

Documentation of special foods given to promote lactation district of Uttarakhand in Almora

Dinu Kumari and Pushpa Bharati

An investigation was undertaken on 60 mothers of Almora district to document special foods given to promote lactation. Milk with ghee was consumed by more than 50 per cent of the pregnant women prior to delivery. Most common special foods given during lactation upto first week were ginger *kada*, black tea and *ajwain kada* while, *atta ka halwa* was consumed during second week (58). Consumption of *dalia* (56), *Moong dhal khichadi* (36) and milk with honey (10) was slowly reduced from first week to third month. Normal diet was resumed after one month. Mothers consumed lesser quantity of water when the girl baby was born as compared to boy baby. Avoidance of fast foods (57), garlic (46), pumpkin (45), onion (44), brinjal (43), green chilies (43) and pickle (30) were reported by majority of the mothers from Almora.

Key Words : Lactation, Special foods, *Atta ka halwa*, *Methi ladoo*, *Panjiri*

How to cite this article : Kumari, Dinu and Bharati, Pushpa (2020). Documentation of special foods given to promote lactation district of Uttarakhand in Almora. *Food Sci. Res. J.*, 11(2): 108-114, DOI : 10.15740/HAS/FSRJ/11.2/108-114. Copyright@ 2020: Hind Agri-Horticultural Society.

INTRODUCTION

India is a country with traditions and is known for its unity in diversity. Each state in India has its own culture and conversely dietary practices vary from place to place. Lactation is a normal physiological process that impedes considerable nutritional demands on the mother. The period of lactation is a time of greater nutritional stress for the mother than that of pregnancy. For many mothers it lasts much longer. In India it is the custom to breast

feed infants for prolonged periods even upto three years. Further, World Health Organization also recommends exclusive breast feeding for first six months of life. The process of milk production is known to increase the need for all nutrients (calories, protein, minerals and vitamins). The extent of the increase depends to some extent on the adequacy of the mother's previous diet, the stores of nutrients built up in her body during pregnancy, her dietary pattern and her activity. A nutritious diet that meets the RDA for the lactating women is of benefit to both mother and infant; such a diet provides sufficient quantity of nutrients to prevent maternal reserves from being depleted. It is difficult to meet nutritional requirements through normal diet. In India, practice of providing special foods rich in many essential nutrients is very common in different parts of the country. It promotes an adequate supply of high quality of milk for the baby.

Traditional food supplements are commonly consumed in India to increase lactation performance and

MEMBERS OF RESEARCH FORUM

Author for correspondence :

Pushpa Bharati, Department of Food Science and Nutrition, College of Community Science, University of Agricultural Sciences, **Dharwad (Karnataka) India**
Email: bharatipushpa@uasd.in

Associate Authors' :

Dinu Kumari, Department of Food Science and Nutrition, College of Community Science, University of Agricultural Sciences, **Dharwad (Karnataka) India**

health of mothers, irrespective of the income, education, occupation, religion, places of dwelling etc. Special foods are made up of several ingredients including herbs, spices, nuts and condiments besides cereals, pulses, green leafy vegetables, milk and milk products. These herbs and spices happen to be good sources of micronutrients and nutraceuticals.

However, with changing lifestyle and working mothers who are figure conscious, changes in these diets are expected. Therefore, a need was identified to study the beliefs and practices regarding the food intake during lactation in the current scenario. Keeping this in view, present study has been elucidated to study the special foods consumed by lactating mothers of Almora district of Uttarakhand.

METHODOLOGY

The study was conducted during 2013-14 selecting 60 mothers having at least one live child from Almora district of Uttarakhand. A questionnaire was developed with the help of literature and by consulting nutrition experts. The questionnaire included questions related to foods provided during pregnancy to improve lactation, foods given prior to delivery, special foods consumed and avoided during lactation besides demographic profile. Data were collected using the developed questionnaire by personal interview method. Data were tabulated and percentages calculated.

