

Exploring How Baiga Tribal Women Secure Food: Insights into Coping Strategies Amidst Food Insecurity

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Abstract: The study examines the complex relationship between food security strategies and dietary consumption patterns among the Baiga tribe. Through mixed methods, the research employed qualitative interviews, participant observations, as well as quantitative surveys to gain a holistic understanding of how these women manage food insecurity. The findings show that hunting-gathering shifting cultivation sharing within the community was significant for ensuring availability and diversity of diet among others which are traditional practices considered important by them. The findings indicate that the challenges of food insecurity are primarily addressed through the extensive use of Indigenous knowledge and traditional practices, such as the barter system. These approaches play a crucial role in enabling communities to cope with limited food availability. The reliance on Indigenous knowledge provides culturally rooted strategies for managing resources, while the barter system facilitates the exchange of goods and services, thereby mitigating the impacts of food scarcity. These adaptive mechanisms highlight the importance of traditional methods in sustaining livelihoods in the face of socio-economic constraints.

Keywords: Food Insecurity, Tribal Women, Baiga women, Malnutrition, Coping strategies

Introduction

Food security means that all human beings must always have access to enough nourishing food for their diet. This definition, highlighted during the 1996 World Food Summit, reflects how important it is to have continued access of food to every person. It is essential in leading an enjoyable life that everyone has access to meals that are healthy and satisfying. Food plays an important role in human life as it provides energy for daily activities thereby influencing our vulnerability to diseases while affecting individuals' general well-being, so a proper balanced diet is of paramount importance towards this direction. It is therefore important to ensure that individuals have the resources necessary to obtain a variety of foodstuffs of good quality and quantity.

Food security is multi-dimensional involving four main dimensions. Physical availability of food is the foundation which depends on levels of production, stocks, and net trade. This does not however imply household food security; thus economic and physical access to eatables is equally crucial. The affordability of these adequate supplies also requires policies that enhance income,

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manage expenses, stabilize markets and prices. The third dimension involves how the body utilizes what it has eaten- nutritionally speaking. Proper hygiene care practices, diverse diets and equitable sharing within households ensure sufficient nutrition status. Lastly, this must be sustainable over time; thereby even if an individual has periods where they may experience sufficient dietary intake, it would still not qualify for them being food secure especially when there are possibilities of occasional breaks in accessing sources due to weather shocks or political unrest among others. (World Bank, n.d.)

For many tribal communities in India particularly those who fall under Particularly Vulnerable Tribal Groups (PVTGs) such as Baiga, basic needs are still heavily dependent on environmental services linked with their ecology. These communities struggle continually with inadequate nutritional things required by themselves and their children. Despite much advancement in the realm of food production as well as other sectors related to the economy, there are continuous challenges regarding feeding people sufficiently with essential nutrients such as proteins and vitamins. Efforts towards improving the socio-economic development of these groups at the same time conserving their rich cultural heritage are still going on with various welfare schemes and programs meant for PVTGs in particular.

Spread across several states in India including Chhattisgarh, Jharkhand, Bihar, Odisha, West Bengal, Madhya Pradesh and Uttar Pradesh are Baigas who are one of the Particularly Vulnerable Tribal Groups (PVTGs). Dindori District is in the eastern part of Madhya Pradesh as of the 2011 Census and it has a majority tribal population, especially with Baiga and Gond people. Most parts of this district are rural, with artisanship and agriculture being the main economic activities that they depend upon for their survival. Hilly terrains and thick forests are a few characteristics distinguishing it from other districts making it an eco-cultural zone. In addition to subsistence farming, shifting cultivation is another common economic activity which these tribes undertake within the forest regions. Issues concerning education and health care services have remained major concerns in Dindori just like many other tribal-dominated districts across India. As such, basic service accessibility has been affected by slow infrastructure growth. Consequently, there is a lack of access to basic social amenities including educational facilities among others.

However, social statistics like literacy rates and health indices show that this area still lags in development compared to well-off divisions implying the need for focused developmental plans given its location within a low-income district. This means that cultural diversity exists alongside abundant natural resources but typical problems of remote tribal areas such as poverty and lack of basic services persist in Dindori District.

