



# Customary practices - A great challenge to the maternal and child health

■ Suryamani Patro

P.G. Department of Home Science, SBRG Women's College, Berhampur (Odisha) India  
(Email : [smpatro2007@rediffmail.com](mailto:smpatro2007@rediffmail.com))

## ARTICLE INFO :

Received : 14.02.2020  
Accepted : 25.05.2020

## KEY WORDS :

### KEY WORDS :

Customary practices, Maternal, Child health

## HOW TO CITE THIS ARTICLE :

Patro, Suryamani (2020). Customary practices - A great challenge to the maternal and child health. *Adv. Res. J. Soc. Sci.*, **11** (1): 26-32, DOI: 10.15740/HAS/ARJSS/11.1/26-32. Copyright © 2020: Hind Agri- Horticultural Society

## INTRODUCTION

Despite remarkable progress in the field of diagnostic, curative and preventive health; malnutrition in the form of maternal mortality, stillbirth, neo-natal mortality, infant mortality, low birth weight babies, anaemic mothers etc. prevail at a high rate in India. The maladies of malnutrition is prevalent mostly among the backward sections of the society e.g., tribal community, people living in rural areas and urban slums etc. The worst sufferers are the women, at their reproductive age and children.

Tribal communities constitute about 8.2 per cent (*i.e.*, 8.4 million) of total population of India that represent almost half of the tribal population of the world (Census of India, 2011). Most of them even today remain at the lowest strata of the society due to various reasons like geographical and cultural isolation, low level of literacy, primitive occupation and poverty.

Our country is home to 40 per cent of world's malnourished children in contrast to inhabit only 20 per

cent of world's total children population (UNICEF, 2004). The average infant mortality rate in rural India is 72 per cent, which varies from 16.3 per cent in Kerala to 89 per cent in Meghalaya (UNICEF, 2004). Amongst scheduled tribes the infant mortality rate is as high as 84.2 per cent and under-five mortality levels remains high at 96 deaths per 1000 live births (NFHS, 2005). Though scheduled tribes make up 8-9 per cent of the total population, they account for about 14 per cent of all deaths and 23 per cent deaths in the 1-4 year age group in rural areas. Since the majority of deaths among tribal children are concentrated in the 1-4 year age group, tribal deaths at this age group account for almost a quarter of all deaths (World Bank, 2007).

The constitution of W.H.O. has asserted that enjoyment of highest attainable standard of health is one of the fundamental rights of every human being without discrimination of race, religion, political belief, economy or social condition. However, many women in the globe are being denied of the basic human rights. Women face

these problems at least in three critical stages of life *i.e.*, in infancy, early childhood and during reproductive phase. The health and nutrition of female child is compromised owing to the prevailing sex biasness since her early life. Such a disadvantaged beginning leads to impaired growth and development of many adolescent girls. The poor and inferior share of food given to the female child coupled with lack of care for her special nutritional needs during adolescence renders her vulnerable to the stresses, who will consequently begin her childbearing years with poor health. Thus, the vicious cycle of malnutrition continues generation after generation.

Social vulnerability of women is also reflected in malnutrition statistics with more than one third (36%) estimated to be malnourished. Maternal mortality rate increased significantly in the last few years (NFHS, 2005) India accounts for over one fifth of global maternal deaths (World Bank, 2007). The impact of this is not limited to women alone, but to their children too, who are born under-weight at less than 2.5 kg.

Further, owing to their customary cultural beliefs women of backward communities practise a number of superstitions, taboos, food fads and fallacies related with pregnancy and lactation. These attitudes invariably affect the nutrient intake of family as a whole and women in particular, which ultimately leads to negative nutrition balance among the women in reproductive age. Women with poor nutritional status are at risk during pregnancy and delivery, babies born to such mothers are of low birth weight and premature and are more susceptible to infection.

The present paper is an attempt to highlight the prevailing traditional beliefs of tribes and other backward communities regarding food habits of pregnant and lactating mothers and the customary practices followed during the crucial period of life *i.e.* during pregnancy, lactation and infancy in India and other developing countries. Special emphasis will be given the way these beliefs would stand on the way when we try to achieve the United Nations sustainable development drafted during SDG Summit 2019 (UN, 2019) that has targeted six goals *e.g.*, Goal 1: End poverty in all its forms; Goal 2: Zero hunger; Goal 3: Health; Goal 4: Education; Goal 5: Gender equality and women's empowerment; Goal 6: Water and sanitation.

