

A STUDY ON USE OF LOCAL FOOD STUFFS AND TRADITIONAL KNOWLEDGE FOR IMPROVING PUBLIC HEALTH NUTRITION IN MAYURBHANJ DISTRICT, ODISHA

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Abstract

Major health problems of the 21st century include nutritional deficiencies and dietary changes in both rural and tribal settings. Nutritional analysis, combined with an understanding of traditional systems and resources, can help to identify the biological and socio-cultural components in solution of dietary and health problems associated with dietary change and adaptive strategies for the future. Addressing nutritional needs offers a primary rational for the preservation of traditional knowledge and life-style, the conservation of wild and cultivated resources and the sustainable use of the environment in which they are located. The objectives of the present study were to discuss about the practice of traditional knowledge and culture in public health nutrition among tribal population of Mayurbhanj district of Odisha, which forms one of the mega biodiversity zones of the country rich in flora and fauna. One hundred households were selected by random purposive sampling method for collection of data and information on traditional food and health practices was collected by interview cum questionnaire method. The results of the study revealed that they used different types of locally available foods for their health benefits such as Palta medicines for son and Babul leaves for fair baby during pregnancy, Kalibahu and Gai chira (one type of root) for recovery after delivery, Bottle gourd and sago dana kheer for better lactation, Handia for better health and getting relief from tiredness. For getting relief from diseased conditions they used various types of things such as Wild ant chutney for cough, Gangasiuli leaves juice for Malaria fever, Amar poi leaves for Diarrhea, Powder of Black berry seeds for Diabetes, Bhalia for Eczema, Neem leaves and oil for scabies, Handia rasi, Pedipedica leaves and Mehendi roots for Jaundice, Bug with banana for Piles, etc. All types of medical facilities are available in that locality but the people were not utilizing it because of their misconception and lack of knowledge. Thus emphasis should be given on nutrition and health education of the local people and further in depth scientific research is required in this direction to adopt new strategies for future generation.

Keywords: Food habits, Babul leaves, Pedipedica leaves, Traditional knowledge

INTRODUCTION:

India has a concentration of 104.3 million tribal people and considered to be the second largest in the world next to Africa. These Tribal people constitute 8.6 percent of total Indian population (census of India, 2011) of which 93.8% resides in rural areas. The country today is placed in a piquant position having succeeded in solving some problems while new ones are emerging. Current development in various dimensions has not been able to offer succor of the poor especially the tribal population. Indeed, the difference between the poor tribal people and other population groups is widening. Various International and National Organization provides many schemes for them but the tribal people are downtrodden and vulnerable often suffering from various socio-economic, demographic, physical, nutritional and health problems. Most of the developmental indicators like level of poverty, nutrition, per capita income, basic education. IMR, MMR, employment etc. appear to be very severe in backward states of India.

Among 30 States, Odisha, being socio-economically backward and culturally sound, occupies a unique place in the tribal map of the country having largest number of tribal communities with a population of 9.59 million constituting 22.86% of states population and 9.17% of the total tribal

population of the country (census of India, 2011). Despite remarkable worldwide progress in the field of diagnostics and curative and preventive health, still the tribal people of Odisha are living in isolated area, far away from civilization with their traditional values, customs, beliefs and myth intact. They manage their livelihood through agriculture and maintained an indigenous life with their own knowledge system. They used to maintain the long standing traditions from their ancestors and spread the knowledge in different spheres of their life which is popularly called local knowledge or indigenous knowledge. The concept of indigenous knowledge gained its worldwide recognition through the United Nation conference on Environment and Education in 1992, World Conservation strategy of International Union and Conservations of Natural Resources in 1980, Brundtland Commission and World Commission on Environment and Development, 1987. With modernization of the present society, the needs of those disadvantaged populations were brought to the limelight and their knowledges system was given the importance and treated as real knowledge for survival. This paper is intended to unfurl the practice of traditional knowledge and culture in improving the public health nutrition of the tribal people of Mayurbhanj district of Odisha.

The objective of the study was

- 1) To study the socio-economic conditions of the respondents.
- 2) To know the food habits and consumption of traditional foods in their daily diet.
- 3) To study the use of indigenous foods in treating some diseases.
- 4) To analyze practice of indigenous knowledge for betterment of reproductive health.
- 5) To study different myths in treating some health problems.

