

Socio-Economic status and Dietary Practices among the Lodha: Particularly Vulnerable Tribal Groups (PVTGs) of West Bengal

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Abstract

The Lodha in West Bengal, a Particularly Vulnerable Tribal Group (PVTG), are especially prone to nutritional problems because of low economic subsistence, reliance on forests for food, and strong cultural traditions. This paper uses socio-economic survey data conducted among the Lodha tribal community of Paschim Medinipur and Jhargram districts, residing in villages adjacent to forests. Ethnographic observations have been applied to study how income, diet, food restrictions, and health are interrelated. According to the Modified B.G. Prasad Scale, over 80% of Lodhas have lower-middle incomes. Their food primarily consists of rice, wild vegetables, and various animal proteins, including unusual meats and alcohol. The prevalence of undernutrition is 73.9% among the children and 68.6% among adult females. The prevalence of lower-middle socio-economic status of the Lodhas has been a major determinant of their poor nutritional status. Intervention programmes and encouragement of food replacement instead of the eradication of cultural practices, along with strategic ways of subsistence, can improve their quality of life.

Keywords: Lodha, Tribe, Dietary practices, Nutritional status, Taboos, West Bengal

Introduction

Nutrition is a key factor in health, productivity, and quality of life (FAO, 2019; WHO, 2021). The global community is focused on enhancing health and nutrition, implementing health and nutrition-related initiatives, and fostering a healthy environment (Mason et al., 2006). The social and economic factors influencing health have been recognised as disparities in health outcomes among low, middle, and high-income nations. Nutritional inequalities are widespread; individuals from high and middle-income nations seem to be more susceptible to over-nutrition (overweight and obesity), whereas those in low-income countries are more likely to experience malnutrition (Perez-Escamilla et al., 2018). With a population of nearly 1464 million, India became the 1st largest country in the world (World Population Review, 2025). Despite being one of the largest economies, India still belongs in a medium HDI tier of 0.685 (HDI, 2025).

Furthermore, according to the Global Hunger Index (2024), India, achieving a score of 27.3, ranked 105th out of 127 countries, indicates that the country is experiencing a "serious" state of food scarcity. In India, malnutrition, especially undernutrition, poses a considerable public health issue (Prasad et al., 2018). The tribes are a fundamental component of the Indian population. Their distinct ecology, economy, society, and religious beliefs have a long-standing connection with Indian culture. The concept of a tribe encompasses communities that vary significantly from one another in terms of demographic size, linguistic and cultural characteristics, ecological environments, and material conditions of life. The tribes in India exemplify the diverse and vibrant character of Indian society, which is simultaneously grounded in age-old traditions while also being influenced by the forces of modernisation that operate in conjunction. In India, tribal folk predominantly reside in isolated and underdeveloped areas, where access to healthcare, education, and job opportunities is restricted. These circumstances greatly affect their nutritional well-being, resulting in elevated levels of malnutrition, poor maternal and child health outcomes, anaemia, and various other health-related challenges when compared to their non-tribal peers (Punetha & Pandey, 2023). For tribal groups like the Lodha, food is tied to culture, knowledge of the land, and their livelihood (Kshatriya & Acharya, 2016). The Lodhas in West Bengal, a Particularly Vulnerable Tribal Group (PVTG), are a good example to study how conventional ways of getting food, their dietary practices, and livelihood insecurity are connected.

According to the Census of India, 2011, there are 108,707 Lodha (including Kheria and Kharia) in West Bengal, residing mostly in the districts of Paschim Medinipur and Jhargram. They used to live off the forest, hunting, gathering, and farming to an extent (Bose, 2006; Majumdar, 1950). The Lodha people may not excel in farming, yet they possess a profound understanding of the forest. Their extensive knowledge encompasses trees, herbs, and traditional medicines (Setua & Islam, 2021). They ate wild plants like roots, greens, fruits, and mushrooms, along with animals like rodents, reptiles, and birds, plus rice and veggies. This gave them a range of foods and access to the local land's resources (Sinha, 1973).

However, in recent years, things have changed due to modernisation, upholding strategic ways of subsistence and the environment in particular. Cutting down forests, limits on the use of products from the forest, and reduced hunting opportunities have made it harder to get good forest foods (Planning Commission, 2008). They lack in consumption of key nutrients, which is reflected through the prevalence of 40.4% undernutrition among preschool children (Bisai et al., 2014) and 41.6% undernutrition among women (Sabud et al., 2020).

Objective

1. Exploring the food habits: This includes noting what plants and animals they eat, where they get their food (forest, farms, and stores), how they cook it, and how their diet changes with the seasons.
2. Find out what cultural things affect what they eat, like taboos and rituals: This means understanding food restrictions based on clan, dietary rules during pregnancy, after childbirth, as well as how festivals, religious practices, and alcohol affect food choices.
3. Assessing their socio-economic status: Using the Modified B.G. Prasad Scale (2025) to classify their socio-economic status, this work looks at how income affects Lodha families' ability to get nutritious foods, have diverse diets, and have enough food.