The National Food Security Act (NFSA) 2013 or the Right to Food Act is one of the significant national measures taken towards solving the hunger problem in India today. This legislation aims to provide food grains at subsidized prices to those in need, facilitated through the Targeted Public Distribution System (TPDS), which covers up to 75% of the rural and 50% of the urban populations. Alongside TPDS, the Antodaya Anna Yojna (AAY) was introduced in 2000, targeting the poorest segments by providing highly subsidized food grains. The government also supports the nutritional needs of vulnerable populations through initiatives like Midday Meals, integrated child development programs, and the Public Distribution System (PDS).

Despite these efforts, gaps remain between policy objectives and actual conditions on the ground. Many tribal communities, including the Baiga, lack awareness of minimum dietary requirements and the importance of dietary diversity, which hinders the effective implementation of nutrition programs. Displaced from their traditional ecosystems, many Baiga are compelled to migrate, leading to further marginalization and isolation. The Baiga's nutritional status is particularly

concerning due to their remote living conditions and reliance on an often-inadequate public distribution system. In villages like Jalda and Chada in Dindori district, it was observed that none of the children attended school, thus missing out on benefits like the midday meal scheme. Their diet typically relies heavily on raw food directly sourced from nature, reflecting their deep connection with and dependence on the surrounding environment for sustenance.

The Baiga community, recognized as a 'Scheduled Tribe' by the Government of India, faces significant challenges due to their traditional farming methods, low levels of education, and limited population growth. These factors contribute to the community's pronounced disparities in both nutritional and socioeconomic conditions (Shirisha, 2019).

Understanding the interconnectedness of hunger, malnutrition, and food insecurity is essential for addressing the root causes of dietary deficiencies. Hunger typically refers to the physical discomfort or pain caused by a lack of sufficient caloric intake and is a direct indication of food deprivation. It highlights a condition where there is a clear shortage of food energy, making every hungry person essentially food insecure. However, the relationship is not entirely reciprocal; not all food-insecure individuals experience hunger since food insecurity can also stem from inadequate nutrient intake, not just insufficient calorie consumption.

Malnutrition is described as a condition that compromises an individual's physical function to such an extent that they can no longer support necessary bodily processes like growth, pregnancy, lactation, physical labor, and the ability to resist and recover from illness. Since poverty is closely associated with malnutrition, improving a country's economic conditions should lead to better outcomes in terms of malnutrition.

Malnutrition, on the other hand, involves either too little or too much consumption of nutrients and can manifest as deficiencies, excesses, or imbalances in the intake of macro- and micro-nutrients. It often arises from prolonged food insecurity but can also be influenced by non-dietary factors. These include inadequate childcare practices, insufficient health services, and poor living conditions, which can affect the body's ability to absorb and utilize nutrients effectively.

Moreover, while poverty is a clear driver of hunger and malnutrition, the relationship is cyclical, as poor nutrition can undermine economic productivity and contribute to the persistence of poverty by impairing physical and cognitive development, thus reducing an individual's ability to earn a sustainable income. This complex interplay suggests that interventions aimed at alleviating food insecurity need to address broader socio-economic and environmental issues to be effective.

Across various research studies, malnutrition has been discovered to be a persistent problem among tribal groups living remotely and in remote areas that have no access to basic services. In one of these studies, Chakma et al. (2009) examined the nutritional status of Baiga tribe, which is one of the primitive tribes found in Madhya Pradesh in India. This study aimed to assess the nutritional intake and status of preschool children and adults within this tribe using anthropometric measurements as well as dietary surveys.

