

Livelihood Transformation and Its Impact on Food Security and Maternal and Child Health: Evidence from Tribal Communities in Attappady, Kerala

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ABSTRACT

This study examines the key factors driving livelihood transformation among tribal communities and analyses their implications for food security and maternal and child health. Employing a descriptive research design, the study integrates both primary and secondary data, with primary data collected from tribal individuals across various age groups. The research was conducted through a field visit in the Attappady Tribal Block of Palakkad district, Kerala, between July 2025 and December 2025. The findings reveal that the transition from traditional livelihoods to more uncertain and challenging contemporary forms has led to increased food insecurity, which has adversely affected maternal and child health, contributing to higher levels of malnutrition. The study concludes that addressing these issues requires prioritising community-based approaches that actively involve tribal communities in planning and implementation, and incorporating indigenous knowledge systems to ensure sustainable and culturally appropriate interventions.

KEYWORDS: Tribal communities, Livelihood transformation, Food insecurity, Malnutrition, Maternal and Child Health.

INTRODUCTION

Attappady, a unique landscape in Kerala located in the Palakkad district, has garnered significant attention in news reports for various reasons, particularly concerning health. The area is home to both tribal and non-tribal communities. In the 1950s, the tribal population constituted over 90% of the area's inhabitants; however, this number has decreased significantly to approximately 34-

43% by the early 2010s. According to the 2011 census, the tribal population in the Attappady Block was 27,627, comprising 13,708 men and 13,919 women. The main tribal communities in the region are the Irula, Muduka, and Kurumba.

Livelihood systems are vital in shaping food security and health outcomes, especially for marginalised populations. In Attappady, the traditional livelihoods of tribal communities have relied on forest resources and subsistence agriculture, but these have experienced significant changes over the past few decades. Such transformations have disrupted indigenous food systems and weakened nutritional security, with particular consequences for women and children. Despite Kerala's overall progress in health and human development, Attappady continues to report concerning rates of malnutrition and maternal health issues. M. Kunhaman (1985) argues that the tribal communities, who have a better understanding of their situations, should be empowered to safeguard their interests through their own systems. There is a need for policy intervention, particularly through affirmative action, to protect the interests of the tribal community. According to K. A. Manjusha (2025), the most effective solution to put an end to the land question in Attappady is that authorities need to provide them with Individual Property Rights within the Collective Right of Land. This article aims to study the connections between livelihood transformation, food security, and maternal and child health in the region.

Thus, the study explores the nature of livelihood transformation by assessing its impact on food security and maternal and child health, and recommends policy measures to address the imbalance faced by tribal communities in Attappady.

METHODS AND MATERIALS:

Materials: The study utilises both primary and secondary sources. For primary data collection, a field visit to the Attappady region was conducted, along with personal interviews and group discussions with tribal people. Research articles, news reports, official government reports and National Family Health Survey reports were used to collect secondary data.

Methods: This is a qualitative study rather than a quantitative one. A descriptive research design was employed for report writing.

TRIBAL COMMUNITIES AND THEIR HEALTH STATUS IN KERALA:

Article 366 (25) of the Constitution of India refers to Scheduled Tribes as those communities, which are scheduled in accordance with Article 342 of the Constitution. This article says that only those communities that have been declared as such by the president through an initial public notification or through a subsequent amendment Act of Parliament will be considered to be Scheduled Tribes. Lokur Committee identified that Scheduled Tribes have indications of

primitive Traits, distinctive culture, shyness of contact with the community at large, geographical isolation and Backwardness. Tribes of Kerala are said to descend from the ancient Dravidian stock with dark complexion and short stature in height. A majority of the tribes of Kerala build their settlements in the dense forest grounds and also on the hill ranges, mainly on the Western Ghats, bordering Tamil Nadu and Karnataka. The Scheduled Tribe Population of Kerala is 484839, constituting 1.45% of the total population of the state. Among this population, Wayanad district has the highest proportion of Scheduled Tribes (18.53%). Thrissur District has the lowest Scheduled Tribe proportion (0.30%). There are 36 Scheduled Tribe communities in the state according to the 2011 Census.

Social stratification remains a strong determinant of health in the progressive social policy environment of Kerala. Though Kerala has made noteworthy progress in health indicators, the scheduled tribe population of the state still suffers from both communicable and non-communicable diseases (Shabeeer K P). When growth picked up over the last two decades, the human development status of the Scheduled Tribes did not show any perceptible improvement. The major reasons for Kerala's lopsided human development state, including historical factors, struggle for social reforms, land reforms, and the spread of education, particularly female education, did not influence the tribal population in Kerala (Nair, M. S., & Sajeev, M. V., 2021). The tribal groups are bearing a higher burden of underweight, anaemia and goitre compared to non-tribes (Haddad et al,2012). Among tribal antenatal women, 85% utilized maternal health care facilities fully compared to 100% among non-tribal women. Lower levels of education and lack of transport facilities were prime factors contributing to underutilization by tribal women (Jose et al 2014). The Kurumba women in Attapadi face significant health challenges, including high maternal and child mortality, malnutrition, and limited access to health care services (Shilpa, T., & Sundararajan, S., 2025). There have been 136 neonatal and infant deaths between 2012 and 2021 in Attappadi Taluk, which is a high number in a State with the lowest neonatal and infant mortality rates in the country.

