



Nutritional status of tribal mothers and children (0-5 years) of Nabarangpur district, Orissa: An anthropological approach

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Abstract

Background: Body needs certain essential nutrients for its well-being these essential material is known as “nutrient” that are derived from the food. Good food is indispensable for health at all stages of life and satisfactory for growth during infancy, childhood and adolescent. It is well known the maintenance of health is greatly depends on adequate nutrition adolescent and it is important to fighting against diseases and illness.

India is one of the fastest growing economics in the world. Our state has achieved many milestones in the field of science and technology. In order to achieved food security and different nutritional intervention programs. Despite all this progress Odisha identified as a malnourished state. Current status of Odisha especially KBK districts such as Nabarangpur district took first position on epidemic malnutrition. It is basically habitation of Kondha and Poraja community.

Objectives: The objective of this study was to know the nutritional status of tribal mothers and children. To know the various factors including dietary practices, food taboos, hospitalization, environmental and psychological factors.

Results: In this vulnerable district some factors are behind the tribal community which leads to highly epidemic malnutrition and morbidities among mothers and below five years children, these are-kwashiorkor, marasmus, anaemia and iron deficiencies. The secondary data which indicates poverty, poor environmental sanitation, poor dietary practices, frequency infection, poor household food security, food taboos, gender issue, high consumption of rice, no special food during pregnancy, moderator work during pregnancy, not aware of nutrient food, early marriage, birth interval between two children, frequency of acute illness and below birth weight of child.

Conclusion: With the help of this study I gained in depth understanding about the tribal food habits, the various foods and non-food factors that influenced their nutritional status of the vulnerable section in these areas and their nutritional condition. This understanding will guide them for future intervention to improve the nutritional status and the government programmes on nutrition supplements in this areas.

Keywords: tribal, food taboos, dietary practices, nutritional status

Introduction

Unlike many other species living on the planet, human beings are born with no knowledge of how to survive in their environment, and few instincts that would help them to survive their first few days, much less their lifetimes. Especially tribal are relatively unspecialized; they lack sharp claws or thick fur, eyes, ears, and noses are relatively weak, and they don't run or climb particularly well. As well as the first appeared few evolution words completely in the mind of tribal community.

Body needs certain essential nutrients for its well-being these essential material is known as “nutrient” that are derived from the food. Good food is indispensable for health at all stages of life and satisfactory for growth during infancy, childhood and adolescent. It is well known the maintenance of health is greatly depends on adequate nutrition adolescent and it is important to fighting against diseases and illness.

India is one of the fastest growing economics in the world. Our country has achieved many milestones in the field of science and technology. In order to achieved food security and different nutritional intervention programs in the country.

Despite all this progress India is one third of world's malnourished.

Current status of Odisha especially KBK districts like Rayagada, Kalahandi, Malkangiri and Nabarangpur district has been suffering from malnutrition. Nabarangpur district took first position on epidemic malnutrition. It is basically habitation of Kondha and Poraja community. In this vulnerable district some factors are behind the tribal community which leads to highly epidemic malnutrition and morbidities among mothers and below five years children. The secondary data which indicates hospitalization, non-literate, sociodemo-graphic condition, poor dietary practices, food security status, mother employed as a moderator work during pregnant and lactating, and environmental and psychological factors indicates to child carrying and child crying practices. Particularly pregnant, lactating and less than five children are suffering from various nutritional deficiency diseases these are- Kwashiorkor, Marasmus, Anemia, and Iron deficiencies.

