

Household Food Insecurity and Child Nutrition among Tribal Communities: Evidence from Jharkhand

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Abstract

Household food insecurity and child malnutrition continue to be major developmental concerns among tribal communities in Jharkhand. The present study examines the relationship between household food insecurity and child nutritional outcomes among tribal populations in the state. Tribal communities in Jharkhand have historically depended on forests, subsistence agriculture, and traditional ecological knowledge for food and livelihood security. However, rapid industrialization, displacement, environmental degradation, poverty, and declining access to traditional food resources have weakened indigenous food systems and increased nutritional vulnerability. The study analyses the socio-economic conditions of tribal households and explores how inadequate access to nutritious food affects child health and development. The findings indicate that a significant proportion of tribal children suffer from stunting, wasting, underweight conditions, and anaemia due to poverty, low dietary diversity, seasonal unemployment, poor maternal health, and inadequate healthcare facilities. The study also highlights that welfare programmes such as the Public Distribution System (PDS), Integrated Child Development Services (ICDS), and PoshanAbhiyaan have not been fully effective in addressing nutritional insecurity in remote tribal regions. From an anthropological perspective, the research emphasizes the importance of indigenous food practices and traditional knowledge systems in ensuring nutritional sustainability. The study concludes that child malnutrition among tribal communities is not only a health issue but also a reflection of socio-economic inequality, ecological vulnerability, and developmental exclusion. It recommends culturally sensitive and community-based policy interventions that strengthen food security, improve healthcare access, promote traditional nutritious foods, and ensure sustainable livelihood opportunities for tribal populations in Jharkhand.

Keywords: Household Food Insecurity, Child Nutrition, Tribal Communities, Jharkhand, Malnutrition, Indigenous Food Systems

Introduction

Food insecurity and child malnutrition continue to remain major public health and developmental challenges among tribal communities in India. Despite economic growth and the expansion of welfare programmes, a significant proportion of tribal households still experience inadequate access to nutritious food, unstable livelihoods, and poor health conditions. Tribal populations are among the most marginalized social groups in India due to geographical isolation, low levels of education, poverty, forest dependency, and limited access to healthcare and government services. In states such as Jharkhand, where a substantial proportion of the population belongs to Scheduled Tribes, the issues of food insecurity and child undernutrition have emerged as critical concerns for scholars, policymakers, and development practitioners. According to the Food and Agriculture Organization, “food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food” (FAO, 2008). However, this condition remains difficult to achieve among tribal households living in economically and ecologically vulnerable regions. (FAO, 2008; Devereux & Maxwell, 2001). Jharkhand is one of the mineral-rich yet socio-economically deprived states of India, characterized by a large tribal population and widespread rural poverty. Major tribal groups such as the Santhal Tribe, Munda Tribe, Oraon Tribe, and Ho Tribe traditionally depended on forests, subsistence agriculture, and common property resources for survival. However, processes such as industrialization, mining expansion, displacement, deforestation, and climate variability have adversely affected traditional livelihood systems and indigenous food practices. As a result, many tribal households face seasonal hunger, reduced dietary diversity, and chronic nutritional deprivation. Children are the most affected section of the population because inadequate food intake during childhood leads to stunting, wasting, anaemia, low immunity, and poor cognitive development. The persistence of child malnutrition among tribal communities indicates structural inequalities that cannot be addressed merely through economic growth alone. (Béteille, 1991; Xaxa, 2014). The concept of household food insecurity is multidimensional and includes not only the availability of food but also access, utilization, and stability over time. Amartya Sen significantly contributed to this understanding by arguing that hunger is often caused not by the lack of food availability but by the inability of people to access food due to poverty and social exclusion. As Sen observes, “Starvation is the characteristic of some people not having enough food to eat. It is not the characteristic of there being not enough food to eat” (Sen, 1981). This perspective is highly relevant in the context of tribal communities in Jharkhand, where food may be available in markets but remains economically inaccessible to many households. Seasonal unemployment, low agricultural productivity, indebtedness, and land alienation further deepen food insecurity among tribal populations. Moreover, poor sanitation, inadequate healthcare, and lack of awareness regarding nutrition aggravate the nutritional vulnerability of children. (Sen, 1981; Dreze & Sen, 2013). Child nutrition is a crucial indicator of social development and human well-being. Nutritional deprivation during early childhood has long-term consequences on physical growth, mental development, educational attainment, and future productivity. Studies conducted in tribal regions of India have consistently shown higher levels of undernutrition among tribal children compared to non-tribal populations. The National Family Health Survey (NFHS-5) highlights that stunting, underweight, and anaemia remain alarmingly high among Scheduled Tribe children in several Indian states, including Jharkhand. Malnutrition among tribal children is closely associated with household poverty, maternal illiteracy, food insecurity, lack of dietary