Materials and Methodology

The study was carried out in Jashipur block of Mayurbhanj districts of Odisha. One hundred households were selected for the study by random purposive sampling method. The data was collected by questionnaire cum interview method with the help of pretested and modified questions. The head of the family was interviewed for the collection of data. 24 hours' recall method was used to know their food habits. Information on indigenous knowledge for treating different health problems was collected by

interviewing the participants. The collected data was tabulated and analyzed with the help of statistical tools and techniques and are discussed below.

Results and Discussion-

The results of the study were compiled and discussed below.

a) Socio-Economic indicator of the respondents-

The socio-economic conditions of the respondents provide relevant information regarding their family background. It was observed that majority of the respondents belong to the age group 25 to 60 yrs i.e. All of them were Hindu by religion and were scheduled tribe. 95% of them were literate. Nuclear family system was found to be prevalent in that area. All of them like to be in joint family but they preferred to be in nuclear family system to avail government facilities such as ration card, BPL Card, Indira Abas Yojana etc. Primary occupation of the respondents was found to be agriculture (83%) and all (100%) of them belonged to low income group.

Table -1: Socio-Economic Indicators

Sl	Socio- economic Indicators	Characteristics	Percentage
1	Age	25 - 60 years	72
2	Religion	Hindu	100
3	Education	Literate	95
4	Marital status	Married	100
5	Types of family	Nuclear	92
6	Occupation	Agriculture	83
7	Types of house	Kucha	82
8	Farm animal	Cow, Goat, Hen, Cock, Pig. etc.	100
9	Income	(Rs. 4000-10000) Month	100

Most of them were staying in their kutchha houses and kept poultry, goat, sheep, cow, pig in their houses for the purpose of meat.

b) Food habits and food consumption pattern

It was observed that all respondents were non vegetarian and took three meals per day. They took a heavy breakfast i.e. Pakhal (Flooded rice) / Rice flake / Puffed rice with vegetables or dried fish, chili, onion etc. and walked out for their work place with packed lunch. Generally, they cooked their food only in the night and kept it for the next day. They prepared non-vegetarian food on every market day i.e. at least twice per week either broiler or fish or chicken. They consumed mutton occasionally during festivals.

Rice was their staple food. They cultivated and consumed different types of high yielding varieties of rice such as babailaccha, messori, swarna, lalat etc. Different types of locally grown and seasonal pulses, vegetables, leafy vegetable mushrooms, fruits and meat fish and eggs were included in their daily diet. The availability of different local food stuffs is shown in Table No.2. Various uncommon food stuffs consumed by them were dal eg. khesaridal, horsegram dal, vegetables such as pindra, dimri, kaunara etc., leafy vegetables such as bathua, hirmichia, khapra, keendali, pitagama, kaunra, kachu etc., mushrooms such as rutka chhattu, bali chhattu, kukuda chgattu, dashra chhattu, kadhan chhattu etc., Fruits such as charkoli, cusum koli, kanta koli

etc. They consumed different types of meat such a bat meat, pigeon meat, snail meat, kurkuti meat in their diet according to availability.

Handia, Handiarasi and Mahuli were the common beverages consumed daily by the respondents Handia is prepared by fermenting soft cooked rice with Ranu Powder in a covered mud pot or silver pot for three days. Ranu powder is prepared out of bark of Kankada tree and rice powder. After three days of fermentation Handia will be prepared. The top water is discarded carefully which is known as Rasi. The remaining fermented rice is sieved with the help of bamboo net mixing little bit water which is known as Handia. Mahuli is prepared out of Mahula one type of fruit.

Process of food preparation and food preservation was found to be hygienic. They dried all excess stuff in the sun without mixing salt or turmeric and kept it in bamboo basket. Due to exposure to air and moisture the foods may be spoiled by contamination with fungus, bacteria or worm etc. But sometimes they consumed those without looking into its freshness and suffer from health problems such a cholera, diarrhea and dysentery etc. Loss of life was also reported in some cases due to consumption of poisonous mushroom and other un hygienic foods.