Need and Importance of research

Nabarnpur district comes under KBK district of Odisha. It is

basically a habitation of Kondha and Poraja community. It is a time to explore some major problems of this district, through the research study. In the year 1999 government declare as a separate district of Odisha with some KBK benefits provision. As a researcher the district is not getting fully benefits from the government facility as actual need benefits than others kbk districts of Odisha. Some major problems of the district are health problem, communication problem, education problem, water and sanitation problem. Especially the tribal community or those who are living in remote and inaccessible areas has been suffering from these four basic things, If we comparison development of the district since last 18 years back and current status. Something has changed, if we see on health is poor in tribal community, if we see on communication facility that also poor in tribal areas, if we see on education, education also poor in tribal, if we see on water facility that also poor in remote areas. Research is not an ending process, it's an ongoing process. Past five years research study can be changed than current study. In the year 2017 Indian ICAR scientist team visit at Nabarangpur district and identified three vulnerable villages as Sukigoan, Biriguda and Chelidongri and declare as adopted village. Particularly the tribes who are living in remote and inaccessible areas where the health care development services of the government are not available so there was urgent need to understand the concept of health among the tribal. Maternal mortality and infant mortality is highly progress. Particularly pregnant women and below five year children are suffering from various nutritional deficiency diseases such as kwashiorkor, marasmus, anemia, and iron deficiency. Which is a cause of concern to improvement of the nutritional status of tribal mothers and children, who are the future citizen of the country is the top priority for welfare of the society.

Statement of the problems

Health and the related problems are very much interlinked with the socio-economic condition of the community. The concept of health among the tribal and their traditional knowledge and health seeking behavior of the tribal groups is associated with their, beliefs, customs and practices. Health status of this community, particularly the Kondha and Poraja community influenced by their own of life, including their socio- economic condition, nutrition, living condition, dietary habits, housing, socio-religious beliefs, taboos and superstition. In these areas some problems are inside the tribal, that's leads to epidemic malnutrition and that problems stopped the hilarious feelings among this community.

Review of Literature

Dietary guidelines for Indians in 2011(National Institute of Nutrition) determined of malnutrition "widespread malnutrition is largely a result of dietary inadequacy and unhealthy lifestyle. Other contributing factors are poor purchasing power, faulty feeding habits, large family size, frequent infection, poor health care in adequate sanitation and low agricultural production, population living in the backward and drought prone rural areas and urban slums and these belonging to the socially backward group like scheduled castes and tribal communities are highly susceptible to under nutrition. Particularly landless laborer and destitute are also at

a higher risk.

Dietary guidelines for Indians in 2011(National Institute of Nutrition) described on malnutrition "Common childhood infection like diarrhea, measles, and phenomena occur in association with malnutrition and contribute to about 70% of mortality. Appropriate feeding during infection is essential, which demands a lot of patience from the mother during periods of infection; children tend to lead less due to reduced appetite many children vomit frequently. Nutrients are also lost in urine and faces. The unhealthy practices of restricting diet, including breast-feeding by the mother during any sickness could further aggravate the problem hence extra care is needed in feeding the child appropriately during and after illness to prevent subsequent nutritional deficiencies.

V. Subramanyam (1997) observed in his study on dietary habits that "The staple food of all the tribal is *amboli* (gruel), which is made up of with ragi (millet) flour. The rice growing families take rice at least once in a day. The consumption of non-vegetarian diet is very less in all the tribal and they have it occasionally. In the vegetarian diet, they make curries with seasonally available vegetables like water gourd, beans, brinjal, tomato, drumstick, pumpkin and pulses. They prepare chutnies with the inflorescence of tamarind fruit, chillies, and red gram. They take red gram or green gram curry with *amboli* or rice. The oil consumption is very less in all the tribes. The consumption levels of vegetables, pulses, leafy vegetables and meat are also very less among the Gadaba

Narrating the conception on food restriction and food taboos, V. Subramanyam (1997) mentioned that, "The tribal avoid taking their concerned totemic plants and animals as food items. They do not consume the sacrificial animals bloods where as it is offered to the supernatural beings. Generally the women are restricted to take alcoholic beverage during her pregnancy and it is prohibited to the children who are aged below six years after the birth of a child. The lactating mother will not consume pumpkin, onion, egg, meat and fish at least for a period of six months. It is interesting to note that the restriction of certain food items like egg, meat, fish to women during pre-and postnatal periods, has no specific reason and it is a belief. Definitely these food items have much protein and nutritive values and in such periods, which provides strength good health for both mother and child.