According to Chakma et al. (2009), it was found out that there were alarming levels of malnutrition; about 61% of pre-school children were underweight while nearly a quarter suffered from severe malnutrition. Also, almost three-quarters of adults had chronic energy deficiency ($BMI < 18.5\%$). These nutritional deficiencies were largely due to insufficient dietary intake as cereals exceeded the recommended levels while proteins, fats, iron and vitamin intakes remained low. This study emphasizes the complex interplay between socioeconomic factors and traditional dietetic practices with regard to high prevalence rates of malnutrition amongst tribal populations. Chakma et al., in a comprehensive study discussing the nutrition environment of the Baiga tribe in Madhya Pradesh, provide critical insights that refer to the wider context within which Baiga tribal

women operate and especially how they obtain food and manage their nutritional needs. The research established the nutritional status of this community. It emerged that many adults were malnourished with over a half of them having a BMI of less than 18.5 or chronic undernutrition. The diet was mainly composed of cereals and millets, with low proportions of proteins, fats and necessary micronutrients intake. Particularly, children presented high occurrence of conjunctival xerosis and Bitot's spots indicating notable Vitamin A deficiency. Furthermore, both children and adults in the group were shorter and lighter than those living in rural areas in Madhya Pradesh as well as National Center for Health Statistics (NCHS) norms indicating persistent problem of undernutrition (Chakma et al., 2014).

It was verified at the National Institute of Nutrition and observed that a one-day diet survey was adequate to capture the consumption of the rural or tribal populations in general because their diet was nearly monotonous (Rao, Kumar, Krishna, Bhaskar, & Laxmaiah, 2015).

To address the vulnerabilities of women as a social group regarding food insecurity, a bottom-up, networked approach is essential. This effort must be coordinated across multiple levels beginning at the household, extending to the societal, and reaching up to the national level. Additionally, these efforts should be supported by a regional response to ensure comprehensive and effective solutions.

Materials and Methods

Study Area

The study was conducted in the Dindori district of Madhya Pradesh, India, home to the Baiga tribe, known locally as Baigachak. Dindori, primarily a tribal-dominated district, is situated in the eastern part of Madhya Pradesh and shares its border with Chhattisgarh. The district covers an area of approximately 7470 sq. km and is notable for its significant population of the Baiga, who are classified as a Particularly Vulnerable Tribal Group (PVTG).

Study Design

The study adopted a community-based ethnographic approach focused exclusively on Baiga tribal women, reflecting on how baiga tribal women secure food. The villages of Chada and Jalda, known for their substantial Baiga populations, were selected as primary sites for data collection. The women within these villages served as the fundamental units for data gathering, with participants chosen through purposive sampling techniques to ensure a specific criteria relevant to the research question thereby providing a representative cross-section of the community.

Data Collection Methods

A descriptive research design was utilised, employing a quantitative approach through a cross-sectional study. Data were collected using a self-reported and self-administered questionnaire. The research methodology was multi-faceted, employing several qualitative techniques to develop a deep understanding of the food security strategies among Baiga women:

- **Focus Group Discussions:** A total of 30 women were engaged in FGDs, organised in three batches of 10. These discussions were structured to facilitate an open and in-depth exploration of the participants' experiences and strategies related to food security. The discussions aimed to explore communal perspectives and shared experiences relevant to their coping strategies in securing food.
- **Semi-structured Interviews:** Complementing the FGDs, 104 interviews were conducted with women from the selected villages. These interviews provided a platform for individual stories and detailed personal experiences to be shared, offering richer qualitative data. These were conducted solely with Baiga women to delve into individual experiences and perceptions concerning food security. The interviews combined open and closed-ended questions, facilitating rich, in-depth discussions.
- **Participant Observation:** To enhance the authenticity and validity of the data, extensive participant observation was undertaken. This involved living within the Baiga community and engaging directly in their daily activities, providing firsthand insights into the practical aspects of their food security strategies.
- **In-depth Interviews with ASHA Workers:** Targeted interviews were carried out with local ASHA workers to gain insights into the health-related aspects of food security and the specific challenges faced by the women in the community.
- **Case Studies:** Individual case studies were also developed to examine specific instances related to land tenure and food security, offering detailed contextual analysis that enriched the overall research findings.