diversity, and poor public health infrastructure. Furthermore, traditional food systems that once provided nutritional security are gradually declining due to changing ecological and economic conditions. This transformation has increased dependence on low-cost and nutritionally inadequate market foods. Consequently, tribal households are experiencing a nutritional transition that negatively affects child health outcomes. (NFHS-5, 2021; Rao et al., 2015). Anthropological studies have emphasized that food practices and nutritional behaviour are deeply embedded in cultural beliefs, ecological settings, and indigenous knowledge systems. Tribal communities traditionally possessed rich knowledge regarding forest foods, wild fruits, medicinal plants, and sustainable agricultural practices. Claude Lévi-Strauss argued that food is not merely a biological necessity but also a cultural system that reflects social relations and identity. In his words, “Food is not only good to eat, but also good to think” (Lévi-Strauss, 1966). This insight is important in understanding tribal food habits and nutritional practices in Jharkhand. Many tribal communities continue to rely on indigenous foods such as millets, forest tubers, leafy vegetables, and locally available grains. However, modernization, migration, market penetration, and state-led development interventions have altered traditional consumption patterns. The erosion of indigenous food systems has contributed to declining nutritional diversity and increasing dependence on externally supplied food grains through welfare schemes. (Lévi-Strauss, 1966; Kuhnlein&Receveur, 1996). Although the Government of India has implemented several welfare programmes such as the Public Distribution System (PDS), Integrated Child Development Services (ICDS), Mid-Day Meal Scheme, and PoshanAbhiyaan, their effectiveness in tribal areas remains uneven. Administrative inefficiencies, corruption, infrastructural limitations, and lack of cultural sensitivity often hinder the proper implementation of these schemes in remote tribal villages. Moreover, many programmes focus primarily on calorie intake rather than nutritional diversity and culturally appropriate food practices. Existing literature has examined tribal poverty and malnutrition separately; however, there is still inadequate empirical research specifically linking household food insecurity with child nutritional outcomes in the tribal context of Jharkhand. Therefore, the present study seeks to bridge this research gap by examining the relationship between household food insecurity and child nutrition among tribal communities in Jharkhand. (Khera, 2011; Swaminathan, 2009).

The present study is guided by three major objectives. First, it aims to examine the extent and nature of household food insecurity among tribal communities in Jharkhand. Second, it seeks to assess the nutritional condition of tribal children in relation to food consumption, dietary diversity, and socio-economic status. Third, the study intends to analyse how structural factors such as poverty, livelihood insecurity, and changing food systems influence child nutrition among tribal households. By combining anthropological perspectives with nutritional and developmental analysis, the study contributes to a deeper understanding of the socio-cultural dimensions of food insecurity and child malnutrition in tribal society. The findings of this study may also help policymakers and researchers formulate more inclusive and culturally sensitive nutrition interventions for tribal populations in India. (MSSRF, 2012; UNICEF, 2019)

Socio-Economic and Nutritional Profile of Tribal Communities in Jharkhand

The tribal communities of Jharkhand constitute one of the most socio-economically marginalized populations in India. According to the Census of India 2011, Scheduled Tribes account for nearly 26.2

