

Ethnicity and Nutrition: Review Article

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Abstract

Nutrition is the foundation of good health. It is an input to sound health. Nutritional status is convincing indicator of health. This review was aimed to find gap/missing of existing literature in order to make foundation of new research on ethnic group specifically ethnic children. After repeated critical review of number original articles, some gaps have been found. Almost every article they focused on outcome and mildly highlighted input variables but did not consider all possible variables and missed to show interlink between those variables. Calorie intake by ethnic group was absent. Besides analysis of traditional tribal diet in order to get calorie value was scarce.

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Introduction

There are number of ethnic group in Bangladesh. Some groups live in plain land and larger part reside in hilly, riverine, forest dense area. They traditionally lead diverse life style and their way of life is indigenous. Nature and forest dependent life style makes them unique area of study. They constitute 1% of total population. Geographical distribution, shifting cultivation, cultural belief make them different from rest of the country population. We know children, pregnant women and aged people are vulnerable in any community. This review emphasizes on ethnicity and nutrition.

Ethnic nutrition

Bhattacharyya K and Sarkar TK conducted a community-based cross-sectional observational study among three tribal villages of the Chanchal II block of the Maldah district in West Bengal to assess nutritional profile of 188 children under 5 years of age. They found more than half of the study subjects (63.83%) were suffering from different grades of malnutrition. [1] After go through and critical review of this paper it is found that they did not show dietary quality and quantity which is an important determinants of nutritional status. Along with diet information on hygiene practice was also absent in their article. There is a gap between environmental factors and nutritional status. In terms of socioeconomic status this paper only shows age and sex of the children, occupation and income of parents but no information was found about education of mother which is a strong influencing factor in determining child nutritional status. So if we want to get complete picture of nutritional status of ethnic children, it is necessary to consider all possible variables.

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Traditional system of cultivation is an important feature of ethnic people. Cultural belief, traditional healing system, faulty food habit, indigenous cooking system are commonly observed among these diverse communities. Literature suggests in India most of the tribal people convey their own geographically isolated life style. Evidence supports inadequate food habits, along with traditional sociocultural and biological activities, may lead to a high proportion of child under-nutrition. [2-4] Another study was done to investigate the nutritional status amongst Shabar children living in urban, rural and forest habitats and factors associated to nutritional state. The results revealed that children from forest regions had the highest prevalence of under-nutrition followed by their rural and urban counterparts, 33.87%, 24.62% and 20.16%, respectively. [5] They had taken 5 to 19 years children. This type of study can be conducted in our context because no information is available specially those ethnic children live in deep dense forest and riverine area. Again this literature misses to take information about amount of calorie intake by individual, source of drinking water, sanitation system, personal hygiene practice and collective hygienic status.

According to Bangladesh Demographic and Health Survey (BDHS) of 2014, the national prevalence figures for stunting and underweight are 36% and 33% respectively. But data on tribe to tribe variation of nutritional status was scanty. Large scale study is needed so that separate information of specific tribe can be drawn. Samiran Bisai et al carried out a study to assess the nutritional status among Kora-Mudi children based on recently developed body mass index (BMI) cutoff points for children and adolescents from two villages in Paschim Medinipur District of West Bengal, India. This study found the overall prevalence of thinness, normal weight and overweight were 67.2%, 31.9%, and 0.8 %, respectively. [6] After scrutinizing review of this paper, no information was found regarding complete sociodemographic status as well as food habit and living standard. They recommended that effective public health policies should be undertaken to combat the child malnutrition in India and adjoining countries. So it is a timely matter to carry out a survey based study in our country including all dimensions.

A cross sectional study was carried out in the Baigachak area in 2002-2003 to study the nutrition profile of the Baiga Tribe. About 61% of the pre-school children were underweight out of them 24.3% children were severely underweight. Stunting and wasting were seen in 44.3% and 37% children respectively. They consumed cereal based diet whereas other foodstuff was lower than the RDA. [7] This literature concluded that malnutrition was widely prevalent among the Baiga tribe which is mainly due to inadequate dietary intake. After critical review it is found that they only used 24 hour recall method that means quantity of food is achievable but missing quality of food which can be found by using food frequency questionnaire.

United Nations Development Programme (UNDP) Bangladesh requested Helen Keller International to conduct a comprehensive food and nutrition survey to hard-to-reach indigenous communities in the Chittagong Hill Tracts. This report showed the prevalence of underweight among under-5 children was over 30%, and more than 7% of these children exhibited signs of severe malnutrition. It is alarming that if this livelihood and food insecurity continue or worsen with seasonal fluctuations, moderately undernourished children and mothers can very quickly slide into categories of more severe malnutrition. [8] But this report did not show any interlink such as association or correlation or prediction between variables.

