

Nutrition Security among Karbis of Kamrup District of Assam

Ritu Geu Goswami *

Department of Immunology, National Institute of Public Cooperation and Child Development, Khanapara, Guwahati 781022, Assam

ABSTRACT

Food security means availability and access to food to all individuals throughout the year whereas nutrition security means the food which is available should provide the essential nutrients as per individual requirements. A study was conducted to assess the dietary intake and nutritional status of Karbi tribe of Kamrup district of Assam. The study covered 400 women of Chandrapur and Dimoria block of Kamrup district in the age group of 15 to 49 years. Sample selection was done by using purposive random sampling method. Dietary intake was assessed by using 24-hour recall method and Body Mass Index was determined by measuring the height and weight by using standard procedures. The study revealed that the Karbis included cereals, pulses and flesh foods and green leafy vegetables every day in adequate amounts in their meals which are the major sources of macro and micronutrients. Flesh foods which were included in the dietary every day were fresh fish, dry fish and meat which meets the protein requirement among the Karbis. Carbohydrate intake may be mentioned as adequate as adequacy level of cereals ranged from 103 per cent to 116 per cent which was more than the RDA given by ICMR (2011). Similarly, the micronutrients intake was good as green leafy vegetables and other vegetables were included every day and adequacy level of leafy vegetables ranged from 106 per cent to 112 per cent which was also more than the recommended RDA. The use of herbs as green leafy vegetables among the Karbi dietary help to increase immunity to the body. Karbi dietary was adequate and this is revealed by the fact that very less (15.25 %) number of respondents was underweight. And none of the respondents were moderately underweight (<17.0) or severely underweight (≤ 16.0). Majority (75 %) of adult women of the studied area were having normal nutritional status (BMI between 18.5 to 24.99). The study concluded that the nutrition security was much better among the Karbi population of Kamrup district of Assam as the prevalence of undernutrition was very less in comparison to other tribal groups of India.

Keywords: Food security; Nutrition security; Nutritional status; Dietary intake; Recommended dietary allowances

INTRODUCTION

Food security, as defined by the United Nations' Committee means that all people, at all times, should have physical, social, and economic access to sufficient, safe and nutritious food that meets the food preferences and dietary needs for an active and healthy life. It is well known throughout human history that a hungry world is a dangerous world. If people don't have enough to eat, three things happen viz. people will either revolt or migrate or die. Ensuring food security ought to be an issue of great importance for a country like India where more than one-

third of the population is estimated to be poor and one-half of all children are malnourished. The National Food Security Act, "An Act to provide for food and nutritional security in human life cycle approach, by ensuring access to adequate quantity of quality food at affordable prices to people to live a life with dignity and for matters connected therewith or incidental thereto". Hence along with food security, nutrition security is important as food may be available, but it may not be nutritious. Ensuring nutritious food is an essential element for improving food security and reducing malnutrition.

Correspondence to: Ritu Geu Goswami, Department of Immunology, National Institute of Public Cooperation and Child Development, Khanapara, Guwahati 781022, Assam, E-mail: ritugeu_goswami@yahoo.in

Received date: February 15, 2021; **Accepted date:** March 3, 2021; **Published date:** March 10, 2021

Citation: Goswami RG (2021) Nutrition Security among Karbis of Kamrup District of Assam. J Food Process Technol. 12:555.