Data Analysis

Data from the interviews, focus groups, and observations were analysed. This involved identifying and interpreting patterns and themes that emerged from the discussions, which facilitated a comprehensive understanding of how Baiga tribal women navigate and manage food security within their socio-cultural and economic environment. This analysis helped to highlight the unique and collective coping mechanisms employed by the women, shedding light on both the effectiveness and the limitations of these strategies in the context of their vulnerability as a tribal group.

Result

These findings provide a comprehensive understanding of the socio-economic challenges faced by the Baiga tribal women in Jalda and Chada, guiding targeted interventions aimed at improving their living conditions and overall well-being. The socio-economic profile of the respondents from Jalda and Chada provides great insights into their living conditions and lifestyle. The sample is fairly distributed in these two villages, with a higher percentage of young adults (51.0% aged between 21-30 years). All respondents are illiterate, which indicates the need for educational interventions in these communities. Joint family structures are still relevant, as seen in the 82.7% of them.

All respondents have to be engaged in one or another occupation because it is an economic necessity for all members of the household to contribute. Living conditions are very poor as all respondents live in kaccha houses and 77.9% live one roomed accommodation meaning that there could be overcrowding or susceptibility.

A large number of families have numerous members with almost half having a size of 4-6 members and a considerable percentage (37.5%) having over seven but less than nine members. This suggests that sanitation is important since everyone resorts to open defecation suggesting nonexistence of toilet facilities; hand pumps being the main water sources at 63.5%, while the rest rely on wells.

In addition, the study reveals pervasive alcohol and tobacco consumption among the respondents were found during this research with 100% disclosing usage. Such extensive use raises questions about health ramifications as well as economic stability.

Table 1: *Distribution of Socio-demographic factors of Baiga Tribe of Chada and Jalda village*

Variables	Category	Frequency (N)	Percent (%)
Village	Jalda	52	50
	Chada	52	50
Age Group	17-20	19	18.3
	21-30	53	51
	31-40	14	13.5
	41-50	10	9.6
	51-60	8	7.7
Highest Standard of Literacy	Illiterate	104	100
Family Type	Nuclear	18	17.3
	Joint	86	82.7
Occupational Status	Working	104	100
Type of House	Kaccha	104	100
Number of Rooms	1	81	77.9
	2	23	22.1
Family Members Count	1-3	11	10.6
	4-6	49	47.1
	7-9	39	37.5
	10-11	5	4.8
Type of Toilet Facility	Open Space	104	100
Main Water Source for Household	Hand Pumps	66	63.5
	Well	38	36.5

Source- Author's calculation

Socio-Economic Profile

Demographic and Household Characteristics

The study included a total of 104 respondents from the villages of Jalda and Chada. The demographic analysis revealed that the majority of the households consisted of joint families (82.7%), with the average family size being 6.4 members. Most respondents (100%) reported not having a separate kitchen room. Additionally, the primary water source for 63.5% of the households was hand pumps.

Educational and Occupational Status

The educational level among the respondents was uniformly low, with all respondents (100%) being illiterate. The occupational status showed that all respondents (100%) were engaged in some form of work, highlighting the economic necessity for women to contribute to household income.

Age Distribution

The age distribution of the respondents ranged from 17 to 60 years, with the majority of respondents being in the age group of 25 to 35 years. The mean age of the respondents was 32.62 years (SD = 10.07).

Alcohol and Tobacco Consumption

The consumption of alcohol and tobacco was pervasive among the respondents, with all 104 respondents (100%) reporting alcohol and tobacco use. This finding is indicative of the cultural practices and the potential impact of substance use on health and food security.

Dietary Patterns

Dairy Consumption: The data reveals that dairy consumption is virtually non-existent among the respondents, regardless of family type. Both nuclear and joint families reported hardly ever consuming dairy products, with 100% of respondents indicating such behavior.

Animal Consumption: There is a notable difference in the frequency of animal consumption between nuclear and joint families. While 4.8% of nuclear families consume animal products five times a week, 18.3% of joint families do so. The frequency is higher across all categories for joint families, with 48.1% consuming animal products four times a week compared to 9.6% of nuclear families. This trend continues for three times a week (16.3% for joint families vs. 2.9% for nuclear families)

Meat Consumption: The frequency of meat consumption also highlights differences between family types. Joint families have a higher frequency of daily and weekly meat consumption compared to nuclear families. Specifically, 23.1% of joint families consume meat four times a week, whereas only 5.8% of nuclear families do. Furthermore, 22.1% of joint families consume meat three times a week compared to 0% of nuclear families.