OBSERVATIONS AND ASSESSMENT

The results obtained from the present investigation as well as relevant discussion have been summarized under following heads :

Demographic profile of the respondents:

The information elicited by the respondents with respect to themselves and their family is presented in Table 1. It was observed from the table that majority of the respondents from Almora (30%) were in the age range of 31-35 years followed by age between 36-40 years (21.66%) and least (1.67%) belonged to the age group of 20-25 years. About one fourth of the women had high school education followed by middle school (20%), graduate (16.67%) and primary school (15%). Higher per cent of the respondents (75%) were Hindus and only 25 per cent were Muslims. It was noted that most of the subjects were housewives (53.33%) and 76.67 per cent

Variables	Classification	n	%
Age(Years)	20-25	01	01.67
	26-30	12	20.00
	31-35	18	30.00
	36-40	13	21.66
	41-45	11	18.33
	46- 50	05	08.33
Education	Illiterate	05	08.33
	Primary school	09	15.00
	Middle school	12	20.00
	High school	16	26.67
	PUC	05	08.34
	Graduate	10	16.67
Religion	Postgraduate	03	05.00
	Hindu	45	75.00
	Muslim	15	25.00
Occupation	House wife	29	48.33
	Agricultural laborer	02	03.33
	Daily wages laborer	04	06.67
	Service	18	30.00
	Petty Business	07	11.67
Family type	Joint	14	23.33
	Nuclear	46	76.67
Family size	≤ 4	10	16.67
	5-7	38	63.33
	>8	12	20.00
Food habits	Vegetarian	34	56.67
	Non vegetarian	13	21.67
	Ova vegetarian	13	21.67
Monthly family Income (Rs.)	<10000	09	15.00
	10000-30000	14	23.33
	30000-60000	21	35.00
	60000-90000	13	21.67
	>90000	03	05.00

of the subjects were staying in nuclear family setup. Nearly two third of the selected respondents (63.33%) were having 5-7 members in their family followed by more than eight members (20%). Approximately 50 per cent of the subjects were vegetarian (56.67%). Higher per cent of the respondents (35%) had an income ranging between Rs. 30000-60000.

Foods included during pregnancy to improve lactation:

During pregnancy few women have the habit of consuming special foods to improve lactation after delivery

may be due to the advice of elders or self. It can be seen from the Table 2 that 56 subjects from Almora (93.33%) were not given any special foods during pregnancy. Curds (83.33%), *Ghee* (81.67%), milk with saffron (80.00%) and dry fruits (71.67%) were consumed by the women. This practice was followed with a reason that sufficient stores needs to be maintained for future use - during delivery and lactation. Only five per cent of the women consumed commercial supplements like Proteinx and biovit. Study subjects consumed protein supplements and IFA tablets during pregnancy to avoid deficiencies, to improve body stores, so that post delivery needs can be fulfilled. Consumption of commercial food supplements such as proteinx and biovit by the pregnant women was also reported by Sangalad (2011) in Dharwad district of Karnataka. Hutter (1994) in Dharwad reported the consumption of buttermilk and curds as cooling foods, green leafy vegetables to increase breast milk secretion. Chawla *et al.* (1997) in Hisar reported the additional consumption of *Ghee*, milk and fruits during pregnancy. Kavitha *et al.* (2013) in Ramanathapuram district of Tamil Nadu also reported the consumption of iron tablets and tonics regularly by pregnant women to combat iron deficiency which was common during pregnancy.

Foods provided just before delivery:

There is a practice of giving certain foods prior to delivery in order to ease the process and to give strength to the women during delivery. Foods given to the mothers just before delivery are mentioned in Table 3. Most of the mothers (44) were given milk with *Ghee* (150ml) as it is believed to increase labor pain. *Ajwain kada* (1 cup of 50 ml) was given to 12 subjects for the reason that delivery becomes easy as pain increases. The Almorians preferred giving 50 g of *Ghee* (11) to the mothers as it

Table 2: Foods[#] included during pregnancy to improve lactation

(n = 60)			
Sr. No.	Foods	n	%
1.	Normal food	56	93.33
2.	Curds	50	83.33
3.	<i>Ghee</i>	49	81.67
4.	Milk with saffron	48	80.00
5.	Dry fruits	43	71.67
6.	Butter	24	40.00
7.	<i>Dalia</i>	22	36.67
8.	Egg	15	25.00
9.	Fruits and vegetables	13	21.67
10.	Buttermilk	11	18.33
11.	<i>Khichadi</i>	10	16.67
12.	Mutton	06	10.00
13.	Vegetable soup	06	10.00
14.	Chicken	05	08.33
15.	Green leafy vegetables	05	08.33
16.	Proteinx and biovit	03	05.00
17.	Fruit juice	03	05.00
18.	Boiled potato	03	05.00
19.	Chicken or mutton soup	02	03.33
20.	Tender coconut water	02	03.33

Multiple responses possible

was considered to provide strength to the body during delivery.