HISTORICAL CONTEXT OF THE LIVELIHOOD TRANSFORMATION OF TRIBAL COMMUNITIES IN ATTAPPADY:

Tribal communities in Attappady traditionally cultivated agricultural products on their ancestral land. *"We used to cultivate our traditional agricultural products such as Millet, Ragi, Chama, Thomara, Maize, Pulses, and Vegetables on our own land. We have no land now, agriculture too,"* says Parvathy, an ASHA worker in Agaly Mele Ooru.

They also gathered various wild greens, tubers, and animal meat from the forests, and consumed livestock products produced on their farms. This provided them with a balanced diet rich in iron, carbohydrates, and proteins, contributing to their overall health in the past. *"Our ancestors were*

healthy because they had access to meat, either from our own farms or hunted in the forests. This, combined with our traditional agricultural products and a variety of wild greens and tubers, ensured a healthy life," explains Valli, a tribal mother residing in Nakkuppathy Pirivu, Agaly.

Even though tribal communities had a rich livelihood in the past, it has changed over the years. Several factors have contributed to this transformation, including land alienation, reduced access to forest resources, the introduction of new cash crops, and an increased dependence on wage labour.

When examining land alienation, it is essential to consider the role of land reforms in Kerala. Many historians and social scientists have found that the legal and administrative mechanisms for land redistribution systematically excluded Adivasi communities. Tenants were granted absolute ownership rights under the land reform bills of 1960, 1963, and 1964. While some Adivasis gained ownership rights when they were officially recognised as cultivators, this recognition was often limited. In many cases, Adivasi families were given ownership only of the less fertile lands they had occupied after being displaced by migrant pressure. The influx of migrant settlers and their acquisition of land significantly disrupted Adivasi shifting cultivation practices. Unclear land records, especially concerning boundaries and extent in documents issued by landlords, allowed migrants to encroach upon areas traditionally cultivated by Adivasis. Over time, several migrant farmers in Attappady secured ownership of lands that they initially cultivated under lease. Consequently, many Adivasi communities were forced away from fertile lands and river valleys, retreating deeper into forest regions (Kunhaman, 1981).

Colonial authorities reinterpreted complex, locally embedded land relations through a European framework that prioritised individual private property. This transformation erased the multiple customary land rights that existed in the precolonial period. As a result, Adivasi practices such as shifting cultivation were dismissed as unproductive, and their customary claims to land were not legally recognized. Consequently, Adivasis were relegated to the status of tenants-at-will, possessing no formal rights over the land they traditionally used and cultivated (Suresh M, 2020). During the 1970s to the 1990s, indebtedness was a major cause of land alienation (Dr Haseena V A, 2020).

CURRENT CHALLENGES TO THE LIVELIHOOD OF TRIBALS IN ATTAPPADY:

Since the early 1990s, the right to life and livelihood of tribal people has been a fundamental concern for all development initiatives in the Attappady region. Many tribals in this region experienced severe land alienation across all hamlets. Despite strong legislation and numerous housing and resettlement schemes, land remains a mirage to the tribal population (D Rajasenan,

2015). The land degradation in Attappady must be viewed as a result of human activities by settlers, including the British, Tamils, and Malayalis. Tribal communities remain victims of this land degradation. As a result, many tribal farmers have abandoned agriculture and become wage labourers in both farming and non-farming sectors (Manikandan A D, 2016). A few of the tribal families have owned forest land in the area. But it is not useful for cultivation. The reality was cleared by the words of an old woman as follows: *“We cannot do our agricultural activity because of the disturbances of wild animals like pigs, elephants, etc. In the area, it is life-threatening too. One month ago, my neighbour's goat was killed by a leopard,”* says Kaliyamma at Agaly. Now, most depend on wage labour, cattle rearing, and the collection of forest products for their livelihoods. This shift has reduced their self-sufficiency and increased their vulnerability to market fluctuations.

IMPACT OF LIVELIHOOD TRANSFORMATION ON FOOD SECURITY IN ATTAPPADY:

Due to restrictions on forest access and the loss of traditional land, the community is forced to rely solely on the Public Distribution System for food security. *“We don't get our traditional food from anywhere, so we have to eat the rice provided by ration shops, which we don't like. Almost all families eat the same food, rice with one curry, without sufficient nutritional vegetables or pulses,”* says Sumathi, a tribal mother. Adivasi communities continue to face discrimination, not only from non-tribal settlers but also from state authorities, particularly through restrictions on access to forests and forest resources (Elizabeth Edison et al., 2019). These restrictions have also led to food insecurity and malnutrition among the community.

