

Assessment of Knowledge related to Health, Nutrition and Environment in Tribal Children and Their Parents in selected regions of West Bengal, India.

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ABSTRACT

West Bengal is home to a noticeable percentage of tribal communities. Despite their extensive cultural past and traditional wisdom, numerous tribal populations have significant issues in health and nutrition. Comprehending eating patterns, nutritional deficits, and strategies to enhance nutritional status is crucial for tackling these issues and fostering well-being. Knowledge related to nutrition along with health, hygiene and environment can provide overall situation of malnutrition or over nutrition in tribal children. Sometimes tribal children face the problem of improper nutrition due to lack of basic knowledge of themselves or their parents. To assess the level of nutritional and associated knowledge we have conducted survey in selected tribal dominated areas of the state.

Keywords: Tribes, Nutrition, Children, Malnutrition, Over nutrition, Health, Hygiene, Environment.

Received 10.12.2024

Revised 25.02.2025

Accepted 26.03.2025

CITATION OF THIS ARTICLE

Parthapratim Patra and Mahasin Mondal. Assessment of Knowledge related to Health, Nutrition and Environment in Tribal Children and Their Parents in selected regions of West Bengal, India. Inter. J. Edu. Res. Technol. 16[1] March 2025; 58-61.

INTRODUCTION

The tribal communities reside in dwellings that are in proximity to nature and have limited access to contemporary advancements and the benefits of technology. Exposure to the most recent understanding and advancements is very restricted. India is home to 705 communities, which are distributed across five principal regions and each tribe is characterized not only by its geographical location but also by its distinct cultural attributes. The primary source of sustenance for the indigenous population is their residences. All activities embodying the qualities of life are fulfilled within these residences. The majority of tribal dwellings are constructed from natural materials. Consequently, it is quite reasonable that the community possesses profound information regarding health, nutrition, and the environment essential for sustaining life, managing with minimum assistance. It is essential to assess the dimensions and intricacies of this self-help method. A tribe is a collection of indigenous individuals who share common cultural characteristics, including language, customs, and social structure (Negi and Singh, 2018). Tribal communities are distinguished by their distinctive cultural traditions and dietary practices. The unique nutritional issues of these communities are a result of their limited socioeconomic resources and distinctive dietary and agricultural systems. Tribal groups are more susceptible to malnutrition due to their customary socio-cultural practices and low literacy rates (Kapoor & Dhall, 2016). Adequate nutrition knowledge is crucial due to the significant impact of diet on health. This study evaluated the knowledge of primary school students and their parents in tribal areas of West Bengal regarding health, nutrition, and the environment. The tribal community has comparable health issues and requirements to the general population; hence, the standardized national framework for rural healthcare is appropriate to them, albeit with minor modifications for the specific demographic (Singh et al., 2021). The notion of tribal nutrition and its associated knowledge connection is a crucial domain of investigation within anthropology and public health. Tribal nutrition pertains to the conventional food systems and nutritional habits of tribal populations. The tribal health care system, particularly its indigenous knowledge also has immense value in maintenance of child health care (Das et al., 2022). Research indicates that these groups frequently possess distinctive dietary patterns and knowledge systems tailored to their particular environment.

Early Childhood Care provides a crucial foundation for lifetime learning and development, significantly influencing achievement in primary school (Ramesh, 2021). In the early stages of schooling, there is an escalation in internal activity, including secretion, hormonal functions, basal metabolism, and biochemical responses, resulting in heightened dietary requirements (Priyadarshini and Biswal, 2023). This stage needs proper nutritive care. Early Childhood Care facilitate survival, growth, development, and learning about health, nutrition, hygiene, and cognitive, social, physical, and emotional development—from birth until they enter primary school in formal, informal, and non-formal environments (Ramesh, 2021). Parent knowledge and community relationships also play pivotal role in over all improvement of tribal children. The primary causes of childhood malnutrition are inadequate diet, insufficient dietary protein, infections, suboptimal breastfeeding habits, delayed introduction of supplementary meals, inadequate food volumes, and lack parental information regarding nutrition (Kumar et al., 2024).