Black tea, coffee (1 cup of 50 ml) and *Jeera kada* (1 glass of 150 ml) was given to the mothers as it was considered to increase labor pain, hence referred by seven, six and five Almorians. Two to three Tsp of honey (30 to 45 g) and *Atta ka halwa* (1 *Katori* of 100 g) referred by four and two respondents which was believed to help in ease of 5 delivery and considered as a heating food. Milk was believed to provide energy and strength to mother, hence consumed at an amount of 150 ml by

Table 3: Foods[#] provided just before delivery

(n = 60)

Foods	No. of mothers	Amount	Reasons perceived by the respondents
Milk with <i>Ghee</i>	44	1 glass with 1-4 tsp ghee (150ml)	Speeds up labour
<i>Ajwain kada</i>	12	1 cup (50ml)	Ease in delivery
<i>Ghee</i>	11	½ <i>Katori</i> (50g)	Provide strength to body
Black tea	07	1 cup (50ml)	Speeds up labour
Coffee	06	1 cup (50ml)	Speeds up labour
<i>Jeera kada</i>	05	1 glass (150ml)	Speeds up labour
Honey	04	2-3 Tsp (30-45g)	Ease in delivery
Milk	02	1 glass (150ml)	Provide strength to body
<i>Atta ka halwa</i>	02	1 <i>Katori</i> (100g)	Heat producing food

Multiple responses possible

two mothers. Mulimani (1998) in Dharwad reported the consumption of milk with saffron clove *Kada*, *Jeera kada*, *Sounfkada* and boiled vermicelli water to enhance labour pain and give strength. Hutter (1994) reported consumption of *Jeera* water and sugar and concoction made of a fruit grown in the forest called *Gadjiga*. Astonishing reasons were quoted by the author. *Ghee* was also believed to be hot food. Hot tea was commonly drunk during the process of delivery. The butter and *Ghee* being fatty foods were believed to make the birth canal more slippery, so that the child will come out more easily.

Special foods consumed during lactation :

Special attention is given to the diet of mothers during lactation especially during first month of parturition. Diet of lactating mothers consists of traditionally prepared special food. It could be seen from Table 4 that majority of the respondents reported that *Atta ka halwa* (58) was given only upto second week. Consumption of ginger *Kada*, black tea and *Ajwain kada* were reported by only eight to six per cent of respondents upto first week of lactation. Milk with turmeric was preferred by 12

respondents for the first week which reduced to eight by the second week. Chicken soup was preferred by 13 respondents, only during second week. Consumption of *Dalia* (56), *Moong dhal khichadi* (36) and milk with honey (10) was slowly reduced from first week to third month.

Rice with *Ghee*, boiled dhal and normal diet were consumed by only four respondents during first week of lactation which increased to almost cent per cent by third month. Inclusion of foods like wheat chapatti (12), *Methi ladoo* (19), *Panjiri* (7), boiled egg (5), mutton *curry* (2) and mutton soup (4) were reported from second week which increased slowly by third month of lactation to 57, 51, 42, 8, 13 and 16, respectively. Buffalo milk and chicken *curry* was incorporated in the diet from first month onwards. In line with the present study Chawla *et al.* (1997) and Kawatra and Sehgal (1998) in northern India and Mulimani *et al.* (2001) in southern part of the country reported that lactating mothers consumed *Atta ka halwa* and wheat *Rabi* for the first 15 days after delivery as hot foods, to increase breast milk flow, to decrease pain and overcome weight losses. Joshi and Waghmare (2000)