Fruit Consumption: Joint families again show a higher frequency of fruit consumption compared to nuclear families. While only 1.9% of nuclear families consume fruits five times a week, 5.8% of joint families do. The trend is similar for four times a week (7.7% for joint families vs. 1.9% for nuclear families) and three times a week (25% for joint families vs. 3.8% for nuclear families).

Oil Consumption: All respondents, regardless of family type, reported consuming oil. This indicates a uniform dietary habit concerning oil consumption among the surveyed population.

Table 2: Cross-tabulation of Dietary and Health Behaviors by Family Type

Variable	Category	Nuclear Family (N)	Percent (%)	Joint Family (N)	Percent (%)
Dairy Consumption	Hardly Ever	18	100	86	100
Animal Consumption	5 times/week	5	4.8	19	18.3
	4 times/week	10	9.6	50	48.1
	3 times/week	3	2.9	17	16.3
Meat Consumption	Daily	1	1	3	2.9
	6 times/week	3	2.9	13	12.5
	5 times/week	3	2.9	22	21.2
	4 times/week	6	5.8	24	23.1
	3 times/week	0	0	23	22.1
	2 times/week	0	0	1	1
Fruit Consumption	5 times/week	2	1.9	6	5.8

	4 times/week	2	1.9	8	7.7
	3 times/week	4	3.8	26	25
	2 times/week	7	6.7	23	22.1
	Hardly Ever	3	2.9	23	22.1
Oil Consumption	Yes	18	100	86	100

Source- Author's calculation

Table 2, provides crucial insights into the dietary behaviors of the Baiga tribal women, differentiated by family type. The higher frequency of meat, animal products, and fruit consumption among joint families suggests better access to a variety of food sources compared to nuclear families. This disparity could be attributed to the collective economic activities and resource-sharing inherent in joint family systems, which might enhance food security and dietary diversity. Conversely, the negligible dairy consumption across both family types points to a potential area of nutritional deficiency that could be addressed through targeted interventions. The universal consumption of oil, while consistent, also raises questions about the types and quantities of oil being used and their health implications. The findings highlight significant differences in dietary consumption patterns between nuclear and joint families within the Baiga community. Joint families appear to have better access to diverse food sources, which could positively impact their nutritional status. These insights are vital for developing tailored strategies to improve food security and nutritional outcomes for Baiga tribal women, particularly in nuclear family setups where dietary diversity seems limited.

In the context of the Baiga tribe, the methods of securing food are intricately linked with the dietary consumption patterns observed. The reliance on hunting and gathering is reflected in the frequent consumption of animal products and fruits among joint families. This can be attributed to the collaborative efforts in hunting and gathering, which are more efficiently managed within joint family structures. The practice of shifting cultivation (Bewar) provides staple crops like millets and maize. However, the lack of dairy consumption across both nuclear and joint families suggests that while crop cultivation ensures basic sustenance, it may not cover all nutritional needs, indicating a potential area for nutritional intervention. The consumption of meat, which is more frequent among joint families, indicates the role of animal husbandry in providing essential protein. Joint families might have more resources and labor to rear livestock, thereby ensuring a steady supply of meat, as reflected in the cross-tab results showing higher meat consumption frequencies in joint families. Community-sharing practices likely contribute to the higher consumption frequencies of diverse food items observed in joint families. The ability to barter and share resources within a larger family network ensures better food security and access to a variety of foods, which might be limited in nuclear families.