Several research indicates that the majority of tribes rely on agriculture and indigenous forest resources (Das et al., 2022). Due to insufficient education, they were unable to secure appropriate jobs and were frequently exploited locally (Kumar et al., 2024). Tribal communities predominantly consume coarse cereals such as millet, maize, and sorghum, in addition to rice in areas where it is cultivated. High consumption of fruits, vegetables, nuts, and legumes; moderate consumption of poultry, eggs, and dairy products; and occasional consumption of red meat can improve growth and development of child (Firth et al., 2020). Proper knowledge about leafy vegetables, wild fruits and medicinal is also very significant for food security of remotely located tribal community (Das et al., 2022; Sarkar et al., 2018). Malnutrition within tribal communities perpetuates a detrimental cycle of adverse health outcomes, characterized by an increased vulnerability to infections, diminished labor capacity, and the intergenerational transmission of nutritional deficiencies. The inadequate level of knowledge, entrenched cultural views, and old cultural norms are the primary community hurdles impeding their autonomous decision making on access to modern healthcare facilities (Kumar et al., 2022).

MATERIAL AND METHODS

The study focused on some selected tribal community dominated areas of Purulia, Bankura and Paschim Medinipur districts of West Bengal. The study involved collecting data between 2022-2025 from 200 tribal male children, 200 tribal girl children and 200 tribal parent respondents. Tribal children were between the ages of 5 and 10 and parents were between the ages of 25 and 50 having at least one child. In consideration of the objectives, a quantitative methodology was employed. This research was conducted as an observational cross-sectional analysis. Data analysis can produce substantial results that can be converted into policy outcomes for the benefit of tribal children nutrition. The data has emphasized the varied and extensive traditional knowledge of the ethnic groups predominantly located in the study sites and other resource-abundant regions worthy of exploration in our country.

RESULTS AND DISCUSSION

The findings indicated that tribal children have significant knowledge about nutrition and health-hygiene. Our study revealed comparable results across male and female tribal children; however, there are some deviations in case of their parent. To avert undernutrition, prompt action is imperative, encompassing the promotion of awareness at the community level, income generation for tribes through government schemes, enhancement of healthcare access, and provision of supplementary nutrition as urgent measures to eradicate undernutrition in tribal regions, particularly among tribes in the study sites as well as in the country (Kumar et al., 2024). Disparities in nutrition, characterised by suboptimal diet quality and insufficient nutrient consumption, derive from a multitude of factors and are associated with negative health outcomes, including obesity, diabetes, cardiovascular disease, and certain types of cancer (Agurs-Collins et al., 2024). Comprehensive dietary knowledge is essential for a healthy existence. Education is also regarded as a fundamental element in the development of individuals and communities. Many contemporary researchers have documented a significant correlation between the educational attainment of respondents and their attitudes towards nutrition (Priyadarshini and Biswal, 2023). The majority of parent respondents, were illiterate in basic education, they were primarily uninformed of the significance of junk food or the essential nutritional requirements for good existence (Table 1). Participants with advanced educational degrees demonstrated superior knowledge and comprehension of food, nutrition, health, and hygiene. The table 2 clearly showed the knowledge tribal people including tribal children. This table illustrates that the concept of health and healthcare is intricately connected with various factors within the tribal population.

Research indicates that the tribal health maintenance system is characterized by considerable complexity, intricately linked to socio-cultural beliefs and practices (Sonowal, 2010).

Table 1: Nutrition Related Knowledge

Nutrition Related Knowledge	Percentage			
	Male Tribal Child	Female Tribal Child	Father	Mother
1. Knowledge about Balance Diet	11.25 %	10.00 %	17.50 %	18.50 %
2. Knowledge about Drinking Water	81.75 %	91.25 %	98.50 %	99.50 %
3. Knowledge about fruit consumption	50.25%	50.50%	98.75%	99.00 %
4. Knowledge about healthy vegetable	78.25%	90.75%	99.50 %	99.50 %
5. Knowledge about leafy vegetables	98.50 %	99.00 %	99.00%	100 %
7. Knowledge about meat in diet	89.50 %	88.75 %	100 %	100 %
8. Knowledge about fish in diet	80.75 %	90.00 %	100 %	100 %
9. Knowledge about egg in diet	98.75 %	99.00 %	100 %	100%
10. Knowledge about Edible Mushroom	13.25 %	13.00 %	35.00 %	36.00 %
11. Knowledge about Salade in died	20.25 %	25.25 %	55.25 %	65. 25 %
12. Knowledge about ORS in case of dehydration	10.75 %	12.75 %	46.25 %	55.75%
13. Knowledge of Fat rich food	2.50 %	5.25%	15.00 %	28.00 %
14. Knowledge of Vitamins	5.00 %	5.00%	40.00%	58.25%
15. Knowledge of Junk food	10.00%	15.25%	40.25 %	55.25 %