Vidyarthi and Rai (1977) view on age at marriage that, "The age, at which the girl was given marriage, depends on their social values and norms. Among the tribal, virginity was not very much valued. Many of the tribal societies were lax towards pre-marital sex relation, which were considered as training in art of love and sex life and often culminates in marriage. Girls in tribal societies were given marriage generally after puberty. According to 1971 census at the national level, the age at marriage for tribal women was higher (16.39) than that of the rural women in general (15.39). There were a few micro-level studies which dealt with the age at marriage of individual tribes, e.g. female age at marriage- Ao-Naga (16-20yrs), Bhil (16 yrs), Chenchu after puberty, Khasi (13-18), Koli (12-16yrs) and Santal 17.87 yrs (Basu, 1993).

Bhattacharya (1995), determined on assessment of nutritional status that, "Anthropometry is the most important parameter in the assessment of protein energy malnutrition (PEM). Anthropometric methods commonly in use are: weight for

age; height for age; weight for height; weight/height ratio; weight (kg)/height (in meter square) (which is known as Body mass index); head circumference, chest circumference, calf circumference, and skin-fold.

Salia Basu, Anil Jindal & Goutam Kshatriya observed on pattern of morbidity that “the pattern of morbidity is more or less similar in all the four tribal groups. The most frequently reported diseases are diarrhea and respiratory infection and skin diseases. Other disease like malaria, tuberculosis, leprosy, venereal diseases, pneumonia and pyrexia, of unknown origin, chronics ulcers, liver disorders and urinary tract infection are rampant. Most of the morbidity condition are the result of their poor health consciousness which is governed by their, cultural and magi co-religious beliefs, low level of literacy, poor environmental sanitation, ignorance, nutrition and living condition.

Perception of health and pattern of health seeking behavior among the selected tribal population groups of Madhya Pradesh and Orissa by saliabasu chapter-3

Salia Basu, Anil Jindal & Goutam Kshatriya conception on maternal child health care that “Maternal child health care is an important aspect of health seeking behavior, which is largely neglected among these tribal population groups. Expectant mothers to a large extent are not inoculated against tetanus. From the inception of pregnancy to its termination, no specific nutritious diet is consumed by women. The consumption of iron, calcium, and vitamin during pregnancy is poor. Maternal mortality directly related to pregnancy and child birth has been found to be appreciably high among the tribal populations of Bastar district. As for as child care is concerned, a breast fed infant in the first year does not get any supplementary diet. Vaccination and immunization of infants and children have been inadequate among these tribal groups.

Budhadeb Chaudhuri 1986 Observed on Environment and Health of tribal that “Environment includes both the physical and social environment. However, here we are primarily concerned with the physical environment and would try to examine its relation with health. Disease and treatment particularly in the tribal societies cannot be properly understood in isolation. Health and treatment are very much connected with the environment particularly the forest ecology. The traditional health care system and treatment are based on their deep observation and understanding of nature and environment. The knowledge of many medicinal plants has often been derived through their observation of other animals in nature. All of them have indicated deep knowledge of the tribal people regarding the medical value of different plant which they regularly use for cure treatment.

U.N, 1984 observed on childbearing and maternal mortality that “child bearing imposes additional health needs and problems on women, physically, psychologically, and socially. The complication of pregnancy and of childbirth and of legally induced abortion in areas where environmental and health conditions are adverse result in large number of female deaths. In India maternal mortality is around 500 per 100,000 live births, which is about 50 times that of a developed country or of the better of segments of the Indian society.