### **Traditional beliefs and customary practices:**

As described by Devdas (1986) nutrition is the most

important single factor that affects the health and well being of a human being. Food fads and faulty food habits are some of the important contributing causes for the wide spread prevalence of malnutrition among pre-school children, expectant and nursing mothers in developing countries. Food beliefs, fads and prejudices are important social factors that are known to influence the choice of foods of many population groups in different regions of the country Swaminathan (1997).

### **Traditional beliefs and customary practices among pregnant women:**

Onuoha (1982) observed that the food restrictions are determined by age, sex, physiological status and seasonal availability. A brief account of traditional beliefs and customary practices being followed among pregnant women across the country has been described below.

Tribes of Coimbatore district considered papaya, gingley seeds and pineapple as hot and abortive foods Uma and Usha (1990). The authors observed pregnant mothers including meat, chicken, milk and egg as these help in the good growth of foetus; cereals for easy digestion; fruits for their positive impact on health and saffron for the complexion of foetus.

Chandrasekhar *et al.* (1990) observed Kota and Kadar pregnant women taking ragi, kale, fruit, egg and milk in a belief that these are good for growth of foetus. At the same time, papaya is considered as abortive food; jackfruit and sesame seeds as hot foods; root and tubers as gas forming and causes vomiting and are avoided.

Jayalaxmi and Neelakantha (1995) observed no special food to be given to pregnant women of Tamil Nadu. Whereas, papaya, sesame and chicken are avoided in a belief that they are hot and abortive foods. Sinha and Pandey (1998) and Saxena (1989) from their respective studies among tribes of Bihar and Madhya Pradesh noticed pregnant women considering fowl, fish, sesame, fruit and pulses (black gram and lentil) as special foods. From the study among the sericulture households of Karnataka, Sunanda and Preema (1995) observed that sesame and jaggery are considered as abortive and heat producing foods; papaya as abortive; drumstick leave and kasipuppu are heat producing foods; banana not good for health and are avoided by the expectant mothers.

Nigeria women of childbearing age are prohibited from consuming pork due to the belief that children born might get spotted skin. Pregnant women avoid eating snails with the fear that children would be afflicted with

excessive saliva. However, they are encouraged to eat foods left by rats since that will ensure an easy delivery (Onuoha, 1982). Reduction in the intake of normal food during pregnancy to avoid vomiting is observed among Madhya Pradesh tribes (Basu *et al.*, 1994).

The expecting mothers avoided papaya and drumstick considering it as abortive and indigestible foods (Rajmal and Parvati, 1986). Similarly tribal women of Andhra Pradesh were observed to avoid papaya and pumpkin due to the abortive nature of these foods (Kupputhail and Mallika, 1991).

Whereas, Easwaran and Poorani (1991) from their study among tribes of Coimbatore observed that papaya is allowed in the diet of pregnant women and no special food is included. However, they used to take less amount of food, completely avoiding spicy food in the fear of difficulty during the delivery. Sinha and Pandey (1998) in their study among the HO tribes of Bihar found fowl, fish, seasonal fruit, black gram and lentil are included in pregnant women's diet as these are good for health.

Suneel *et al.* (2006) from their study among tribes of Madhya Pradesh found no special food being consumed during pregnancy. However, few foods such as fishes, chillies, full liquor and papaya are tabooed socially as these are considered to be hot and may abort the foetus. Strong odour foods (amla and dhania) are also prohibited as it caused nausea. It is very interesting to note that sugar dissolved in water under such conditions was also prohibited. Twinned fruits and tubers are also prohibited with a belief of having twins.

Among the Kutia Kondha women consumption of any special nutritious diet was not observed during pregnancy, rather, reduction in their regular diet was observed in a fear of recurrent vomiting and also to ensure that the baby may remain small and the delivery may be easier. Alcohol is consumed to bear their regular activities including hard labour during pregnancy (Basu, 2000).