Methodology

To understand the socio-economic conditions, dietary practices, and nutritional issues of the Lodhas in West Bengal, this study combined a socio-economic survey with a cultural investigation. The study focused on Lodha families living in the forest fringe areas of Paschim Medinipur and Jhargram districts.

Data were collected from 303 households using a structured pre-tested questionnaire. Their income was categorised into five classes based on the Modified B.G. Prasad Scale (2025) (Prasad, 1961; Sharma, 2021). Data on cultural practices, food habits, taboos, and healthcare practices were gathered through observations, conversations, and group discussions with community members, especially women, elders, and traditional healers.

The data was organised using statistics, and the interview information was analysed to find cultural reasons that affect nutrition (FAO, 2019). Standard ethical procedures were followed, including obtaining permission from all participants and maintaining their confidentiality, as instructed by the Indian Council of Medical Research (ICMR, 2017) and the Anthropological Survey of India (2016). By integrating economic data with cultural aspects, we obtained a comprehensive understanding of how livelihood issues and traditions influence the nutrition of this vulnerable tribal community.

Results

The Lodha community is mostly nuclear in family type (79.5%). The majority (87.8%) live in single-room housing. 59.4% of the studied households lived in families having 1-4 members. Almost all the houses were kuccha with mud floor and wall (99%), and roofs built with asbestos (74%). The highest percentage of AAY cardholders (92.1%) is with the Lodha community, indicating these households are extremely economically marginalised. Lodha (86.5%) continues to depend on biomass fuels like firewood for cooking. The incidence of forest collection and river product gathering that was identified during the study was 88.4%. The Lodhas collect sal and kendu leaves, roots and tubers from the forest. The Lodha community shows a higher lack of literacy amongst both the adult males and females, with 67.3% and 66% lacking any formal education, respectively. 64.4% of the males are daily wage earners.

Socio-Economic Status and Nutrition Linkages

Based on the Modified B.G. Prasad Scale (2025), the socio-economic assessment shows income inequality among the Lodha community. Most respondents (80.5%) are in Class IV (Lower Middle), with per capita monthly income between ₹1412 and ₹2823. Just 15.0% of the studied population are in Class III (Middle), and only 2.3% each are in Class II (Upper Middle) and Class V (Lower). Nobody belongs to Class I (Upper), which shows that there are no high-income earners in this community.

The prevalence of Class IV suggests that most families are just above the poverty line, despite extreme poverty (Class V) being relatively rare. This makes them open to economic problems and changes in yearly income. The lack of higher-income classes (Class I and II together are only 2.3%) points to few chances for economic improvement. This economic situation directly affects nutrition. Often, they are deprived of getting enough foods that are high in nutrients, such as milk, eggs, and fruits. These trends match earlier research showing that socio-economic hardship among tribal groups is highly related to poor nutritional results, especially for women and children (Bisai et al., 2014; FAO, 2019).

Table 1. Socio-Economic Classification of Lodha Community (Modified B.G. Prasad Scale, 2025)

SES Class	Per Capita Monthly Income (INR)	n	% of Total
Class I (Upper)	≥ 9414	0	0.0
Class II (Upper Middle)	4707–9413	7	2.3
Class III (Middle)	2824–4706	46	15.0
Class IV (Lower Middle)	1412–2823	243	80.5
Class V (Lower)	< 1412	7	2.3
Total	—	303	100.0

Dietary Patterns

The dietary pattern of the Lodhas is peculiar due to the inclusion of local or natural resources or unconventional foods (Jana, 2004). A cross-sectional study made to explore the traditional food practices of Lodhas of West Bengal has shown that the average intake of food stuff (g/CU/day) by Lodhas from their floral and faunal consumption are cereals (378.5), pulses (66.7), green-leafy vegetables (38.3), other vegetables (76.5), tubers (182.9), Fat & Oils (16.9) and sugar (4.7). Average nutrient intake (CU/day) is: energy (1727 Kcal), protein (43.9g), fat (18.8g), calcium (140.4mg), iron (7.1mg), Vitamin C (57.7mg), respectively (Bisai & Dutta, 2021).

Staple and Plant-Based Foods

The Lodha diet mainly includes boiled rice (*bhat*), which they eat as a staple in two meals each day. They also gather edible roots, tubers, leafy greens, mushrooms, and wild fruits from the forest, which diversifies their diet and adds micronutrients. Because they rely on what is seasonally available, their diet varies significantly throughout the year, and they sometimes face food shortages during slow agricultural times.