Table - 2: Traditional foods consumed in the locality

Sl No.	Food Group	Types of foods	Frequency of consumption
1	Cereal	Different kind of rice	Daily
2	Pulses	Khesari (<i>lathyrus sativus</i>), barbatti (<i>vigna catjang</i>), Horsegram / black gram, Red gram (<i>cajanus cajan</i>), lentil (<i>cicer aientinum</i>), green gram	Weekly but according to seasonal availability
3	Vegetables	Pindra (<i>morinda citrifolia</i>), dimiri (<i>ficushispida</i>), cabbage(<i>brassica oleracea</i>), kunduri, kaunra, radish, brinjal, tomato, bitter gurd, bottle gurd,pumpkin etc,bamboo	Seasonally / according to availability
4	Leafy Vegetables	Bathua (<i>cheno podium album</i>), bhaji (<i>amaranthus viridis</i>), hirmichiya (<i>enhydra thluctuans</i>), kalam (<i>ipomea reptans</i>), drumstick (<i>moringa oleifera</i>), spinach, radish leave, khapra (<i>trianthema monogyna</i>), kundali (<i>ipomea batata</i>), pita ghima, tentuli leave (<i>tamarindus indica</i>), kaunra (<i>abelmoschus manihot</i>), colecossia (<i>colocasia esculenta</i>), kachu	Seasonally / according to availability
5	Mushrooms	Rutka, bali, kukuda, dashra, kadhan,	Specially in rainy or winter season.
6	Meat, fish, egg	Mutton ,chicken, pigeon,bat, crab, snail, kurkuti (<i>oecophylla smaragdina</i>), and different kind of fish, egg of hen and duck	At least twice per week and also according to availability
7	Fruits	Kendu (<i>dios pyros melanoxylon</i>), black berry (<i>syzygium cumini</i>),charkoli (<i>buchanania lanzan</i>),mango, jack fruits, kusuma (<i>schleichera oleosa</i>), ambada (<i>spondias pinnata</i>) koli (<i>ziziphus mauritiana</i>)	Seasonal
8	Beverage	Handia, rashi, mahuli	Daily / Weekly
9	Preserved food	Vegetables, Meat, Fish, Mushrooms	Occasionally

c) Health culture & health practice of the respondents:

Health culture and health practices of the tribal vary according to their communities and geographical location. However, education, media and Govt. involvement has some impact on their health practices. Information regarding different types of treatment adopted, use of traditional knowledge for improving public health & nutrition were collected and discussed below.

(i) Types of treatment adopted to improve health condition:

It was observed that 100% of the respondents believe in magic treatment and herbal treatment but only 46% of them practice magic treatment, especially for fever, diarrhea, cholera, colic pain etc. They also believe in medical treatment and went to nearby to hospital with ANM, Asha Karmi or Anganwadi worker for their health problem. But in case of severity of the disease, they went to both local gunia as well as consult doctor and follow their treatment.

Table No. 3: Health problem:

Sl. No	Health problem	Frequency & %	Treatment adopted
1.	Malaria/Cold/ fever/ cough	88 12	Medical & Herbal/ Magic treatment
2.	Joint pain/Arthritis/ Rheumatism	85	Herbal medicine
3.	Eczema/ Skin problem	72	local treatment/Indigenous medicine
4.	Problems related to reproduction	12 88	Doctor local treatment/Indigenous medicine
5.	Diabetes/Heart Problem	14	Doctor & Indigenous medicine
6.	Diarrhea / Dysentery	100%	Indigenous medicine

(ii) Foods taken during disease condition

It was interesting to note that they consumed different types of foods to get recovery from illness which is shown in table no. 4

Generally, they used the above food materials & leaves for getting relief from diseases at their household level & in case of emergency they consult doctor. Coconut laddoo was given to relieve back pain and to provide strength. Verma (2002) reported in her studies that buttermilk is beneficial for diarrhea. Sachan et.al, (2012) found in their study that tribal of Similipal biosphere reserve use different types of mushrooms as a source of food as well as for treating malnutrition, weakness and other nutritional disorders.