Foods	1 st week	2 nd week	1 st month	2 nd month	3 rd month
Ginger <i>Kada</i>	05 (08.33)	-	-	-	-
Black tea	05 (08.33)	-	-	-	-
<i>Ajwain Kada</i>	04 (06.67)	-	-	-	-
<i>Atta ka halwa</i>	58 (96.67)	14 (23.33)	-	-	-
Milk with turmeric	12 (20.00)	08 (13.33)	-	-	-
Chicken soup	-	13 (21.67)	-	-	-
<i>Dalia</i>	56 (93.33)	31 (51.67)	02 (03.33)	-	-
<i>Moong dhal khichadi</i>	36 (60.00)	53 (88.33)	02 (03.33)	01 (01.67)	01 (01.67)
Milk with honey	10 (16.67)	02 (03.33)	01 (01.67)	-	-
Vegetable soup	-	08 (13.33)	01 (01.67)	-	-
Rice with ghee	04 (06.67)	19 (31.67)	52 (86.67)	56 (93.33)	56 (93.33)
Boiled <i>Dhal</i>	04 (06.67)	19 (31.67)	43 (71.67)	48 (80.00)	51 (85.00)
Normal diet	04 (06.67)	21 (35.00)	58 (96.67)	58 (96.67)	60 (100.00)
Wheat chapatti	-	12 (20.00)	43 (71.67)	56 (93.33)	57 (95.00)
<i>Methi ladoo</i>	-	19 (31.67)	49 (81.67)	51 (85.00)	51 (85.00)
<i>Panjiri</i>	-	07 (11.67)	42 (70.00)	42 (70.00)	42 (70.00)
Boiled egg	-	05 (08.33)	08 (13.33)	08 (13.33)	08 (13.33)
Mutton <i>curry</i>	-	02 (03.33)	09 (15.00)	12 (20.00)	13 (21.67)
Mutton soup	-	04 (06.67)	05 (08.33)	05 (08.33)	16 (26.67)
Coffee	05 (08.33)	-	03 (05.00)	16 (26.67)	21 (35.00)
Buffalo milk	-	-	08 (13.33)	20 (33.33)	20 (33.33)
Chicken <i>curry</i>	-	-	02 (03.33)	06 (10.00)	09 (15.00)

Multiple responses possible; Figures in parenthesis indicate percentages

observed similar pattern of diet among lactating mothers of Parbhani district. *Shira*, milk, *Ghee*, *Dhal* and fenugreek seeds were consumed during first ten days of delivery to improve milk secretion, to prevent inflammation of body and to get rid of back pain during lactation. Hence it can be concluded that despite of cultural and regional variations, the concept of giving special foods to the lactating mothers in the early part of lactation was the same and foods happened to be prepared with similar ingredients though the names were different. Consumption of traditional supplementary foods in the form of preparation such as *Methi ladoo*, *Badam halwa* and *Harira* for a period of three months helps in increasing milk secretion, regaining lost strength and regulates the blood losses. Shaikh (2011) in Dharwad reported consumption of semolina *Kheer*, *Alvi payasa*, *Panjiri ladoo*, *Gond hareera*, organ meat (goat head, liver and leg), *Badam hareera* and fish *Curry* among Muslim women due to the belief that it will provide strength to the mother, reduces the pain, increases blood and breast milk production. Kaur (2015) in Karnal reported consumption of *Panjiri* to restore energy, protein and strengthen the body, poppy seeds *Ladoo* to provide strength, *Til ladoo* to increase breast milk secretion as it is rich in calcium, *Sheera*, *Dalia* and *Atta ka halwa* to provide energy and repair the tissues.

Type of water used for drinking during lactation:

Consumption of water during lactation period plays an important role in maintaining the fluid balance of the lactating mothers. The data presented in Table 5 depicts interesting results with regard to consumption of water with birth of girl baby or a boy baby. Women consumed lesser quantity of water when the mother delivered a girl

baby (0.25 to 2.5L per day) compared to when it was a baby boy (0.5 to 4L per day). Generally either normal water (23.33 and 33.3%) or hot water (30.00 and 18.33%) was consumed with lesser per cent of them consuming luke warm water (18.33 and 35.00%), respectively with birth of girl or boy baby. Astonishingly 28.33 and 13.33 per cent of women did not consume water for drinking. To prevent dehydration, to quench thirst and to rehydrate the body were the reasons quoted for consumption of water and prevent blotting of stomach, dilution of breast milk were the reason were the reasons quoted for reduced consumption or no consumption of water. Joshi and Waghmare (2000) in Parbhani, Maharashtra reported avoidance of cold water by the lactating mother as it was considered acidic in nature, lead to cold and cough in the mother as well as infants.

Foods avoided during lactation:

Lactation is a stage wherein food habits are strictly observed. Certain foods are avoided owing to number of food fads and fallacies including heat producing, cold foods etc. The data on foods avoided by the lactating women is presented in Table 6.