Working on tribes of Gujarat, Gopaldas *et al.* (1983) observed consumption of jaggery, black pepper and wheat by the pregnant women, as these foods are considered as good for health. Whereas, salt, chilly, black gram, maize, *Jowar*, *Ghee*, moth beans, groundnut, curd, coconut milk and new rice are considered to be injurious to the foetus.

In Andhra Pradesh consumption of many nutritious foods by pregnant women are prohibited for variety of cultural practices and taboos like green leafy vegetables

(causing diarrhoea); vegetables (pumpkin, brinjal, bitter gourd as indigestive foods); fruits (papaya, pineapple and banana as abortive foods); potato and sweet potato (causing arthritis); buffalo milk (causing excess of mucus in respiratory tract); meat and egg (causing abortion). The normal dietary intake was reduced in the fear of having a big baby and difficult delivery Sreegiri *et al.* (2010).

Bara (2004) observed Kondha tribal women are not taking any extra and nutritious food during pregnancy due to their ignorance, poor economic condition, combined with the prevailing social customs and food habits. Even they stop taking regular food due to nausea and vomiting. Non-vegetarian foods except fish were restricted in their diet in a belief of their indigestive nature. They also fear that the baby may overgrow leading to difficulty in delivery.

Patro (2005) studied such practices among paroja mothers of Koraput district and found them consuming papaya and green leafy vegetables. At the same time there were restrictions for a number of foods like ripe banana, egg, mutton, rice cake, ragi, mushroom, field bean, coconut etc. due to their blind belief and superstitions. These tribal people were in the belief that by inclusion of these foods in the pregnant mother's diet there may be difficulty in delivery or the health of expectant mother may deteriorate. Ripe banana and egg were also restricted to avoid chances of abortion. Egg was also believed to make the child deaf and dumb. Rice cake and ragi were believed to cause mumps in the child. By inclusion of mutton in the pregnant women's diet, the eyes of the child would be like the goat's eyes. Intake of mutton was also believed to be associated with the occurrence of fits in the child. Mushroom was feared to cause ulcer in the child. Similarly, coconut and banana were believed to cause stomach pain in mother.

### **Traditional beliefs and customary practices among lactating women:**

Food fads and beliefs of lactating women of various communities is an interesting aspect of study. Communities differ in their way of classifying foods as galactogogous *i.e.* the foods having the property of stimulating milk secretion in lactating mothers, or the ones to be avoided by the lactating mothers. A review of traditional beliefs and customary practices being followed among lactating women across the country has been

presented below.

Bhat and Khetrapal (1983) noted cumin seed, omum (Ajwain), pajori, jaggery, milk and *Ghee* as milk secreting foods by some tribes of Hissar. The tribes of Jodhpur consider caraway seed (ajwain), dry gum; dry ginger, jaggery, fenugreek seeds and *Ghee* as milk secreting foods Ratwani and Verma (1989). However, mothers of urban slums of Delhi classified butter, almond, jaggery, dried date and red gram dal as milk secreting foods Ravinder *et al.* (1995). Both the Lamba and Irula lactating mothers considered green leafy vegetables as having milk-secreting property. Whereas mango, jackfruit, roots and tubers were avoided by both the tribal groups (Chandrasekhar *et al.* (1990).

Jayalaxmi and Neelakantha (1995) observed that rural lactating women are given agathi, ragi kali, garlic and dried fish. They were found to avoid protective foods like jackfruit, mango, drumstick, green leafy vegetable, egg, pulses, groundnut, curd, puffed rice and flesh food. Groundnut, jackfruit, mango and flesh foods were avoided, as these are difficult to digest. In order to avoid gas production; eggs, puffed rice, drumstick and pulses are avoided. Curd was avoided due to its cooling effect.

*Bajara*, bengal gram dal, black gram dal, carrot, radish, green leafy vegetable, bitter gourd, brinjal, ladies finger and curd are found to be avoided by the rural lactating mothers of Harayana (Jood *et al.*, 1999).