Copyright: © 2021 Goswami RG. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

According to Global Hunger Index, India has a “serious” hunger problem and ranks 102nd out of 117 countries. Despite India being world’s second largest food producer, it has second highest under-nourished population in the world. In India, ensuring nutritious and safe food is a growing concern with emerging incidents of food contaminations, use of pesticides and chemicals which if remain unnoticed can lead to various health hazards, illness, outbreaks and even death. Nutrition and food security also affect the India’s socio-economic status of the individuals more specifically children and women. Nutrition is the basic prerequisite to sustain life. Nutrition is the science that deals with food and the way food is absorbed, digested and assimilated to give proper nourishment to the body. Nutrition is important in our lives for our total wellbeing, both physically and mentally. In order to get proper nutrition a balanced diet is necessary. Balanced diet is referred to food containing the major nutrients such as carbohydrates, proteins, fats, vitamins and minerals in adequate amounts. Hence, food, nutrition and nutrition security are inter-related. Even if food is available but not nutritious it will hamper the health of the person. Nutritionally adequate food is required to be physically fit and to be in a normal nutritional status. Nutrition security also depends on the food habits and folk beliefs associated with food in the culture. The food culture also reflects the nutritional status of the community or tribe [1-4].

METHODS

The universe of the study was the women population in the reproductive age group of 15 - 49 years. The total respondents for the study were 400 and samples were selected by using Purposive Random sampling method. The data on dietary intake and nutritional status was collected only from primary sources. Interview schedule was used for eliciting information from the women regarding socio-economic background, food habits, dietary intake and nutritional status. The information pertaining to food habits covered vegetarian/non-vegetarian, weekly pattern of consumption of all the food groups i.e. cereals, millets and pulses, vegetables (roots and tubers, green leafy vegetables, other vegetables) and fruits, milk and milk products, egg meat and fish, sugar and jiggery and fats & oils. Dietary intake of various foods was collected using 24-hour recall method and was assessed using standard procedures of Thimmayamma, (NIN) & Candance, (Texas & Iowa University). Later, the food consumption adequacy was compared with Recommended Dietary Allowances (RDA) given by National Institute of Nutrition (NIN), 2011. Anthropometric measurements were recorded using stadiometer and weighing machine following standard techniques and Body Mass Index (BMI) was compared with Tim J Cole and WHO. The data regarding age and tribal status of the women were collected from the Anganwadi centres and NGOs working in those areas. The respondents were interviewed in their own homes. Face to face interview was conducted with the sample using interview schedule and all the required information was thus collected [5-9].

RESULTS

Table 1: Nutritional status of Karbi women of Kamrup district of Assam.

		Parents depression			
		Frequency	Percent	Valid percent	Cumulative percent
Valid	0	82	48	42.75	10.75
	1	30	17.5	33.25	13.75
	Total	112	65.5	100	
Missing	System	59	34.5		
Total		171	100		

The objectives of the study were to assess the dietary intake and nutritional status of Karbi women of Kamrup district of Assam. The traditional occupation of the Karbis was jhuming, weaving, livestock but from tradition, some Karbis have shifted to salaried jobs and business. Agricultural land is decreasing day by day and so people are going out of their native places in search of jobs. In the present study, the respondent’s family whose sole source of income from agriculture is very few (10.75%) followed by 42.75 per cent doing either government or private service. More than one-fourth (33.25%) of the family were working as daily wage earner and 13.75 per cent were doing business like grocery shops, tea shops, vegetable sellers, etc. Monthly income of the family of the respondents belonging to Karbi community was also assessed. Almost half (49.75%) of the population income was up to Rs 5000, followed by 39.75 per cent whose monthly income ranged from Rs 5001 to Rs 10,000. Very few (10.5%) were earning above Rs 10,000 per month. Although agricultural land was less and income was low, yet the food pattern was better due to the resources available to Karbi Community. Every Karbi household of Kamrup district had a homestead/ kitchen garden known as bari in Assamese as well as in Karbi language where indigenous vegetables like kasu, dhekia, vedailota, mandhania, kasiduria matikaduri, mesta tenga, bhendi, jolokia, mora pat, nemo, dhanias, kasiduria, haldi, kosu, dhekia, kat alo, kal, kothal, nariol, bogori, ponial, triphala, etc. were grown.