Access to government schemes and legal forest rights supports the community's overall food security. The uniform consumption of oil among all respondents, regardless of family type, could be a result of the support from these schemes. However, the absence of dairy consumption indicates that government interventions might need to include dairy or dairy alternatives to address

this gap. The adaptive agricultural practices ensure a continuous supply of food, albeit with variations in type and quantity. The higher frequency of meat and fruit consumption among joint families could also be a result of more effective adaptation to seasonal changes, allowing them to utilize a broader range of food sources throughout the year. The methods employed by the Baiga tribe to secure food are deeply connected to the dietary patterns observed in the cross-tabulation analysis. Joint families benefit from collective efforts in hunting, gathering, and animal husbandry, leading to more frequent consumption of diverse food items. In contrast, nuclear families may face challenges in accessing a variety of foods, reflected in lower consumption frequencies. Understanding these connections highlights the importance of family structure in food security strategies and provides a basis for targeted nutritional interventions to address specific gaps, such as dairy consumption, within the community.

The differences in dietary habits between nuclear and joint families underscore the importance of considering family structure in food security interventions. For instance, Nutritional Programs like Targeted nutritional programs should address the lack of dairy consumption across both family types. Introducing dairy alternatives or supplements could help mitigate nutritional deficiencies. Support for Nuclear Families like Programs aimed at supporting nuclear families could focus on improving access to diverse foods, perhaps through community gardens, subsidized food programs, or enhanced access to local markets. Leveraging Joint Family Systems like Joint families' resource-sharing practices could be leveraged in designing community-based food security interventions. Encouraging communal farming or cooperative food buying groups could enhance food security for all family types. By integrating these insights, we can develop more effective and culturally sensitive strategies to ensure food security and improve the nutritional well-being of the Baiga tribe.

Discussion

The study done by Chakma et al. (2009) reveals how the Baiga are malnourished and can help inform public health policies. It is not only enough access to food that matters but also what type of nutritional value and diversity of diet it has for these people. Therefore, public health interventions should be targeted towards increased food availability as well as strengthening nutrition education among tribal communities. For instance, a successful approach could be the development of community-specific healthcare programs and nutrition programs that take into account unique dietary requirements and socio-economic realities of Baiga tribe. The alternative would be that they advocate for family gardens which would assist in diversifying their diets in addition to campaigns aimed at changing traditional eating practices leading to malnutrition. In conclusion, Chakma et al.'s (2009) findings are most useful when considering comprehensive nutrition interventions carefully tailored to address the unique needs of this tribe and others like it or similar societies.

Factors Influencing Nutrition and Food Security

There is a strong relationship between nutrition and food security. Food security refers to the ability to consistently access enough safe and nutritious food for an active and healthy life. Several factors, at various levels, can influence nutrition as well as food security. At an individual level, education plays an important role. With education, an individual attains knowledge of

Understanding dietary needs, food preparation techniques, and healthy eating habits that significantly impact nutritional choices.

Income and economic resources are some of the major factors that lean on the consumption of food on the table. Since most baiga tribes are low on agriculture and skills most of the food is from the forest. Low-income limits access to diverse and nutritious foods, promoting reliance on cheaper, often less nutritious options.

A healthy being is also an important factor in determining nutrition and the food that is consumed. Chronic illnesses or disabilities can affect nutrient requirements and the ability to acquire or prepare food.

At the household level, several factors significantly influence the Baiga tribe's nutrition and food security. The overall availability of food within the household directly impacts dietary intake. Lean seasons and limited access to resources can lead to periods of undernourishment. Additionally, household dynamics play a crucial role. Larger families with young children may face greater challenges in acquiring and preparing sufficient food due to increased demands and limited resources. Furthermore, cultural practices and food preferences heavily influence dietary patterns. While these traditions often have historical roots and may be adapted to utilize available resources, they can sometimes restrict the variety of foods consumed, potentially leading to nutrient deficiencies. Understanding these household-level factors is essential for developing targeted interventions that address the specific needs of the Baiga community.

Within the Baiga community context, several factors at the community level influence nutrition and food security. The remoteness of Baiga settlements often limits access to these resources, forcing a reliance on forest foods and potentially less diverse diets. Sanitation and hygiene practices also play a significant role. Poor sanitation can lead to the spread of foodborne illnesses, reducing nutrient absorption and impacting overall health. Finally, the availability of social safety nets such as government programmes and community support systems can significantly improve access to food for vulnerable populations within the tribe, particularly during lean seasons or for those facing chronic illnesses. Addressing these community-level factors is essential for ensuring long-term food security and improving the nutritional well-being of the Baiga tribe.