Cumin seed, milk, omum, *Ghee*, groundnut, almond, til seed, *Halwa*, panjiri (a recipe prepared by using wheat flour, *Ghee*, ground sugar, gum acacia, ajiwain and nuts) are considered as milk secreting foods by the rural lactating mothers of Harayana. Radish, sathavasi herb, fermented rice, papaya, turmeric soup, black gram dal and onion are included in the diets of lactating women and brinjal, ladies finger, green leafy vegetable, oil, spices, curd, are avoided. Non-vegetarian item was considered to reduce breast milk secretion (Dahiya and Kapoor, 1992).

From the study among the sericulture households of Karnataka, Sunanda and Preema (1995) observed that bengal gram and wheat were avoided by lactating women due to its digestive difficulty, cluster bean and amaranth for their septic property, oil and curd for their cooling effect. They consider milk and milk products, garlic, kasipuppu as galactogogus food.

From the study of Uma and Usha (1990) it is observed that lactating women were given green leafy

vegetable and garlic, for their galactogogus property; milk, curd and fruit for its impact on positive health and betel leaves for its high calcium content. While the foods that were avoided are chilly, for its undesirable effect on child, mango, for its gas producing effect, spices for its undesirable effect on digestion and egg for its allergenic nature. Kasapani, a preparation from various herbs, is observed to be included in the diets of nursing mother from the third day of delivery, which is supposed to have a soothing effect and presumably help in recovering the energy loss due to the effect of labour, besides having antibiotic properties.

Pande and Rohini (1990) observed that rice with plain dal (without seasoning, chilly and spices) are given and fried foods are avoided in the diet of Maharashtra tribal lactating mothers. According to studies of Rajmal *et al.* (1999) brinjal, cluster bean, bottle gourd, potato, egg and cassia are avoided in the diets of lactating mothers in a fear of allergy, knee joint pain and negative effect on health. On the other hand drumstick leave, fish, milk, pepper, garlic and ginger were considered special foods for the reason that they are good for health, prevent from cold and cough and increase milk secretion. Similarly, working on the nolias of Ganjam district, Patro (2000) observed that ragi gruel to be considered as galactogogus food and sea fish and brinjal are avoided in a belief that they may cause allergy to the child. Many unscientific infant feeding practices being followed by Parojas – a tribal community of Odisha has been described in detail by Patro *et al.* (2012)

Bhat and Khetrapal (1983) observed that lactating women of Hissar district are specially given milk, *Ghee*, gum, bean and fruits as these are considered as good for child; but pulses are liable to cause gas formation and difficulty in digestion and are avoided. Some of the interesting food fads and fallacies of Gujarat tribes has been reported by (Gopaldas *et al.*, 1983). Mahua (*Mahua indica*) alcohol is given during and after delivery in a belief to combat tiredness, to stop postpartum bleeding and is considered to cleanse the woman's gastrointestinal tract. Some tribal women believe that consumption of alcohol by the women causes diarrhoea in infants. During lactation *Bajra*, redgram and a special drink, Sua-ka-pani made from the bark of sindha (*Viethenia somnifera*) tree is believed to immunize the child from all possible diseases. Consumption of salt, chilies, wheat, blackgram dal, *Jowar*, new maize and moth beans is believed to

make the breast milk indigestible to the child. Brinjal is considered to cause delayed healing of wound in mother and child, oil and spices to heat up the body system and curd as cold foods and were avoided by lactating mothers.

Suneel *et al.* (2006) from their study among tribes of Madhya Pradesh observed women are given wheat porridge soon after delivery at least for the initial 7 days. Gur (jaggery), *Desi ghee* and coconut are added to make it more energetic. Buttermilk is given to the lactating women as it enhances the flow of breast milk.

Sinha and Pandey (1998) from their study among the HO tribes of Bihar found mandi (rice cooked with lots of water), sathavari herb, fermented rice, papaya, turmeric soup, black gram dal, onion, rash (top layer of rice beer) were given during lactation as these are supposed to increase milk production. However non-veg foods are avoided in a belief that they reduce milk secretion. Brinjal, lady's finger and green leafy vegetable are avoided as they may cause diarrhoea and colic pain in the child. Oil, spices and curd are avoided as they may cause cold, diarrhoea and green stools in the children.