DISCUSSION

Assam is rich in local green leafy vegetables but still some studies reported inadequacy in consumption of green leafy vegetables. The study concluded that adequacy of food depends on the food habits rather than availability of the foodstuff [6]. As in Assam it may be mentioned that local green leafy vegetables are available everywhere, but it was lacking in the dietary of some communities. This may be either due to lack of awareness about goodness of green leafy vegetables or food habits among the tea tribes that consumption of green leafy vegetables were lower in their dietary as compared with recommended level given by ICMR. The food habits and adequacy of some foods among Karbis were found to be very good. The food habits were a blessing of healthy life for Karbi tribals. The present study

revealed inadequacy in milk and milk products and fruits as which is similar to findings of other research studies. Actually, the tribals have no liking for milk and fruits which has come down from generations [7-9]. They liked flesh foods and green leafy vegetables and so their diet was adequate in green leafy vegetables, pulses and flesh foods. Region specific food disparities are present all over India. Although milk and milk products, fruits, etc. were inadequate among Karbis still food habits of Karbis were rich due to consumption of non-vegetarian foods, cereals and local green leafy vegetables and nutritional status was much better than other tribal groups. A study conducted by Reddy concluded that nutritional intake depended on food habits of a particular region and not on the production and consumption of food items. Food habits among Karbis were adequate in terms of calorie and protein intake. These two nutrients are contributing factors of protein-energy malnutrition and as these two nutrients were taken in ample amounts in the diet of Karbis under nutrition was seen less among the studied population. From the analysis of dietary intake, it may be mentioned that Karbi women adequacy of food was good in all food groups except milk and milk products and fruits. Milk and milk products which are a good source of protein and vitamins can be balanced from flesh foods and green leafy vegetables which are good sources of protein and vitamins. Similarly, fruits are good sources of micronutrients which can be balanced from green leafy vegetables and other vegetables which are taken by Karbi women in adequate quantity. As a whole it may be stated that Karbi respondent's dietary intake was good as compared with recommended levels. The nutritional status was good due to adequacy in terms of nutrients through intake of cereals, non-vegetarian foods, fruits, vegetables and pulses and also following the traditional dietary pattern. The study concluded that the nutrition security was

much better among the Karbi population of Kamrup district of Assam as the prevalence of under nutrition was very less in comparison to other tribal groups of India. Moreover, the tribe is still close to the nature and also following the traditional food practices in cooking and eating.

CONCLUSION

The study concluded that the nutrition security was much better among the Karbi population of Kamrup district of Assam as the prevalence of undernutrition was very less in comparison to other tribal groups of India.

REFERENCES

1. Basu SK. Health Status of Tribal Women in India. *Social Change*. 1993; 23 (4):19-39.
2. Basumatary GP. Traditional food habits of the Bodos of north-east India: a field study. *Review of Research*. 2012; 2.
3. Divya Elizabeth M. Compliance to treatment among Type II diabetics receiving care at peripheral mobile clinics in Kaniyambadi. 2014.
4. Rao V, Babu R. Nutritional Status of Baiga Tribe of Baihar, District Balaghat, Madhya Pradesh. *Nutri Food Sci*. 2014;4:275.
5. Raimedhi I. *My Half of the Sky: 12 Life Stories of Courage*. SAGE; 2014.
6. Majaw B. Indo-Bangladesh borderland issues in Meghalaya. *South Asia Research*. 2021;41(1):100-118.
7. Aba IP, Ifannyi N. Effects of smoke-drying temperatures and time on physical and nutritional quality parameters of Tilapia (*Oreochromis niloticus*). *Inter J Fisheries Aquacul*. 2013;5(3):29-34.
8. Jonsson A, Finnbogadottir GA, Porkelsson G, Magnusson H, Reykdal O, Arason S. Dried fish as health food. *Matis-Food Research. Innovation & Safety report*. 2007;5:1-22.
9. Lohman TG, Roche AF, Martorell R. *Anthropometric standardization reference manual*. Champaign: Human kinetics books; 1988.