UNICEF, 1983 conception on maternal mortality that “poor nutritional status and its concomitant problems of poor body weight and height, poor weight gain during pregnancy low

hemoglobin levels, is one of the primary underlying causes of maternal mortality in India. More maternal deaths occur in India in one week than in all of Europe in one year. Generally, malnourished, poor medical facilities and unfavorable social conditions are the major underlying causes for high maternal mortality in India. Nutritional anemia, a serious problem in pregnancy, affects 50 percent of the women of childbearing age in South East Asia (Shiva, 1992) the situation is all the more aggravated among the women in tribal belt of India because of the prevailing magi co-religious and socio-cultural practices.

National Institute of Nutrition (ICMR), 2011 determined on nutrition for pregnant women that “Child bearing imposes a great strain on the body and it is important that the prospective mother leads a healthy life throughout pregnancy. One of the major factors that promote health and well-being of the mother and baby in the womb is wholesome nourishment. In addition to meeting the needs of the growing baby in the womb, nourishment is required by the mother for certain other purposes as well. During the development of the baby, important changes take place in a pregnant women’s body. The mother’s diet has directly influence on the weight of the baby at birth. The average birth-weight of infants born to women eating inadequate and nutritionally poor diets is significantly lower than the average birth weight of babies, bourn to those consuming a nourishing diet this low birth-weight is a sign of immaturity. An inadequate diet during pregnancy can also have other far reaching effects on the health of the baby during early infancy. A large proportion of infants who manage to survive the first few weeks, either develop various nutritional diseases, such as anemia, protein energy malnutrition and rickets. A poor and inadequate maternal diet of women during reproductive years leads to high prevalence of mild to moderate under nutrition. Chronic moderate maternal under nutrition and anemia during pregnancy are associated with adverse pregnancy outcome like abortion, premature delivery, stillbirth, intrauterine death, low birth weight infants, high prenatal mortality, neonatal mortality and infant mortality

National Institute of Nutrition (ICMR), 2011 determined on diet in pregnancy that “Additional foods are required to increase the body weight of pregnant women. They should eat a wide variety of foods to meet their nutritional need, as well as those of the growing foetus. A judicious combination of cereals, pulses and nuts helps in meeting the protein and energy needs, she has to consume a variety of seasonal vegetables, fruits, milk, and milk products to meet the vitamin and mineral requirement. Daily supplement of iron, folic acid, vitamin B12 and calcium are also recommended to maintain proper health

National Institute of Nutrition (ICMR), 2011 determined on nutrition for the nursing mother that “Beast-feeding imposes a greater strain than pregnancy on the mother, because the women nourishes a fully developed and rapidly growing baby whose food needs increase day by day. If the mother’s diet is satisfactory during pregnancy, she will have accumulated a store of nutrients in readiness for satisfactory breast-feeding. If mother is known to have gone through pregnancy successfully on a faulty and insufficient diet, it means she has freely drowned upon her own tissues to build her baby, and

she will continue to do so as long as she nurses her child in such cases. It is imperative that the defects in the maternal diet are rectified forthwith. So that she and her baby may be saved from malnutrition

National Institute of Nutrition (ICMR), 2011 determined on diet for infants from birth to six months that "Mother's milk is unquestionably the best food for the baby. The milk contains in correct proportion most of the nutrients necessary for the growth and development of the baby. Each mother produces specific amount of milk for the new born which is fit for the baby both nutritionally and immunologically, indeed, the nutrients are supplied in an easily digestible form. Fortunately, breast-feeding is a tradition among Indian women and the value of mother's milk in infant feeding has been realized in India for two thousand years as is emphasized in the charaka samhita. Breast-feeding is safe, simple, and clean. During the first two or three days after the baby is born, the breast does not secrete milk but yields a yellowish fluid called 'colostrum' colostrum is good for the baby and it will take care of his first hunger.