Gopaldas (1989) in his study on Gujarat tribes observed brinjal to be avoided during lactation as it cause delayed wound healing in mother and child. Oil and spices are avoided as it heat up the body system and curd is avoided as it may cause cold in the child. Similarly, Paliyars considered milk, dried fish, non-vegetarian foods, popped amaranth seed and palm jaggery as lactogenic foods Manugensan and Antathalaxmi (1991).

Paroja tribes of Koraput district, Orissa considered papaya, rice water and green leafy vegetables as lactogogus ones. While, green leafy vegetables, brinjal, potato, colocasia, ragi gruel, dry fish and prawn were restricted in the diet of lactating mother. Intake of potato and colocasia were thought to be associated with the stomach pain of child. Brinjal and green leafy vegetables were believed to cause diarrhea in the child. In take of brinjal was also thought to be linked with the over growth of umbilical cord. The sour taste of ragi was considered to cause septic of umbilical cord and was avoided. However, fresh ragi preparation that was free from sour taste was included in the lactating mother's diet Patro (2005).

### **Traditional beliefs and customary practices in intra-natal care :**

Typical intra-natal practices have also been reported

by various researchers in their study among various communities. Basu and Kshatriya (1997) in their study from tribes of Orissa observed that placental cord is cut with the help of a blade. The kharias were observed to apply cow's urine, pigs fat or both on the placental cord of the new born.

Among kutia kondhas the delivery was conducted in the home by the mother herself in a squatting position holding a rope tied down from the roof of the hut Basu (2000). This helped her in applying pressure to deliver the child. In complicated labour, obviously it might lead to maternal as well as child mortality. In case the child born in this procedure he may be susceptible to various infections. Bara (2004) observed that Kondhas conducted delivery at their home. The umbilical cord was cut with a small knife and was placed in an earthen pot and buried behind the house. After the delivery the mother clean herself with tepid water. The neonate is wrapped with cloth anointed with turmeric paste and bathed with tepid water. Then the mother is given ragi gruel and rice with some salt or vegetable curry.

Such poor turn out of institutional delivery was also observed among the tribal women of Rajsthan by Nagda (2004) and he attributed the ignorance or reluctance of mothers to accept modern treatment for the poor rate of institutional delivery. Cases of abortion and stillbirth are reported due to the lack of awareness and strong traditional beliefs and customary practices among tribal mothers Nagda (2004).

### **Conclusion :**

Since the inception of family welfare programme in India, a variety of services are being provided for the care of pregnant women and the new born through programmes like Child Survival and Safe Motherhood (CSSM), Reproductive and Child Health (RCH), Integrated Mother and Child Development Services (IMCDS), Janani Surakshya Yojana (JSY), Indradhanush, Ayushman Bharat and so on. Although there is improvement in services like antenatal check ups and institutional deliveries; nutrition education, a key component of antenatal care still remains a neglected area. Antenatal care is practically restricted to providing clinical check ups and lab investigations. Nutrition related research has reached to micronutrients level, yet translation of these achievements into macro level community action is limited only to supplementation of

iron and folic acid (IFA) tablets or fortification of some of the food items. There is no visible difference in the nutritional status of antenatal mother in the past and the present at least in rural areas and among the backward communities. Development in science and technology has failed to conquer the traditional beliefs of these communities. Tribal peoples and the peoples of rural India and the urban slums are being observed to follow the age old customary practices, most of which does not have any scientific basis and few of them also contradicting to the established hypotheses. The result is reduced nutrient intake both qualitatively and quantitatively ending up in negative nutritional balance, which is expressed as anaemia, maternal mortality, stillbirth, neo-natal mortality, infant mortality, low birth weight of babies and so on. Pregnant women and lactating mothers of many communities have been reported to avoid many fruits and vegetables stating varied reasons out of their own traditional beliefs, but we the scientific community have failed to educate them the health benefit aspects of these food such as the source of vitamins and minerals and their protective nature. Similarly, the non-vegetarian food as the source of complete and best source of bio-available protein, an essential nutrient, has not surpassed their baseless beliefs as they are difficult to digest and create difficulty in delivery and milk production etc. Few of their beliefs blatantly contradict the established scientific facts also. When it is advised to increase the food and nutrient intakes during pregnancy, few communities prefer to reduce food intake to have a small baby, which ideally should be 3.0 kg. Similarly, few communities have been reported to avoid milk and milk products, fats and nuts etc., on the contrary few others prefer alcohol to bear the hard labour of pregnancy, stop postpartum bleeding and to cleanse gastro-intestinal tract. Further, the practice of not availing institutional delivery and preferring to do the job at home under unhygienic and precarious conditions only adds up to grave the situation.