Table No. 4: Food taken during disease condition to get recovery

SI No	Disease	Remedies	Frequency	Percentage
1	Cough	Basanga (<i>Adhatoda zeylanica</i>) leaf, wild ant (<i>kurkuti-Oecophylla smaragdina</i>) chutney.	89	89
2	Cold	Durmstic leaves with masur dal and torani (Soaked water of cooked rice)	73	73
3	Indigestion	Black pepper with bael leaves	54	54
4	Diarrhea	Amarpoei (<i>Kalanchoe pinnata</i>) leaves and guava leave	83	83
5	Dysentery	Burn skin and ear of goat	59	59
6	Piles	Bug with banana	64	64
7	Malaria	Gangasiuli(<i>Nyctanthes arbortristis</i>) leaves juice with black peper, ginger and honey	100	100
8	Jaundice	Handia rasi, mehendi root, Redgram (<i>Cajanus cajan</i>) leave, pedi pedika (<i>Abutilon indica</i>) leaves.	100	100
9	Mouth disease	Warm discarded water of cooked rice. Pig oil, green chilly	94	94
10	Ear in infection	Putting kunduru leave juice in ear	56	56
11	Pimples	Smearing Pigeons stool , massor dal paste on pimples	73	73
12	Scabies	Neem leaves & neem oil	67	67
13	Diabetes	Powder of blackberry seeds	14	14
14	Weakness, Tiredness	Handia	99	99
15	Better health	Mushroom	59	59

iii) Health practices related to reproductive health**Table No. 5 Foods / Remedies related to reproduction**

SI No	Causes	Remedies	Percentage
1	For son child	Palta medicine made by local kabiraj, small raw gadisa fish with ripe banana	88
2	For fair baby	Powder of of Babul (<i>Acacia nilotica</i>) leaves	10
3	Quick recovery after child birth	Sutika goli made by local kabiraj	99
4	For abortion	Runja (<i>Abrus precatorius</i>) seeds	05
5	Mensuration delay	Through Mustard seeds under the bed	80
6	For better milk secretion	Bottle gourd sabjee & sago dana kheer	79

The information on food or remedies adopted by the people of studied area was found to be interesting. 88% of respondents used palta medicine for son where as 10% of the respondents took small gadish fish inside a ripe banana for getting son during pregnancy. Palta medicine is prepared by the local Kabiraj with combination of dung of black female goat having only male calve and blackgram (dung + black gram). For fair child they took powder of babul leaves from third month of pregnancy up to nine months. They took one spoon of it in the morning in empty stomach with water for first fifteen days of third month to 9th month. 99% of the respondents found to take sutika goli prepared with Kalibahu and gaichira roots for getting quick recovery after delivery. For better milk secretion, they took sago dana kheer & bottle gourd sabjee during lactation. Telesara (2000) found out Gond Ladoo was given to pregnant & lactating mothers to increase milk output and prevent excessive bleeding.

iv) Myth in some health problem**Table No. - 6: Practice of myths in some health problems**

SI No	Disease	Remedies	Frequency & Percentage
1	Eczema	Putting warm molten Bhalia on affected area	70
2	Migrain	Burn with hot iron rod (Nia chenka)	40
3	Colic pain	Burn with hot iron (Nia chenka) on 21 st day of birth and on Makar Sankranti	95
4	Pimples	Smearing Pigeon Stool, Lentil paste on pimple	73
5	Eye allergy	Smearing dung of black buffalo on head	43

There are many instances of death of children in Odisha due to burn with hot iron (Nia chenka) in stomach but still the practice persists among tribal in 95% cases. Putting warm Molten Bhalia on affected area of eczema was also observed. Some of them used pigeon stool on pimples and smeared black buffalo's dung on the head to get relief from eye allergy. Those practices were sometimes virulent and create serious health problems in some cases. Similar findings were also observed by Dash (2014) and Pedi et.al (2013).

Elizabeth et.al. (2015) found in their discussion that common beliefs, customs, practices related to health and disease of the people are influencing their health seeking behaviour, low productivity and poverty.

Conclusion:

Tribal preserve, enrich and enliven the cultural diversity of India besides making up a substantial portion of total population of the country Odisha has a large number of tribal communities who love to live in nature and maintained their livelihood with their own indigenous / traditional

knowledge system specially the disadvantaged ones who are deprived of economic, social and political benefits. Further, abundance of tribal people's access to forest product and indigenous health care system contributes positively to the tribal health. They have their own system of diagnosis and cure. They prepare their own medicine usually using herbs and other items collected from the nature and processed locally. These natural resources and skills are disappearing. Moreover, traditional system cannot treat most of the present new emerging diseases that modern medicine can do. Health and sanitation are often worse in regions where tribal peoples live.

Thus herculean efforts should be taken in all direction to address the health and nutritional problems of the tribal people by educating them on food safety and security, creating awareness about available health care services at their door step. Emphasis should be given on preserving indigenous knowledge of tribal regarding health benefits & further scientific research should be carried out in this direction to adopt new strategies for future generation.

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