susceptibility to other diseases. Another serious health issue quite common among tribal women is maternal malnutrition. Maternal malnutrition has its effects on the reproductive performance and delivery of tribal women, which is crucial to an infant's chances of survival and its subsequent growth and development (Reddy, 2008). Early marriage, successive pregnancies accompanied by low-calorie food intake and inaccessibility, under-utilization of medical facilities, 'unhygienic' and 'crude' practices of parturition, puerperal infection, Anaemia, haemorrhage, obstructed labour and sometimes ruptured uterus lead to high maternal morbidity and mortality rates.[9] The inadequate diet and uninterrupted overwork lead to cumulative disorders, such as Anaemia, general

malnutrition, premature ageing and early death (Basu, 1990). Kerala is witnessing a paradoxical phenomenon of low mortality and high "morbidity" syndrome. The morbidity rate is 252 per 1000 in urban areas and 239 per 1000 in rural areas, consistent with NSSO 60^{th} round estimates (Rural 255 and Urban 240 per 1000 population).

3.1. Population of scheduled caste and scheduled tribes in total population in Kerala

As per Census 2011 in India, the population of S.C.s is 16.6 per cent and S.T.s is 8.6 per cent, together forming a quarter of the total population. The population of S.C. and S.T. as a per cent of the total population in India and Kerala is given in the Table 1.

Table 1: Population of scheduled caste and scheduled tribes in total population

Year	Scheduled Castes (in percent)		Scheduled Tribes (in percent)	
	India	Kerala	India	Kerala
1981	15.81	10.01	7.83	1.03
1991	16.48	9.94	8.08	1.1
2001	16.23	9.81	8.15	1.14
2011	16.6	9.1	8.6	1.45

Source: Census of India.

3.2. Age distribution of respondents

The age provides necessary information about the variations in morbidity according to the various life cycle stages. In Table 2, age has been classified into four categories. Most of the respondents are in their middle ages showing the probability of having a healthy population, compatible with the theories of demography, similar to other population groups.

Table 2: Age distribution of respondents

Age Classification in years	Percentage
20-30	20
31-40	26.6
41-50	23.4
51-60	30
Total	100

Source: Primary Data

3.3. Distribution based on the marital status of respondents

A healthy familial relationship can strengthen social well-being by nurturing the offspring responsibly.Table 3, illustrates that they are eager to maintain their own families like others even when economically deprived.

Table 3: Distribution based on the marital status of respondents

Marital Status	Percentage
Single	6
Married	87
Widowed/Divorced	7
Total	100

Source: Primary data

3.4. Distribution based on the education of the respondents

Most of the tribes are ignorant about the government schemes and initiatives for them and have low access to it. Table 4 shows that most (46 percent) of the respondents are illiterate. Only 7 percent have access to higher education. About 40 percent have education below the 10th standard, and most are engaged in manual labour and other menial work.

Table 4: Distribution based on the education of the respondents

Education Status	Percentage
Illiterate	46
Below 10^{th} /10^{th}	40
Plus Two	7
Higher Education (UG/PG)	7
Total	100

Source: Primary Data

3.5. Occupation distribution of respondents

The socio-economic status of any household invariably depends on the occupation of the head of the family and which in turn determines the household's capacity to fight against diseases.Table 5 represents the occupational distribution. Only 7 percent have access to government employment. The remaining 93 percent is working in the unorganized employment sector, showing that most tribes do not have safe and better job.

Table 5: Occupation distribution of respondents

Occupation	Percentage
MNREGS	33
Coolie	47
Govt. Employee	7
Private Employee	3
Farming	10
Total	100

Source: Primary Data

3.6. Income distribution of tribal households

Table 6 shows that 20 percent of the households belong to the APL category and the remaining 80 percent to BPL.

23 percent of the tribal households live below the income of 5000rupees, while 50 percent between rupees 5001 and 10000.

Table 6: Income distribution of tribal households

Monthly Income	**Percentage**
Below 5000	23
5001-10000	50
10001-15000	17
15001-20000	10
Total	100
Economic Class	Percentage
APL	20
BPL	80
Total	100

Source: Primary Data

3.7. Type of house

47 percent of the respondents have concrete houses. The remaining is living in thatched or tiled cottages (Table 7).

Table 7: Type of house

Type of House	**Percentage**
Thatched	13
Tiles	37
Asbestos	3
Concrete	47
Total	100

Source: Primary Data

3.8. Toilet facility

13.33 percent tribal households depend on public restrooms for their primary needs; 23.33 percent have no toilet facility (Figure 1).

3.9. Details of treatment

70 percent of the tribal households began to use institutional medical facilities. Ninety percent began to follow English medicine. It is evident from Table 8 that they started to approach hospitals and health centres to cure diseases.

Table 8: Details of treatment

Treatment Destination	**Percentage**
Government Hospital	70
Private Hospital	30
Total	100
System of medicine followed	Percentage
Allopathic	90
Ayurvedic	10
Total	100

Source: Primary Data

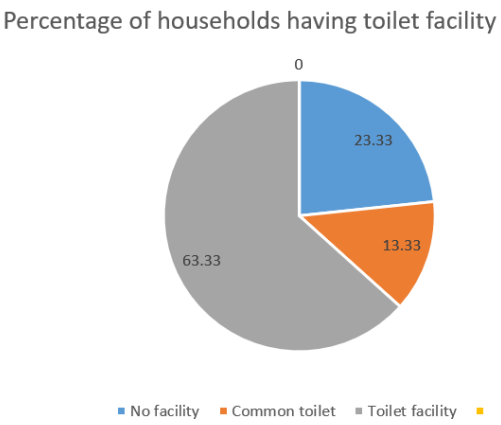

Figure 1: Percentage of tribal households having toilet facility
Source: Primary Data

3.10. Details of inoculation

Figure 2 shows the inoculation details of tribal households. The family members of nearly 50 percent households inoculate themselves to prevent various diseases. At the same time, 40 percent households confine vaccination only among children against various diseases. It was also found that 10 percent households had never heard about immunization.