It is seen that in this modern scientific technical age blind beliefs, superstitions continue to influence human lifestyle, which is a hindrance to the achievement of optimal health of a community and therefore nutrition education should be a component in all developmental schemes for women and children (Patro *et al.*, 2011). Practical demonstration, nutrition education at village level for girls and women at reproductive age will help in combating blind customs and practices and also convince women folk to accept the changes required for a healthy

society.

## REFERENCES

- Bara, F. (2004). Child rearing process and socialization process among the Dongria Kondha. *Adibasi*, **44** (1&2) : 56-67.
- Basu, S., Jindal, A. and Kshatriya, G. (1994). Perception of health and pattern of health seeking behaviour among the selected tribal population groups of Madhya Pradesh and Orissa. In: *Tribal Health in India*, (Ed.) Basu, S., Manak Publication Pvt. Ltd. (1<sup>st</sup> Ed.). 26-39 pp.
- Basu, S. and Kshatriya, G. (1997). Fertility and mortality trends in the Khasia tribals of Orissa. *Social Change*, **27**(1&2): 114- 128.
- Basu, S. (2000). Dimensions of tribal health in India, *Health and Population Perspective & Issues*, **23** (2): 61-70.
- Bhat, C.M. and Khetrpal, N. (1983). Infant feeding and weaning practices in a selected village of Hissar district, *Indian J. Nutr. Dietet.*, **20**: 323 326.
- Census of India (2001). *Population data sheet 1, 2 and 3*. Census Directorate, Orissa, Bhubaneswar (U.P.) India.
- Chandrasekhar, U., Vasantamani, G. and Anooja, K.T. (1990). Infant feeding and weaning practices among Irulas of Attapadi hills and Lambas of Katchuvadi hills. *Indian J. Nutr. Dietetics*, **27**: 175 - 177.
- Dahiya, S. and Kapoor, A.C. (1992). Diet and nutritional assessment of selected infants and young children in rural areas of Haryana., *Indian J. Nutr. Dietetics.*, **29**: 233 -236.
- Devdas, R.P. (1986). Diets for prevention of atherosclerosis, regional workshop on planning diet for health, 10<sup>th</sup> to 13<sup>th</sup>, Jan, 1986, Madras, India.
- Easwaran, P. and Poorani, R.C. (1991). Nutritional status of tribal school going children. *Indian J. Nutr. Dietetics*, **28**: 207 - 209.
- Gopaldas, T., Gupta, A. and Saxena, K. (1983). The phenomenon of sanskritization in a forest dwelling tribe of Gujart, India: Nutrient intake and practices in the special groups. *Ecol. Food Nutr.*, **13**: 1-5.
- Gopaldas, T. (1989). Cited in review of traditional practices in mother and childcare in Gujrat, Seminar Report, 27-28 Feb., 42-68.
- International Institute for Population Science (IIPS) and macro International. 2007. National Family Health Survey (NFHS), 2005-06, India.
- Jayalaxmi, N. and Neelakantha, S. (1995). Study on the food habits of rural population. *Indian J. Nutr. Dietetics.*, **32**:

295-298.