Table 2 showed the knowledge tribal people including tribal children

Related Knowledge	Percentage			
	Male Tribal Child	Female Tribal Child	Father	Mother
1. Knowledge about cleaning face and hand	91.25 %	95.00 %	97.50 %	98.50 %
2. Knowledge about handwash/sanitizer	90.75 %	95.25 %	95.50 %	95.50 %
3. Knowledge about regular brush of teeth	100 %	100 %	100 %	100 %
4. Knowledge about washroom and toilet	100 %	100 %	100 %	100 %
5. Knowledge about cutting nail	88.25%	90.75%	99.50 %	99.50 %
6. Knowledge about basic first aid	78.50 %	78.25 %	89.00 %	92.50 %
7. Knowledge about community garden	79.25%	88.75 %	90.25 %	95.20 %
8. Knowledge about medicinal plant	25.25 %	50.25 %	65.25 %	70.25 %

Understanding of nutrition within tribal societies is a significant factor affecting dietary habits and food selections. The prevalence of malnutrition and its associated health risks among tribal children is now widely acknowledged (Sonowal, 2010). Diet is essential for sustaining an individual's health and serves as the basis for both physical and mental functions. A diet is inadequate when nutrient consumption is either too low or excessively high. Comprehensive nutritional knowledge, healthy eating habits, and appropriate dietary behaviors are essential for optimal growth, development, and the preservation of physical and psychological stability (Priyadarshini and Biswal, 2023). In poor nations, the majority of individuals suffering from chronic nutritional deficiencies are members of tribal communities. The media has played a crucial role in highlighting the pervasive instances of malnutrition in regions predominantly inhabited by tribal communities within various Indian states (Sonowal, 2010). The tribal communities have forfeited their entitlement to access the forest, which has ultimately resulted in the loss of access to forest products that were once their primary source of natural nutrients, such as fruits, green stalks, and tubers, mushrooms (Das et al., 2022). Children require more nutrients than adults, as these are essential for the development and protective functions of their developing bodies. Government initiatives emphasize teaching and training youngsters to adopt a nutritionally balanced diet by implementing a nutrition education curriculum in educational institutions. This is predicated on the assumption that the kid will convey their knowledge to their parents, hence facilitating communication of information among family member. Knowledge of balanced diet is very significant for betterment of children of any community. Inadequate perception regarding the significance of a balanced diet and its correlation to health, coupled with prevalent cultural myths and dietary fads, familial eating habits, and economic vulnerability, contribute to food insecurity and detrimental dietary practices, such as avoidance and inaccessibility. These factors are among the primary determinants of the inadequate consumption of a balanced diet among children from underprivileged backgrounds. The present communication found that there is almost improper knowledge about balance diet among the tribal children as well as their parent. Assessment of nutrition knowledge is a critical measurement for these interventions, as there is a positive correlation between increased nutrition knowledge and the consumption of fruits, vegetables as well as balanced diet among by tribal family. A balanced diet encompasses all essential elements in appropriate quantities and ratios to satisfy an individual's daily nutritional requirements, while also supplying reserves to address any food shortages or heightened bodily demands (Lim, 2018). More than 90 percent of the children asserted that practicing personal hygiene behaviors such as bathing, brushing their teeth,

wearing freshly laundered clothing, utilizing bathrooms, and cleaning their hands with soap after using the toilet and before eating are effective measures for maintaining health.

CONCLUSION

Children need a broad range of nutrients to maintain a healthy as well as active existence and these being acquired through the nutrition which they intakes regularly. Nutrition and health related information can accelerate the physical and mental growth of the children. Nutrition related education of parents is also a pivotal factor which can significantly influence the advancement of better health and gender equality in case of nutrition. The current communication revealed that tribal children and their parents are moderately aware about the information regarding nutrition and health- hygiene. Though they have sufficient knowledge regarding drinking water, consumption of leafy vegetables, protein rich diet; however, they have little knowledge about Junk food, fat rich food, ORS, vitamins etc. A notable percentage of tribal children and their parents were found to aware about health and hygiene. The current study also concludes that there exists a significant prevalence of risk factors associated with improper nutrition due to inadequate personal hygiene, insufficient knowledge of safe drinking water, a lack of awareness about healthy food practices, addiction to junk food, as well as a negligent and casual attitude among. parents. This necessitates prompt execution to identify and address the preventable factors contributing to an optimal setting for the health and well-being of vulnerable tribal children.

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