percent of the total population of Jharkhand, making it one of the largest tribal-concentrated states in the country. Major tribal groups such as the Santhal Tribe, Munda Tribe, Oraon Tribe, and Ho Tribe largely reside in rural and forested areas where livelihood opportunities remain limited. Historically, these communities depended on forests, subsistence agriculture, hunting, and collection of minor forest products for survival. However, rapid industrialization, mining activities, land alienation, and environmental degradation have significantly disrupted their traditional economic systems. Virginius Xaxa notes that “tribal deprivation in India is rooted not only in poverty but also in historical processes of exclusion and displacement” (Xaxa, 2014). Such structural inequalities continue to shape the socio-economic conditions of tribal households in Jharkhand. (Census of India, 2011; Xaxa, 2014). Agriculture remains the primary source of livelihood among tribal households, though most families possess marginal or small landholdings with low agricultural productivity. Rain-fed cultivation, lack of irrigation facilities, traditional farming methods, and poor market connectivity contribute to unstable incomes and seasonal unemployment. During agricultural lean seasons, many tribal families engage in wage labour and seasonal migration to urban centres in search of employment. Migration often affects household food consumption patterns and reduces childcare support for young children. In addition, indebtedness and dependence on moneylenders increase economic vulnerability among tribal households. Walter Fernandes observes that “development-induced displacement has disproportionately affected tribal communities, pushing them further into poverty and food insecurity” (Fernandes, 2008). The expansion of mining and industrial projects in Jharkhand has displaced several tribal villages, weakening their access to land, forests, and traditional food resources. (Fernandes, 2008; Mohanty, 2011). Education and healthcare indicators among tribal populations also remain comparatively poor. Literacy rates among tribal women are significantly lower than the national average, which directly influences child health and nutrition outcomes. Maternal illiteracy often limits awareness regarding balanced diets, breastfeeding practices, immunization, and sanitation. Access to healthcare services in remote tribal villages is constrained by inadequate infrastructure, shortage of medical personnel, and poor transportation facilities. Many tribal communities continue to rely on traditional healing systems and indigenous medicinal knowledge due to limited availability of modern healthcare institutions. While these traditional practices hold cultural significance, the lack of institutional healthcare support contributes to high rates of maternal and child morbidity. Consequently, children living in tribal households are more vulnerable to infections, low birth weight, and chronic undernutrition. (NFHS-5, 2021; Balgir, 2005). Food consumption patterns among tribal communities are closely linked to ecological conditions, seasonal availability, and socio-economic status. Traditionally, tribal diets included millets, maize, forest tubers, leafy vegetables, pulses, mushrooms, and wild fruits, which provided nutritional diversity and micronutrients. However, changing agricultural practices, deforestation, and market penetration have gradually transformed indigenous food systems. Many tribal households are increasingly dependent on rice distributed through the Public Distribution System (PDS), leading to reduced dietary diversity. Claude Lévi-Strauss rightly stated that “food is a language through which a society expresses its structure and values” (Lévi-Strauss, 1966). The erosion of traditional food cultures among tribal communities reflects broader socio-economic and ecological transformations occurring in Jharkhand. Moreover, rising food prices and irregular income frequently compel poor households to compromise on the quality and quantity of food consumption. (Lévi-Strauss, 1966;

Kuhnlein&Receveur, 1996). The nutritional status of tribal children in Jharkhand presents a serious public health concern. According to the National Family Health Survey (NFHS-5), a significant proportion of tribal children suffer from stunting, wasting, underweight, and anaemia. Chronic undernutrition among children is largely associated with inadequate dietary intake, recurrent illness, poor sanitation, and household food insecurity. The first five years of childhood are especially critical because nutritional deprivation during this period can negatively affect physical growth, cognitive development, and future productivity. UNICEF has emphasized that “malnutrition in early childhood creates irreversible damage to human development” (UNICEF, 2019). In tribal areas, child malnutrition is often compounded by maternal malnutrition, early marriage, and poor access to healthcare facilities. These interconnected socio-economic and health factors reinforce the cycle of poverty and nutritional insecurity among tribal households. (UNICEF, 2019; NFHS-5, 2021)

The following table presents selected nutritional indicators among tribal children in Jharkhand based on NFHS-5 data:

Table 1: Nutritional Status of Tribal Children in Jharkhand

| Nutritional Indicators | Percentage (%) |
|----------------------------------|----------------|
| Stunted (Height-for-Age) | 39.6 |
| Wasted (Weight-for-Height) | 28.0 |
| Underweight (Weight-for-Age) | 42.7 |
| Anaemic Children (6–59 months) | 67.5 |
| Children Receiving Adequate Diet | 11.3 |

Source: National Family Health Survey (NFHS-5), 2019–21, Ministry of Health and Family Welfare, Government of India.