The consumption of large quantities of alcohol is a unique aspect of many tribal communities. However, it is particularly noteworthy that within the Baiga tribe, the consumption of alcohol among women is remarkably significant. This pattern stands out even within the broader context of tribal traditions and practices, highlighting a distinct cultural facet that merits further exploration. The prevalence of alcohol consumption among Baiga women introduces a complex factor influencing nutrition and food security within the tribe. Firstly, alcohol dependence can become a primary motivator for income generation. Women may prioritize earning money for alcohol over securing nutritious food for their families. This can lead to neglecting food gathering or cultivation activities, impacting overall household food availability. Secondly, the direct effects of alcohol consumption can hinder the ability to perform daily tasks effectively. Starting the day with alcohol can impair the focus and energy needed for strenuous activities like collecting forest foods or working in the fields. This compromised physical ability can further limit access to nutritious dietary sources.

Perhaps most concerning are documented cases of child neglect due to alcohol intoxication. Instances of new mothers leaving newborns unattended in the forest highlight the potential dangers associated with alcohol dependence. Addressing this issue requires a sensitive approach that considers the cultural context of the Baiga tribe. However, it's undeniable that alcohol consumption

presents a significant barrier to achieving long-term food security and optimal nutritional well-being for the Baiga community.

Vulnerabilities Faced by Baiga Tribal Women

Baiga women have been found to be a critical part of their families on issues of food security and nutrition. Nonetheless, they experience peculiar vulnerabilities that hinder them in effectively fulfilling this obligation. Every year the availability of forest foods varies. The Baigas experience these scarcities at times when their food needs increase, leading to seasons of food shortage and malnourishment. While they know about their domesticated crops, the Baiga people do not always have adequate information about general nutritional terms to make good decisions on what to eat. This can result in vitamin and mineral deficiencies occurring as well. For instance, Baigas suffer from malaria, tuberculosis and diarrhea as shown by studies carried out among them at an alarming rate. These health conditions have negative effects on nutrient uptake and utilization thereby worsening the situation of the tribe's health status in relation to nutrition. Therefore, if any member falls sick it will affect how others go hunting; even gathering or cultivating food may also become impossible due to this disability.

Baiga tribal women form the core of ensuring food security and nutrition for their families. However, there are unique vulnerabilities that hinder them from performing this role optimally. This leaves several challenges that limit the provision of sufficient nutritious meals within households. One main vulnerability is limited resource access. The roles of baiga women include collecting forest foods and participating in agriculture activities until now. However, in recent years deforestation has occurred causing a reduction in local biodiversity which threatens sustainable sources of quality diets. Additionally, they have no say over how household resources are shared thus further limiting their control over food security.

Unequal distribution of labour presents another significant hurdle. Baiga women typically shoulder a heavy burden of domestic responsibilities, including childcare, food preparation, and household chores. This leaves them with limited time and energy to pursue income-generating activities or acquire knowledge about nutrition. This lack of time and resources creates a significant barrier to improving their families' nutritional well-being.

Limited access to education and awareness compounds these challenges. Baiga women often have insufficient knowledge about balanced diets, essential nutrients, and proper food hygiene practices due to limited access to education and targeted awareness campaigns. This lack of knowledge hinders their ability to make informed choices regarding food preparation and childcare practices that directly impact the nutritional well-being of their families.

Furthermore, prevalent gender bias within the Baiga community creates additional challenges for women in ensuring food security and nutrition. This bias can restrict their access to crucial healthcare services, particularly during pregnancy and lactation – a critical period when both mothers and children have heightened nutritional needs. Unequal access to healthcare for women becomes a significant obstacle in addressing maternal and child malnutrition, impacting the overall nutritional well-being of the household. These combined vulnerabilities faced by Baiga women create a ripple effect, highlighting the necessity of a multifaceted approach to empower them. By addressing these challenges, we can work towards ensuring long-term food security and improved nutritional outcomes for the entire Baiga tribe.