National Institute of Nutrition (ICMR), 2011 determined on diet for infants from six months to one year "Food supplements from 6 months to 1 year it is recommended that feeding is organized in the following three stages on the basis of the physical quality of the supplementary food used:

- a. Liquid supplements-juice of fresh fruits such as oranges, grapes, mosumbi or green leafy vegetables may be used as an alternation.
- b. Semi-Solid supplements-mashed foods are started at the seventh month of life. Mashed sate is green leafy and non-leafy vegetables boiled in a small quantity of water. Other supplements which may be tried with benefit during the age of 6-12 months are boiled egg, cooked meat, or boiled, mashed flesh; finely mashed dals and mashed banana.
- c. Solid supplements-when the baby starts cutting his teeth, it is time to start changing him over to chopped and lumpy foods. Vegetables may be in to small pieces instead of pureed meat minced fine instead of ground. Bits of potato, soft cooked rice and chapatti can also be given.

Cowen and Heap, 1993 observed on malnutrition that

"All malnourished children show reduced growth and muscle protein deficiency. Two 'polar' types of protein energy malnutrition are recognized, they are marasmus and kwashiorkor, but many children have mixed clinical picture. Marasmus occurs I infants aged 1 year when maternal milk supply is interrupted by death or illness, and older children in time of famine. The child has clearly lost muscle and subcutaneous fat. The skin is dry and wrinkled and there is no peripheral edema. The hair is thin and dry. Body temperature is low the child looks anxious but moves less than normal and may be hungry, but vomit any foods offered such children are susceptible to diarrhea and respiratory infections, trachoma and vitamin A deficiency, children with Kwashiorkor are usually aged 18 months to 4 years and have been weaned from mother's breast. Children with mixed marasmus kwashiorkor have a varied picture with muscle loss, edema and damaged

skin.

Dietary Guidelines for Indian foods (NIN) determined on food beliefs, fads and taboos that "Food habits are formed early in child, passed on from the elders in the family and perpetuated to adulthood. Food beliefs either encourage or discourage the consumption of particular type of foods. There can be neutral, harmless or harmful practices. Unfortunately, most of the food fads and prejudices (taboos) are associated with women children, who are also the most vulnerable to malnutrition. Exaggerated beneficial or harmful claims in respect of some foods, without scientific basis constitute food fads. In addition, the beliefs of heat producing and cold inducing foods are widely prevalent. Some examples are jaggerey, sugar, groundnuts, fried foods, mango, bajara, jowar, maze, eggs and meat. Papaya fruit is strongly suspected to lead to abortion, though there is no scientific basis. Buttermilk, cured, milk, green gram dhal, green leafy vegetables, ragi, barely flour and apples are considered as cold inducing foods which are actually nutritious vegetarianism is often practiced in India on religious grounds. During certain illness like measles and diarrhea, dietary restriction is practiced. This can aggravate malnutrition in children.

A prominent NGO Reported by CARE; Hindustan Times, (February 3, 2004) on malnutrition that "Malnutrition is the single most important risk factor for spread of disease in Jharkhand, about 54 percent of children up to 3 years of age are underweight, 49 percent are with stunted growth, while 25 percent are wasted and 70 percent suffer from anemia. The ratio of children suffering from malnutrition is higher in rural areas and among the disadvantages groups particularly scheduled tribes. Based on body mass index, 41 percent women are undernourished and 73 percent have some degree anemia. Only 56 percent of households in the state used iodized salt at recommended levels. This was the reported by care (a prominent NGO in Jharkhand) and the reported specified that malnutrition among scheduled castes and scheduled tribes in the state is highest in the country. Almost in all the health and nutrition indicators right for immunization to check up of pregnant women. Jharkhand is far below the national average. The report further observed "Reason for existing plight is multi dimensional. People in the state are largely rural based and are even oblivious of the fact and even lack awareness about health behavior. The concept of immunizing the children against deadly diseases is yet to catch up. The lack of knowledge and adherence to traditional practices of healing hinder their belief to accept modern medicines.