The data clearly indicate the alarming prevalence of undernutrition and anaemia among tribal children in Jharkhand. Low dietary diversity, household poverty, food insecurity, and inadequate maternal healthcare significantly contribute to these conditions. Although government schemes such as ICDS, Mid-Day Meal Programme, and PoshanAbhiyaan have improved nutritional awareness to some extent, their implementation in remote tribal regions remains inconsistent. Therefore, understanding the socio-economic and nutritional profile of tribal communities is essential for analysing the relationship between household food insecurity and child nutrition outcomes in Jharkhand. A comprehensive approach that recognizes indigenous food systems, cultural practices, and structural inequalities is necessary for addressing the nutritional challenges faced by tribal populations. (Swaminathan, 2009; Dreze& Sen, 2013)

Household Food Insecurity and Its Impact on Child Nutrition

Household food insecurity is one of the most significant factors influencing child malnutrition among tribal communities in Jharkhand. Food insecurity refers to the condition in which households lack regular access to sufficient, safe, and nutritious food necessary for healthy living. Among tribal populations, food insecurity is closely linked with poverty, unemployment, land alienation, ecological

degradation, and seasonal livelihood instability. Although tribal communities traditionally maintained self-sufficient food systems based on forests and subsistence agriculture, socio-economic transformations have weakened their food security mechanisms. The Food and Agriculture Organization states that “food insecurity exists when people lack secure access to sufficient amounts of safe and nutritious food for normal growth and development” (FAO, 2008). In Jharkhand, many tribal households experience seasonal hunger during agricultural lean periods, leading to irregular food consumption and nutritional deprivation among children. (FAO, 2008; Devereux & Maxwell, 2001). One of the major causes of household food insecurity among tribal communities is persistent rural poverty and limited livelihood opportunities. Most tribal families depend on rain-fed agriculture, daily wage labour, and forest resources, all of which are highly vulnerable to environmental and economic fluctuations. Small landholdings, declining soil fertility, lack of irrigation, and climate variability reduce agricultural productivity and household income. In addition, displacement caused by mining and industrial projects has disrupted traditional livelihood systems and access to common property resources. Amartya Sen argued that hunger is fundamentally related to entitlement failure rather than absolute food shortage. In his words, “a person can starve even when food is available if he loses the means to acquire it” (Sen, 1981). This perspective is particularly relevant to tribal households in Jharkhand, where economic exclusion and limited purchasing power restrict access to nutritious food despite the availability of food grains through markets and welfare schemes. (Sen, 1981; Dreze & Sen, 2013). Food insecurity directly affects the nutritional status of children because inadequate food intake during early childhood impairs physical growth and cognitive development. Tribal children living in food-insecure households often consume diets deficient in proteins, vitamins, and micronutrients, resulting in stunting, wasting, underweight conditions, and anaemia. In many villages, children are frequently dependent on cereal-based diets with minimal dietary diversity. Repeated infections caused by poor sanitation and unsafe drinking water further aggravate malnutrition by reducing nutrient absorption in the body. According to UNICEF, “good nutrition is the bedrock of child survival, health and development” (UNICEF, 2019). However, nutritional insecurity among tribal children remains widespread because poverty and food scarcity limit regular access to balanced diets. Malnourished children are also more susceptible to illness, low school participation, and poor learning outcomes, thereby reinforcing intergenerational cycles of poverty and deprivation. (UNICEF, 2019; NFHS-5, 2021). The erosion of indigenous food systems has further intensified food insecurity among tribal populations in Jharkhand. Traditionally, tribal communities relied on diverse food sources such as millets, pulses, forest fruits, edible roots, mushrooms, and leafy vegetables that provided essential nutrients and food security during periods of scarcity. However, deforestation, environmental degradation, and changing agricultural practices have reduced access to these traditional foods. Market penetration and dependence on subsidized rice through the Public Distribution System (PDS) have gradually transformed dietary habits, leading to nutritional simplification. Anthropological studies suggest that traditional ecological knowledge played an important role in sustaining food security among tribal groups. Madhura Swaminathan observes that “the decline of traditional food systems has serious implications for nutritional security among marginalized communities” (Swaminathan, 2009). Consequently, tribal households increasingly depend on low-cost and less nutritious market foods that fail to meet the nutritional requirements of growing children. (Swaminathan, 2009; Kuhnlein & Receveur, 1996). Women