Chakrabarty and Bharati (2006) conducted a cross sectional study on 101 mothers and their last child aged upto 5 years was undertaken among Shabar tribal community in Khurda and Cuttack districts of Orissa aimed to determine the association and effect of breastfeeding practices on child undernutrition. Results revealed that 50% children were underweight and 36% percent were undernourished. About 50% children were given breastfeeding after 24 hours and exclusive breastfeeding were discontinued in 51% children before attaining 6 months of age. The prevalence of underweight were significantly ($p < 0.05$) associated with age of children and undernourished mothers. Initiation of breastfeeding after 24 hours was found to be significantly associated with male children and mother's occupation. Result also revealed that high percentage of mothers (51.7%) with primary level of education stopped exclusive breastfeeding before 6 months ($p < 0.05$). Estimation of odd ratio suggested that exclusive breastfeeding less than 6 months is a risk factor for underweight children. [9] Actually they did not clarify either it is exclusive breast feeding or breast feeding or complementary feeding or both though their age group was below 5 years. We know complementary feeding starts after six month of birth of children.

Topic of this paper indicates that they focus on breast feeding but in result part reveals that initiation of breast feeding and exclusive breast feeding. It would be better if they consider only upto six months children but they included upto five years children. So they is a chance of recall bias. Besides peer group pressure could be consider. Dietary practice, hygiene practice, sanitation system were absent. Information on birth weight, mode of delivery, housing condition can be included.

Leung and Stanner (2011) have shown that some minority ethnic groups are more likely to experience poorer health outcomes compared with the mainstream population in UK. In our country Bangladesh need to explore tribal health and nutrition scenario particularly in Chittagong Hill Tracts. To find out health as well as nutritional profile baseline survey should be conducted primarily. These include higher rates of cardiovascular disease (CVD), type 2 diabetes and obesity. The differences in health outcomes may reflect interactions between diet and other health behaviors, genetic predisposition and developmental programming, all of which vary across different groups. As is the case for the rest of the population, the dietary habits of minority ethnic groups are affected by a wide variety of factors, but acquiring a better understanding of these can help health professionals and educationalists to recognize the needs of these groups and help them to make healthier food choices. Unfortunately, to date, there have been few tailored, well-designed and evaluated nutritional interventions in the UK targeting minority ethnic population groups. Further needs assessment and better evaluation of nutritional interventions have been recommended to enhance the understanding of the effectiveness of different approaches amongst minority ethnic groups. [10]

Poor nutritional status is one of the most important health problems facing CHT community. This condition deteriorated due to inadequate sanitary condition. Kabir, *et al.* (2008) surveyed 9000 households in CHT and found that 27% mother suffer from undernutrition and 47% of their children were stunted that means nearly half of the children belonged to low height for age. [11] After critical review of this paper it was found that calorie intake by each individual was absent though they showed quality of food consumption. For better representation both quality and quantity of food items is necessary. Besides traditional tribal diet was scarce.

A comprehensive survey was carried out to assess the nutritional status of 150 pre-school children of 1 to 6 years from low-income families of Jabalpur city. The results of present study shows that dietary intake of nutrients was low in these children. About 17.3% of children were suffering from vitamin A deficiency; where as 24% of pre-school children were suffering from anaemia. The most common illness reported were cold, cough, fever and measles. [12] This paper showed prevalence of infectious diseases and micronutrient deficiencies but there is an association between hygiene practice and infection. Information on hygiene status was absent here.

Zanver V, *et al.* (2007) carried out for assessing the somatic status of tribal children with Special reference to Gomez classification. Out of 200 children studied 90.5% children suffered from various grades of malnutrition. Grade I and grade III malnutrition were more in early age (3-4 yr.) while grade II malnutrition was prevalent more during later age (4-5 yr). More percent of (47%) male subjects suffered from different grades of malnutrition than female subjects (43%). The influence of socio-economic factors like occupation, paternal literacy level and monthly family income showed that children from farmers families having educated parents and from families with comparatively more family income suffered less from various grades of malnutrition. [13] Dietary inadequacy and infections have been considered as predominant etiological factors in the causation of malnutrition-they added but no reflection of diet and infection was found in result part.

Understanding of health seeking behavior is an important step if we want to combat malnutrition. Number of studies has been conducted on healthcare-seeking behavior among the Bengali population in Bangladesh, but relatively few studies have focused specifically on the tribal groups in the country though they constitute 1% of the total population. Rahman, *et al.* (2012) suggested that the tribal communities may differ from the predominant Bengali population in their health needs and priorities: (a) Traditional healers are still very popular among the tribal population in Bangladesh; (b) Perceptions of the quality and manner of treatment and communication can override costs when it comes to provider-preference; (c) Gender and age play a role in making decisions in households in relation to health matters and treatment-seeking; and (d) Distinct differences exist among the tribal people concerning their knowledge on health, awareness, and treatment-seeking behavior. [14] The present system needs to be reviewed carefully to include a broader approach that

takes the sociocultural factors into account, if meaningful improvements are to be made in the health of the tribal people of Bangladesh they recommended. Behavior change is not an easy task; needs systemic way as well as patience. Behavior on hygiene practice and sanitation of tribal group in CHT require depth study.

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