Fast foods were avoided by almost all the mothers (57) for a period of six months due to the reason that, it causes gastric problems and burning sensation in the stomach. Garlic (46) was avoided for six months as it was considered as hot food, lead to allergy, constipation and nose bleeding. Majority of the respondents of Almora reported to avoid pumpkin (45) and onion (44) for a period of six or three months with a belief that they lead to allergic reactions in the mothers. Brinjal was avoided by most of the women (43) for a period of eight months as it was considered as cold and allergic food. Green chilies

Type of water	Girl baby			Boy baby		
	Number (%)	Quantity	Reasons perceived by the respondents	Number (%)	Quantity	Reasons perceived by the respondents
Normal water	14 (23.33)		To quench the thirst and to prevent dehydration of the body	20 (33.33)		To quench the thirst and to rehydrate the body
Luke warm water	11 (18.33)	0.25 to 2.5L per day		21 (35.00)	0.50 to 4.0L per day	
Hot water	18 (30.00)			11 (18.33)		
No plain water	17 (28.33)	-	To prevent dilution of breast milk	08 (13.33)	-	To prevent dilution of breast milk

Note- Plain water was not given directly to the mothers, beverages like fruit juice, tea, coffee, milk and milk shakes were provided.

(43) and pickle (30) were commonly avoided by women with a perception that it leads to acidity, allergy, eye and intestinal infection, loose motion and burning sensation in stomach of infant. Kaur *et al.* (2010) in Kurukshetra and Shaikh (2011) in Dharwad reported avoidance of chilies, tamarind, tea and pickle as these were believed to cause allergy, gastrointestinal disturbances in the mother, via breast milk, dysentery to the child. The pungent

component ‘capsaicin’ of fresh chilies probably was transferred to the child through breast milk and leads to stomach pain and diarrhea in the child. Capsicum, potato and sweet potato were considered as cold foods hence avoided by the study populations. Hutter (1994) reported avoidance of pumpkin, brinjal, lady’s finger and sweet potato by lactating women of Dharwad as they were said to be *Barshana* (heat producing) for both mother

Foods	No. of mothers	Duration of avoidance (mon)	Reasons
Fast foods	57	06	Causes gastric problems and burning sensation of stomach
Garlic	46	06	Causes allergy and nose bleeding
Pumpkin	45	06	Cold food, allergy and burning sensation of stomach
Onion	44	03	Causes heat, allergy, constipation and nose bleeding
Green chilies	43	12	Allergy, acidity, loose motion and eye infection
Brinjal	43	08	Cold food, causes allergy
Black gram	41	09	Causes flatulence
Pickle	30	12	Causes acidity
Peach	25	08	Lead to more hair growth on skin and allergy
Capsicum	25	03	Cold food, Flatulence and allergy
Potato	24	02	Cold food and acidity
Rajmah	22	09	Causes flatulence
Sweet potato	20	04	Cold food and flatulence
Papaya	16	04	Causes loose motion
Pea	15	06	Causes flatulence
Tea	15	03	Burning sensation, distorted and black lips
Fish	13	12	Blindness and allergic reactions
Spinach	13	06	Lead to kidney stone and loose motion
Tapioca	12	02	Cold food
Curds	12	06	Cold food
Mango	11	06	Causes prickles, allergy and pimples
Rice	10	02	Cold food and causes stomach pain
Radish leaves	09	05	Paleness of the skin
Mutton	07	08	Causes heat
Buffalo milk	07	02	Causes flatulence, acidity and obesity
Pineapple	06	06	Causes acidity and allergy
Banana	05	05	Lead to Constipation and diarrhea
Plum	05	08	More hair growth on skin, constipation and diarrhea
Coffee	05	03	Lips turn black
Fennel seeds	05	02	Cold food
Cauliflower	05	06	Cold food
Egg	05	08	Allergy, pimples and produces heat
Chicken	04	09	Causes heat
Tomato	04	03	Lead to kidney stone
Ragi	04	06	Lead to dysentery and constipation
Lentil	03	03	Lead to allergy and vomiting
Radish	03	06	Cold food and lead to acidity
Orange	03	03	Allergy and burning sensation
Lemon	02	03	Intestinal infection
Cow’s milk	02	01	Lead to allergy and constipation