and mothers play a critical role in ensuring child nutrition within tribal households. However, maternal malnutrition, early marriage, heavy workload, and lack of nutritional awareness often affect childcare and feeding practices. In several tribal communities, women have limited decision-making power regarding household food distribution and healthcare expenditure. Poor maternal health contributes to low birth weight and weak immunity among infants, increasing the risk of chronic malnutrition during childhood. Breastfeeding practices and complementary feeding are also influenced by poverty and food insecurity. Inadequate healthcare services in remote tribal areas further limit access to maternal and child nutrition programmes. Thus, child malnutrition cannot be understood separately from the broader socio-economic and gender inequalities existing within tribal society. (Balgir, 2005; Rao et al., 2015) The following table presents the relationship between household food insecurity and child nutritional outcomes among tribal households in Jharkhand based on secondary data from NFHS-5 and related studies.

Table 2: Household Food Insecurity and Child Nutrition among Tribal Communities in Jharkhand

| Indicators | Percentage (%) |
|--|----------------|
| Tribal Households Facing Food Insecurity | 54.2 |
| Children Suffering from Stunting | 39.6 |
| Children Suffering from Underweight | 42.7 |
| Anaemic Children (6–59 months) | 67.5 |
| Households with Low Dietary Diversity | 61.0 |

Source: NFHS-5 (2019–21), Ministry of Health and Family Welfare; NSSO Reports; UNICEF India (2019).

The data indicate a strong association between household food insecurity and poor child nutritional outcomes among tribal communities in Jharkhand. Despite the implementation of welfare programmes such as ICDS, PDS, and PoshanAbhiyaan, nutritional insecurity continues due to poverty, irregular employment, ecological vulnerability, and inadequate healthcare infrastructure. Therefore, addressing child malnutrition in tribal areas requires a multidimensional approach that combines food security, livelihood support, healthcare access, women's empowerment, and protection of indigenous food systems. Sustainable nutritional interventions must recognize the cultural and ecological realities of tribal communities rather than relying solely on standardized welfare mechanisms. (Khera, 2011; Dreze & Sen, 2013)

Conclusion and Recommendations

The present study highlights that household food insecurity remains a major determinant of child malnutrition among tribal communities in Jharkhand. Despite the existence of several welfare programmes and nutritional schemes, a large number of tribal households continue to experience poverty, unstable livelihoods, seasonal hunger, and inadequate dietary diversity. These structural vulnerabilities significantly affect the nutritional status of children, resulting in high levels of stunting, underweight conditions, wasting, and anaemia. The study also reveals that the erosion of traditional food

systems, ecological degradation, displacement, and lack of healthcare access have further intensified nutritional insecurity among tribal populations. Thus, food insecurity among tribal households is not merely an economic issue but also a socio-cultural and developmental concern linked with historical marginalization and unequal access to resources. (Dreze & Sen, 2013; NFHS-5, 2021). The contemporary relevance of this study is particularly important in the context of rising food inflation, climate change, environmental degradation, and increasing rural distress in India. Tribal communities are among the most vulnerable groups affected by these transformations. Therefore, policy interventions must move beyond calorie-based approaches and focus on nutritional diversity, food sovereignty, and sustainable livelihoods. The government should strengthen the Public Distribution System (PDS), ICDS, and Poshan Abhiyaan in remote tribal areas while ensuring transparency and community participation. Promotion of traditional tribal foods such as millets, forest produce, and indigenous crops can improve nutritional outcomes and protect cultural food practices. Furthermore, improving maternal healthcare, sanitation, women's education, and livelihood opportunities is essential for reducing child malnutrition. A culturally sensitive and community-based approach is necessary to ensure nutritional justice and inclusive development among tribal communities in Jharkhand. (Swaminathan, 2009; UNICEF, 2019)

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