Resilience Strategies Among Baiga Tribal Women

The Baiga tribe, residing in the Dindori district of Madhya Pradesh, India, exemplifies a unique case of a community striving for food security within a traditional tribal setting. While the Baigas possess a deep understanding of their forest environment and utilize its resources for sustenance, several factors contribute to the presence of significant health issues within the tribe. The Baigas traditionally rely on hunting, gathering, and forest-based agriculture for their food. This close relationship with the environment provides them with a diverse range of foods rich in essential nutrients. However, deforestation and dwindling natural resources threaten this food source.

Despite the significant challenges they face, Baiga women exhibit remarkable resilience in securing food for their families. One key strategy lies in their strong sense of inter-household cooperation and sharing. Baiga communities function with a collaborative spirit. Women readily share resources, childcare responsibilities, and knowledge about food gathering and preparation with each other. This supportive network helps to mitigate the impact of individual hardships and ensures a safety net for vulnerable households. By sharing resources and knowledge, they can collectively overcome challenges and ensure some level of food security for all members of the community.

Baiga women have shown incredible resilience in ensuring food for their families despite the risks they face. One important method is through their native knowledge and resource management. These women know their environment well and what can be eaten traditionally; therefore, they apply such wisdom throughout different seasons when various plants may grow or sprout with sustainable methods of gathering them from woods so that maximum benefits can be derived out of available forest resources. They change where and what to gather as per the changing weather patterns hence ensuring continuous food security all year round. It also helps them know many types of edible roots, tubers, mushrooms among others thus diversifying diets which could contribute towards nutrition improvement.

The second point is that even though Baiga women are confronted by numerous problems like poverty levels being high within these communities coupled by lack of employment opportunities due to limited education background among other factors; still they remain strong enough not only to feed themselves but also other disadvantaged members in society too especially children who may require additional care or support from mothers. Such situation occurs when males shun away from work either because they don't feel like working or simply spend most time drinking alcohol leaving their wives with more duties than just fetching cooking materials from forests gathering preparing meals for family consumption alone but also generating income outside traditional methods through engaging into activities which can bring money such as collecting medicinal herbs for sale working as casual laborers. This provides some financial freedom necessary during dry spells when there isn't much one can get hold off within the local area.

Again, another factor contributing towards imbalance amongst labour distribution pattern observed among Baigas is men's absenteeism from communal duties because either they don't want to participate directly or indirectly through laziness etc.; therefore everything falls solely upon females' shoulders who must carry out all tasks ranging between nurturing kids upto bringing up earning members within household while at same time playing roles related with socializing individuals around them inclusive those girls whom we share same community with. This strong

sense of female solidarity and support networks helps to mitigate the challenges and ensures that the essential tasks of securing food and caring for families are accomplished.

Conclusion

Ensuring long-term food security and good health for the Baiga tribe requires a multifaceted approach. This study highlights the complex interplay between tradition, food security, and health among the Baiga tribe. While their deep connection to the forest provides a foundation for sustenance, challenges like deforestation and limited nutritional knowledge contribute to food insecurity and health issues.

To ensure the long-term well-being of the Baiga people, a multifaceted approach is necessary. Nutritional education programmes can empower the Baigas to make informed dietary choices within their traditional food systems, promoting a deeper understanding of balanced diets and essential nutrients. Supporting sustainable forest management practices, including promoting the cultivation of diverse, nutrient-rich crops within the forest ecosystem, can bolster food security in the long run. Finally, enhancing access to healthcare services and preventative measures can help reduce the burden of chronic diseases, improving Baiga's ability to acquire and prepare nutritious food. Implementing these solutions collaboratively with the Baiga community, we can create a future where they can thrive. This future will allow them to maintain their cultural identity while ensuring their health and nutritional well-being, fostering a sustainable and harmonious relationship between the Baiga tribe and their environment.

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