and child and adverse reaction of the body, swellings in the body of the mother, specially in legs, hands and face and lead to jaundice. Megharaj and Chodhury (2002) in Udaipur city and Kaur *et al.* (2010) in Kurukshetra also documented the avoidance of potato, cauliflower, green leafy vegetables, brinjal and ladies finger as it may lead to indigestion, cold and itching of the body. Majority of the mothers (41) avoided black gram for a period of nine months, with the reason that it causes flatulence. Pulses like rajmah and pea were avoided by 22 and 15 mothers with a belief that it lead to flatulence till six months. Shaikh (2011) in Dharwad and Kaur (2015) in Karnal reported avoidance of whole pulses like green gram, peas, rajmah, Bengal gram and black gram with a reason that pulses lead to flatulence in child, body pain, heavy and difficult to digest. Most of the subjects (25) avoided peach till eight months due to the belief that it lead to more hair growth on skin of baby and allergy. Papaya (16), mango (11), pineapple (6), banana and plum (5 each) was avoided by the subjects for a period of four to eight months as it is believed to cause loose motion, prickles, acidity, constipation and diarrhea, respectively. None of the subjects found avoiding jackfruit and guava. Most of the mothers (13) from Almora avoided fish for one year due to the reason that it lead to blindness and allergic reactions to the baby followed by Mutton (7) and egg (5) for a period of eight months and considered as hot. Among milk and milk products 12 subjects considered curds as a cold food, hence avoided for six months. None of the subjects found avoiding tamarind, groundnut, ginger and fresh coconut. About 15 and five subjects from Almora avoided tea and coffee for three months due to the superstitious belief that it turns to black and distorted lips. Fennel seeds were considered as cold food and was avoided for a period of two months by very few Almorians (5).

LITERATURE CITED

- Chawla, S., Boora, P., Kapoor, A.C., Kaur, Y.P. and Kumar, V. (1997).** Food consumption pattern of pregnant and lactating mothers in rural Haryana. *Indian J. Nutr. Dietet.*, **34**(2): 40-42.
- Hutter, I. (1994).** Being pregnant in rural south India- Nutrition of women and well- being of children. Thesis Publishers Amsterdam, Netherland.
- Joshi, M. and Waghmare, S. (2000).** Dietary practices of lactating mothers residing in Parbhani district of Maharashtra. *Indian J. Nutr. Dietet.*, **39**(2): 132-137.
- Kaur, T.J. (2015).** Prevalence of food fad and fallacies regarding food intake among lactating mothers in district Karnal. *Internat. Multidisciplinary Res. J.*, **4**(10): 1-9.
- Kaur, T.J., Kochar, G.K. and Gupta, M. (2010).** Knowledge, attitude and practices towards food intake by lactating mothers in Kurukshetra district. *Indian J. Nutr. Dietet.*, **47**(12): 64-70.
- Kavitha, S.S., Sumayaa, S., Ravikumar, S. and Banu, T. A. (2013).** A study on nutritional status of rural lactating mothers (0-6 months) in Ramanathapuram district. *Internat. J. Pharm. Chem. Sci.*, **2**(4): 1723-1724.
- Kawatra, A. and Sehgal, S. (1998).** Nutrient intake of the lactating laborers of Hisar city. *Indian J. Nutr. Dietet.*, **35**(11): 294-300.
- Megharaj, M. and Choudhury, M. (2002).** Dietary practices and macro nutrient intake of women at varying periods of lactation. *Indian J. Nutr. Dietet.*, **39**(6): 277-287.
- Mulimani, G. (1998).** Sociocultural determinants influencing the diet during lactation—A qualitative study. M.H.Sc. Thesis, University of Agricultural Sciences, Dharwad , Karnataka, India.
- Mulimani, G., Sharada, G.S., Naik, R.K., Bharati, P. and Saroja, K. (2001).** Nutritional composition of traditional supplementary foods consumed by Gujarathi lactating mothers. *Indian J. Nutr. Dietet.*, **38**(6): 307-311.
- Sangalad, A. (2011).** Educational strategies to improve the nutritional status of pregnant women of Hubli rural and its outcome. M.H.Sc. Thesis, University of Agricultural Sciences, Dharwad, Karnataka, India.
- Shaikh, F.A. (2011).** Feeding practices and nutritional status of infants and nursing mothers of muslim community from rural and urban areas of Dharwad. M.H.Sc. Thesis, University of Agricultural Sciences, Dharwad, Karnataka, India.

Received : 09.07.2020; Revised : 19.08.2020; Accepted : 21.09.2020