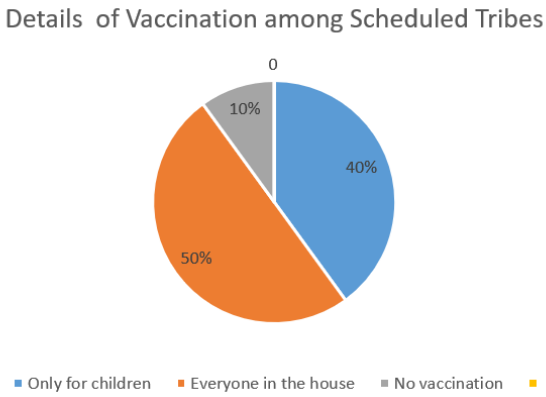

Figure 2: Details of inoculation
Source: Primary Data

3.11. Disease pattern

Table 9 shows the various diseases that are present in tribal communities. Asthma and other respiratory disorders dominate among the diseases. About 66.6 percent are suffering from respiratory diseases; 26.6 percent suffers from Anaemia.

Table 9: Disease pattern

Nature of Diseases	Percentage
Asthma and other respiratory diseases	66.6
Cardiovascular diseases	16.6
Accident, injury, fracture	16.6
Arthritis	20
Underweight	26.6
Anaemia	26.6
Kidney diseases	10
Lifestyle diseases (B.P., Diabetics etc.)	6.66
Viral Fever	46.6
Cancer	10
Gastric complaints	6.66
Menstrual diseases (Gynaecological)	13.3
Contagious diseases	6.66
Skin diseases	30

Source: Primary Data

4. Findings and Suggestions

The study highlights critical issues affecting the health and socio-economic status of tribal populations in Kerala. Illiteracy remains a significant barrier to the effective implementation of development programs, with many individuals engaging in menial labour and seasonal jobs, leading to widespread unemployment and incomes below subsistence levels. About 80 percent of tribal households fall below the poverty line, earning less than rupees 10000 per month, with incomes dropping below rupees 5000 during off-seasons. Many live in poorly maintained government-built homes with inadequate sanitation, as 37 percent lack toilet facilities. Although 90 percent of the tribal population is vaccinated, dependency on western medicine has led to the abandonment of traditional healthcare practices. Furthermore, 70 percent of the population engages in substance abuse, contributing to health problems, including neonatal mortality and diseases such as mouth cancer. Inadequate infrastructure, including transportation and waste management, hampers development, and many government projects remain incomplete. Cultural attitudes also contribute to underutilising resources and maintaining a lifestyle that resists integration into mainstream society, exacerbating health and economic challenges.

To address these issues, several interventions are proposed. Education initiatives should prioritise raising awareness and encouraging parental involvement, focusing on establishing higher educational institutions in tribal areas. Economic empowerment can be achieved through year-round employment schemes, agricultural subsidies, and private property ownership to enhance financial stability. Healthcare improvements should include enhanced midwifery assistance, regular health check-ups for pregnant women, and strengthening the roles of ASHA workers and Anganwadi teachers. Infrastructure development is vital, with an emphasis on completing ongoing projects and improving transportation to health and educational services. Hygiene and sanitation campaigns are essential to promoting personal hygiene and reducing health risks associated with open defecation. Substance abuse prevention programs focusing on education and rehabilitation are also necessary. Community engagement in development initiatives is critical to fostering ownership of health practices while respecting traditional values, and a robust system of monitoring and evaluation is needed to ensure the effectiveness of these interventions. By addressing these issues holistically, the government can facilitate the sustainable development of tribal communities, improving their health, economic stability, and quality of life.

5. Conclusion

Kerala has a long tradition of better health status and health facilities, and the state has achieved international acclaim for having better social and health status. However, many of its population sub-groups, particularly scheduled tribes, is still vulnerable to severe health issues. Malnutrition, Anaemia, being underweight, skin diseases, gastric complaints, menstrual diseases, etc., is rampant among the scheduled tribes in Kerala. There are adequate initiatives on the part of the Government. Still, health deprivation due to the lack of basic facilities of clean water, better toilets, housing etc., are prevalent among them. The educational attainment and employment opportunities available to the scheduled tribes are limited. There is a tendency among the tribes to sting with their traditional unclean way of life. The scheduled tribes in Kerala are suffering predominantly from the diseases of underdevelopment, such as malnutrition, infectious diseases, and maternal and child health problems. The presence of contagious diseases is very high due to inadequate toilet facilities and waste disposal facilities. The tribal women and children are more vulnerable to severe health issues. Particularly tribal women are suffering from several Anaemia and menstrual diseases due to inadequate sanitary facilities, inadequate use of sanitary napkins, unsterile living conditions and so on. Tribal children also suffer from malnutrition and other deficiency diseases. More effective employment schemes, educational opportunities, women empowerment, and effective functioning of ASHAs, are necessary for the betterment of them. It is ensured that the tribes get adequate information on the government schemes on time; also should give awareness to tribes to avoid the tendency among them to underutilize the facilities provided by the Government.

6. Source of Interest

None.

7. Conflict of Interest

None.

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