“Even if the community kitchen program functions well, people don't get a balanced diet from it. The result is an increase in anaemia,” says Mr Manikkyan, a school teacher from Puthur. Low and irregular income from wage labour has led to inadequate food availability, seasonal hunger, and increased dependency on external aid and indebtedness. *“We have no other employment except the jobs provided by the panchayat, and without these jobs, it is difficult for us to live,”* says Pappathi, a daily wage worker under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).

IMPACT OF LIVELIHOOD TRANSFORMATION ON MATERNAL AND CHILD HEALTH AMONG TRIBAL COMMUNITIES IN ATTAPPADY:

Malnutrition is prevalent among the tribal population of Attappady, and it can be attributed to several interconnected factors that exacerbate household poverty, food insecurity, and maternal nutrition during and before pregnancy, as reported by UNICEF (2015). The region has witnessed 136 infant deaths from 2012 to 2022, primarily attributed to factors such as premature delivery,

low birth weight, pre-eclampsia, acute respiratory distress syndrome (ARDS), and anaemia, with a substantial number of mothers reporting nutritional deficiencies (Sunu et al,2014). Malnutrition among pregnant tribal women has been linked to infant deaths in Attappady. Conditions such as anaemia, malnutrition, deficiency disorders, tuberculosis, typhoid, and diarrhoea are rampant in Attappady. Many individuals also suffer from sickle cell anaemia, a genetic disorder that severely impacts their health and quality of life (The Hindu, 2021).

Child health indicators reveal an even starker contrast. Tribal children in Attappady experience elevated levels of undernutrition, including stunting, wasting, and underweight prevalence, along with a heightened susceptibility to infections. According to a doctor at the Kottathara Government Tribal Speciality Hospital, nearly 50% of women in Attappady are underweight and weakened, which affects their ability to give birth to healthy babies. A lack of a nutrient-rich diet is identified as the primary reason for their poor health. *“Women are the main breadwinners in most tribal families. Mothers and children lack access to nutritious food due to many reasons, especially low income and their husbands’ drinking habits,”* said an Anganwadi teacher at Nakkuppathi Pirivu, Agali. The transformation of tribal livelihoods from prosperity to poverty has adversely impacted maternal and child health as well as food security. *“The maternal and child health status is very poor among the Kurumba community, a Particularly Vulnerable Tribal Group (PVTG), since most deliveries are premature and result in very low birth weights,”* says Mr Manikyan, a school teacher from Pudur.

RESULTS:

The findings indicate that the transformation of livelihoods in Attappady has weakened traditional resilience mechanisms and increased dependency on external systems. This shift from sustainable livelihoods to food insecurity has directly impacted maternal and child health outcomes, resulting in higher rates of malnutrition. They earn a small, irregular income that is insufficient to support a healthy, minimum-standard life. Almost all families live in small houses between 300 and 450 square feet on a small area of land. These inadequate living conditions, along with food insecurity, affected their maternal and child health. The decline of the once-thriving livelihoods of tribal communities can primarily be attributed to poor policy decisions regarding land transactions made during the post-independence land reforms. Additionally, officials adopted a lenient approach towards encroachers on tribal lands, which facilitated the exploitation of these communities. Moreover, the tribals often borrowed money from non-tribals in exchange for betel and tobacco. When these debts became too great to repay, many of them sold their land to non-Adivasi traders at a low price. This resulted in a large transfer of fertile land to non-Adivasis. In this way, it can be seen that the non-Adivasis were exploiting the Adivasis.

DISCUSSION:

Both central and state governments allocate significant funds for tribal development through various programs, such as Integrated Child Development Services (ICDS), the Public Distribution System (PDS), Attappady Tribal Development Projects, healthcare initiatives, and Kudumbasree programs. While these initiatives have generally ensured access to food and health services, their results tend to be temporary. Programs that promote inclusivity should be implemented by actively involving tribal community members and seeking their input on development initiatives. However, several challenges persist in the execution of these programs. Issues such as a lack of cultural sensitivity, inadequate infrastructure, poor inter-departmental coordination, and limited community participation hinder progress. Nevertheless, it is crucial to continue these interventions until tangible results are achieved.

CONCLUSION:

Livelihood transformation in Attappady has significantly impacted food security and maternal-child health. The shift from traditional, self-sustaining systems to market-dependent livelihoods has increased vulnerability and nutritional risks. To address this, it is necessary to revive traditional livelihoods by promoting millet cultivation, indigenous crops, and forest-based economic activities. Nutrition-sensitive interventions should be strengthened by improving Integrated Child Development Services (ICDS) and maternal health services, while also encouraging dietary diversity and nutrition education. It is crucial to reinforce land and resource rights through the effective implementation of the Forest Rights Act, preventing further land alienation. Community-based approaches must be prioritised by actively involving tribal communities in planning and implementation processes and integrating indigenous knowledge systems. The deserving land of tribals must be provided as early as possible. Professional courses, especially skill development courses, engineering and paramedical courses should be ensured to tribal students through an intensive recruitment programme among them, so that they can enter into various jobs, including public as well as private. It can reduce their current challenges to their livelihood. Lastly, an integrated policy framework is required that aligns agriculture, health, and nutrition programs, with a strong emphasis on women's and children's development.

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