- Jood, S., Soraja, B. and Salil, S. (1999). Nutritional status of rural lactating women from three towns of Harayana in winter season. *J. Dairying, Food & Home Sci.*, **18**(3 and 4): 155-158.
- Kupputhail, U. and Mallika, N. (1991). Nutritional status of adult woman belonging to Khond, Gadaba and Poraja tribes of Andhra Pradesh, India.
- Manugensan, P. T. and Antathalaxmi, A. (1991). Dietary practices of the paliyar tribal group and the nutrient content of unconventional foods consumed. *Indian J. Nutr. Dietet.*, **28**(11): 297-301.
- Nagda, B.L. (2004). Tribal population and health in Rajasthan, *Studies of tribes & Tribals*, **21**(1): 1-8.
- Onuoha, G.B.I. (1982). The changing scene of food and beliefs among the Mbaise people of Nigeria. *Ecol. Food Nutr.*, **11**: 245-247.
- Pande, V. and Rohini, D. (1990). Food habits and consumption pattern of tribal families, *Mahashatra J. Extn. Edu.*, **9**: 1-4.
- Patro, S. (2000). *Nutrient composition of traditional foods of fishermen community of Ganjam District*. M. Phil. Dissertation, PG Department of Home Science, Berhampur University, Ganjam, Orissa, 114 pp.
- Patro, S. (2005). *A comprehensive study on the prevalence of malnutrition among tribal preschool children of Koraput District, Orissa*. Ph.D. Thesis, PG Department of Home Science, Berhampur University, Bhanjabihar, Ganjam, Orissa, 245 pp.
- Patro, S., Samantaray, P., Nanda, S. and Sahu, R. (2011). Impact of nutrition counselling on knowledge, attitude and practices of tribal mothers. *Int. Res. J. Lab to Land*, **3**(9): 68-72.
- Patro, S., Nanda, S. and Sahu, R. (2012). Infant feeding practices of Paroja: A tribal community of Odisha. *Stud. Home Com. Sci.*, **6**(1): 21-25.
- Rajmal, P.D. and Parvati, E. (1986). Intra family food intake of selected rural households and food consumption pattern of pregnant women. *Indian J. Nutr. Dietet.*, **23**: 343-346.
- Rajmal, P.D., Vijayalakhmi, P. and Mercy, P. (1999). Trends in breast feeding practices. *Indian J. Nutr. Dietet.*, **36**: 1-5.
- Ravinder, C., Susama, S. and Aravinda, W. (1995). Influence of infant feeding practices on the growth and morbidity profile of infants in the urban slums of Delhi. *Indian J. Nutr. Dietet.*, **32**: 242-245.
- Ratwani, L. and Verma, M. (1989). A study of nutritional status and food practices of the pregnant and lactating women residing in selected desert area of Jodhpur (Shergarh Block). *Indian J. Nutr. Dietet.*, **26**: 304-307.
- Saxena, V.B. (1989). Review of traditional (including tribal) practices in mother and child care in Madhya Pradesh, Report (27-28 Feb.) NIPCCD, N.D., 24 pp.
- Sinha, A. and Pandey, H. (1998). Maternal and infant feeding practices of 'Ho' tribe women in Bihar. *Indian J. Nutr. Dietet.*, **35**(2): 325-328.
- Sreegiri, S., Krishna, G., Babu B. and Devi, M. (2010). A cross sectional study of nutritional status of antenatal mothers in rural areas of Visakhapatnam, Andhra Pradesh. *J. Community Medicine*, **6**(1): 25-27.
- Sunanda, S. and Preema, S. (1995). Food distribution order, food beliefs and feeding practices in sericulture households. *Indian J. Nutr. Dietetics*, **32**: 187.
- Suneel, R. Qamra, J., Roy and Mishra, D.K. (2006). Food consumption pattern and associated habits of the bhil tribe of Dhar district of Madhya Pradesh. *Proceeding of National Symposium on Tribal Health*, 211-219pp.
- Swaminathan, M.S. (1997). *Food and nutrition*, Vol I and II, The Bangalore Printing and Publishing Co. Ltd., Bangalore, 307 pp.
- Uma, N. N. and Usha, C. (1990). Food habits and practices of infant feeding in certain rural and urban communities of Coimbatore district. *Indian J. Nutr. Dietetics*, **27**: 340.
- UNICEF (2004). *State of worlds children*, UNICEF.
- World Bank (2007). *Achieving the MDGS in India's poor states: Reducing child mortality in Orissa*, New Delhi, India.

#### WEBLIOGRAPHY

- NFHS (2005). Nutrition and Anaemia-Mother and Child Nutrition: [www.motherchildnutrition.org](http://www.motherchildnutrition.org).
- UN (2019). <https://www.un.org/sustainabledevelopment/>

11<sup>th</sup>  
Year  
★★★★★ of Excellence ★★★★★