Table 2. Common plant-based foods consumed by the Lodhas and their nutritional values

Food Item	Source	Preparation Method	Key Nutrients per 100g*	Seasonal Availability
Rice	Cultivated	Boiled	130 kcal, 2.4g protein, 0.2g fat, 28g carbs	Year-round
Leafy greens	Forest	Boiled/stir-fried	High in iron, calcium, β-carotene	Monsoon
Pumpkin	Homestead	Boiled/curry	Vitamin A, fiber, potassium	Winter
Wild mushrooms	Forest	Fried/curry	Protein, selenium, antioxidants	Monsoon
Tuber/roots	Forest	Boiled/roasted	Carbs, fiber, potassium	Winter–Spring

*Key nutrients referred from Gopalan et al., 1993

Research shows plant-based foods provide key micronutrients like iron, calcium, β -carotene, and potassium, but their availability changes throughout the year. Greens and mushrooms, which have antioxidants and minerals, grow mostly in the monsoon season, while tubers are found in winter and spring. This can cause a lack of micronutrients in the summer when less food is available. Rice, the main food, gives enough energy but not enough protein and micronutrients.

Animal Protein Sources

Animal-derived foods are an important part of the Lodha people's diet, as they are a hunter-gatherer community. They usually get goat and chicken from markets or by raising them at home. The Lodha also eats less common animals like rats, monitor lizards, toads, pigs, owls, wild birds, hares, and snakes, which they trap in forests or hunt.

Fermented and Alcoholic Beverages

In Lodha society, drinks like *Handia* (rice beer) and Mohua liquor are very important. Besides supplementing their thirst, they are the objects of hospitality, mark rituals, and represent their cultural identity (Sinha, 1973). *Handia* is created by fermenting boiled rice with a starter culture (*bakhar*), while Mohua liquor is made by distilling the flowers of the *Madhuca longifolia* tree (Roy, 2018). People drink these during festivals, ceremonies, meetings, and sometimes just for fun. Nowadays, the consumption of local distilled spirits has also increased due to the admixture of people from other ethnic backgrounds and social classes. These low-cost, malicious drinks are made of grains, molasses, and increase health risks due to poor distillation practices. It is important to mention that drinking too much can cause health problems like liver damage, poor nutrient absorption, and spending less on nutritious foods (Kshatriya & Acharya, 2016).

Food Taboos and Cultural Practices Affecting Nutrition

Food taboos within the Lodha community are tied to their clan system. Certain animal species are viewed as sacred or representative of a clan and are forbidden from consumption (Sinha, 1973). These rules strengthen community identity and culture, but can also limit the variety of nutritious foods.

Dietary rules also come into play during various life cycle events. During gestation, certain foods are restricted, which could affect the mother's health. The lactating women are subject to food taboos to promote proper milk secretion and the health of the child. Likewise, people in the community avoid certain foods—especially animal protein—when mourning or during periods of ritual impurity, sometimes for a long time. These practices help build community and keep traditions alive, but they might exacerbate nutritional problems.

The nutritional impact of abstaining from specific food items varies. For instance, if one avoids omega-3-rich fish such as catfish or *magur*, it may influence cardiovascular and neurological wellness. Similarly, not consuming deer meat reduces the consumption of lean protein and iron.

Nutritional Vulnerabilities

The Lodha community's eating habits and socio-economic status expose quite a few nutritional problems that are connected and that put their general health at risk. A key issue is an imbalance in macronutrients. Their diets are mainly rice and carbs, but they do not get enough good-quality protein, which raises the chance of protein-energy malnutrition (Bisai et al., 2008; Kshatriya & Acharya, 2016).

Conclusion

The 2025 SOFI report, published by FAO, IFAD, UNICEF, WFP, and WHO, analyses the impact of increasing food prices on food insecurity and malnutrition. Numerous countries are still experiencing a rise in hunger. The elevated and ongoing costs of nutritious foods are making it increasingly difficult to access quality diets, particularly for children in low-income environments. There is substantial evidence indicating that the occurrence of malnutrition differs according to the levels of absolute economic status (Alao et al., 2021). Lower household income has consistently been linked to lower diet quality (French et al., 2019). The prevalence of lower-middle socio-economic status of the Lodhas has been a major determinant of their poor nutritional status. Their long-standing methods of getting food – like gathering wild plants, small farming, and using different local plants and animals – show they know how to live off the land, which has helped them survive for many years. However, they face problems like constant poverty, times when food is scarce, not being allowed to get food from forests, and health issues tied to cleanliness and alcohol, which hurt their ability to get good nutrition from diverse food sources. High Carbohydrate dependence, seasonal food insecurity, micronutrient deficiencies, overconsumption of alcohol, poor sanitation, uncertain or irregular way of subsistence, low literacy, and cultural norms related to food taboo practices are some of the factors of malnutrition among the Lodhas of West Bengal. Fixing these issues calls for more than just using typical nutrition programs. It needs actions that consider their culture, like respecting their food habits, what foods they avoid, and their rituals. The actions should also protect the environment by encouraging ways to use forests and land that maintain biodiversity and ensure they have access to nutritious foods all year. Culturally sensitive nutrition programs that encourage food replacement instead of the eradication of cultural practices are important. Sensitisation about proper hygiene and sanitation practices is in need. Awakening to education is inevitable. Raising awareness about the various governmental beneficial schemes for better utilisation of their resources and a strategic way of subsistence is crucial.

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