P. Dash. Sharma, 1979 observed on his study on nutritional status that "In earlier study Sharma reported on the nutritional status of the Konds of Orissa. The study was conducted on the Konds (also spelled as Khonds) of three villages covering 51 households of Sagada range of Orissa of Kalahandi district. The study covered the morphological characteristics and body composition of the Konds with special reference to nutrition, fertility, mortality and morbidity studies. The nutritional study on Konds was based on diet survey, food and food habits. He concluded from his study that Kond diet is inadequate according to the accepted standards. Their deficiencies are both qualitative as well as quantitative. Such an inadequate diet is reflected in the wide prevalence of under-nutrition and

the tribal community which leads to malnutrition, especially among the Kondha and Poraja mothers and children. All most all tribal children are consuming rice, three to four times in a day with salt and chilly. They also suffer types of acute illness during childhood. Tribal children love to take out side foods regularly. They are consuming inadequate foods and tribal mother are not aware of antenatal care during their pregnancy. That also might be a cause of malnutrition. Tribal mother are avoiding some food items during pregnancy, which is a cause of malnutrition. Tribal community beliefs in his pregnancy, if mother fall in a pregnant, they think that gods gives us to child carrying and child crying practices, which is affect on child birth interval. That is a major problem of malnutrition and child weight is decreasing after immediate delivery of the mothers. Due to extreme poverty they consume only rice and ragi. In tribal community they do not give special foods to the children for good health condition. Whatever the family eats, only that food gives to small children. In a tribal family they compulsory need carrying child and crying child for the dead body, because they think if mother or father died while the dead body carry by his own son and going to tomb at that while the girl child crying for the dead body as back. As they think for boy child, they are getting serial of girl child in that family.

Continue.....

(Vicious Circle Indicates to Malnutrition of Tribal Children)

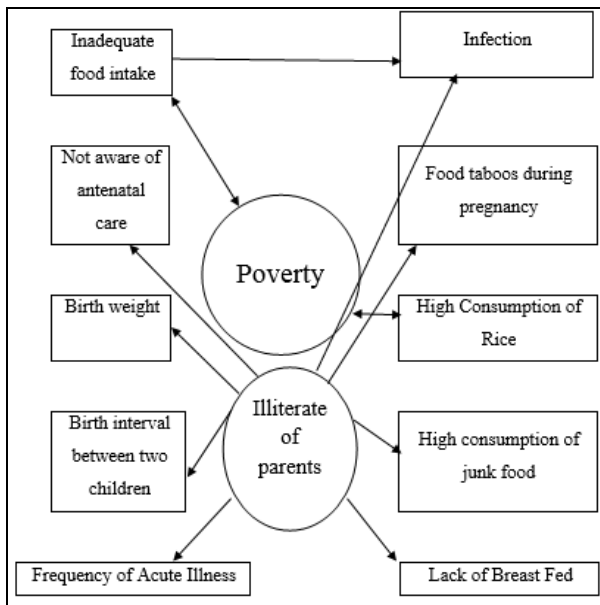


Fig 2



Fig 3: (Marasmus Child in Nabarngpur)



Fig 4: (Increasing Malnutrition in Nabarngpur)



Fig 5: (Adolescent Girl Died of Anemia)



Fig 6: (Tribal Children Consuming Rice with Bamboo Root)



Fig 7: (Marasmus Child Sleeping at Home)



Fig 8: (ICAR Scientist Team Visit at Nabarangpur and Discuss on Kitchen Garden.



Fig 9: (Kwashiorkor Children Standing at Village)



Fig 10: (Marasmus Child on OTV)

Conclusion

With the help of this study I gained in depth understanding about the tribal food habits (the various foods and non-food factors these are food taboos practice, reproductive history of mother, antenatal care of mother, birth history of children, frequency feeding for different food groups, immunization status of child, child care practices, health status and morbidities, food security status and water and sanitation hygienic practices of the tribal mothers, influenced their nutritional status of the vulnerable section in this areas) and their nutritional condition. This understanding will guide them for future intervention to improve the nutritional status and the government programmes on nutrition supplements in this areas.

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