

Research Article

A Study on Nutritional Status of Rural Lactating Mothers (0-6 Months) in Ramanathapuram District

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ABSTRACT

Lactating mothers have been widely recognized as a vulnerable group from health point of view. They need more healthy food than normal person, because secretion of milk, the quality and quantity of which depends upon maternal diet. A total of one fifty rural lactating mothers (0-6 months) were selected for the study. The samples were selected from each five rural areas selected for the study constituting to a total of 150 selected samples. Information regarding socio-economic background, general health status, food consumption pattern and nutritional assessment were collected, among the selected samples only five percent were illiterates rest were literates. All the 150 selected samples preferred allopathic type of medication for treating the discomforts, the clinical examination revealed that 41% of the sample had healthy appearance and rest 59% had unhealthy appearance majority (60%) had normal eyes, 30% had slight discolouration in their eyes, and 10% had severe discolouration. It might be due to the poor intake of diet deficient in vitamin A, protein, food and energy. The hemoglobin level in blood of majority of the samples was below normal. Based upon the analysis the study finally emphasizes that the lactating mothers are poorly nourished and their nutritional status is also very poor.

INTRODUCTION

Women is regarded as the nerve centre of the family and society maternal nutrition and health is consider as the most important regulator of human fetal growth (Giorgio Pardi et al, and ventura, 2008). Antenatal care throughout pregnancy is important in helping to ensure the health of the women and newborns. Women who see a health care provider regularly during pregnancy have healthier babies, are less likely to deliver prematurely and are less likely to have other serious problem related to pregnancy (Buckshee 1997). Nutrition during pregnancy also affects the lactation and breast feeding which were key elements in the health of infants and young children and a contributing factor in birth spacing. Nutritional needs of a lactation mother are higher that of a pregnant women, because secretion of milk. The calorie intake of lactating mothers was estimated to be 2250 kcal per day that is lower knowledge what the nutritional inadequate (Geissler et al, 1978)

Objectives

The study has the following objectives

- To study the socio-economic status of the selected samples
- To assess the health and nutritional status of the selected rural lactating mothers (0-6 months)
- To assess the health status of the selected infants

MATERIALS AND METHODS

The preset study was carrying out lactating mothers (0-6 months) belong to rural area of Ramanathapuram District of Tamilnadu. 150 lactating mothers (0-6 months) from five rural areas constitute the sample respondents. The Collection of data includes socio-economic survey, nutrient intake of the selected mothers, health status of the selected infants and anthropometric measurements. Information on mothers hemoglobin level was collected from their doctor's prescription. The study followed the (Sri lakshmi, 1993) normal hemoglobin level of women is between 12-15.5g/dl.

RESULTS AND DISCUSSIONS**(i) Socio-economic status****Table i: indicated the Background information of the selected Rural Lactating Mothers (0 -6 months)**

S.No	Particulars	No. of samples (N=150)	Percent
1.	Age		
	15-20 years	36	24
	21-25 years	79	53
	26-30 years	24	16
	Above 30 years	11	7
1.	Type of family		
	Nuclear family	96	64
	Joint family	54	36
2.	Family Size		
	1-3 Members	50	34
	4-7 Members	77	51
	Above 7 members	23	15
3.	Educational Qualification		
	Primary School	16	11
	High School	90	60
	Higher Secondary School	21	14
	Graduates	16	10
	Illiterates	7	5

The above table(ii) indicates that fifty three percent of the sample belonged to the group 21-25 years, twenty four percent of them belonged to the age group between 15-20 Sixteen percent and seven percent of them were in the age group between 26-30 years and above 30 years respectively.

The table (i) also represents that thirty four percent of the families had 4-7 members. Fifty one percent of the families had 1-3 members and remaining fifteen percent of the families had above 7 members.

Table (i) also indicates that eleven percent of them studied up primary school level, sixty percent of them studied up to high school level, fourteen percent of them studied up to higher secondary level, ten percent of them studied up to college level and five percent of them were illiterates.

Rajika Bhandari and Smith (2000), found that the education level of the male and female heads of the house hold had a differential impact on the food consumption patterns.

(ii) Health Status of the selected samples**1. Personnal details of the selected rural lactating mothers****Table ii: The health status of the lactating mothers**

S.No	Particulars	No. of samples	Percentage
1.	Height (cm)		
	Below 140	12	8
	140-150	65	43
	151-160	46	31
	151-160	28	18
2.	Weight (kg)		
	Below 40	2	1
	40-50	51	34
	50-60	72	48
	60-70	24	16
	above 70	1	1
3.	Order of pregnancy		
	I child	68	45
	II child	45	30
	III child	19	13
	IV child	12	8
	v child	6	4
4.	Type of Delivery		
	Normal	34	23

5.	Caesarian	36	24
	Forceps (hard labor)	80	53
	Type of treatment		
	Allopathic	150	100
	Siddha and Ayurvedic	-	-
Diet	-	-	
Other treatment	-	-	

Table (ii) depicts the forty three percent of the selected samples were found to be in the range between 140-150cm, thirty one percent of the samples were found to be in range between 151-160cm, eighteen percent of the samples were found to be in the range of above 160cm and eight percent of the samples were found to be in the range below 140cm. Table (ii) shows that, forty eight percent of the selected samples weight ranged between 50-60 kg, thirty four percent of the selected samples weight ranged between 40-50 kg, sixteen percent of the selected samples weight ranged between 60-70kg, one percent of the selected samples weight was below 40

kg and above 70 kg. From table (ii) forty five percent of the samples had one child, thirty percent of the samples had two children, thirteen percent of the samples had three children, eight percent of the samples had four children and four percent of the samples had five children. Table (ii) shows that, fifty three percent of the samples had hard labor, they delivered their children only with the help of forceps. Twenty three percent of the samples experience normal delivery. Table (ii) represents, all the selected one fifty samples preferred allopathy form of medicine for treating any ailments.

2. Iron tablet and Tonic Consumption during the pregnancy

Table iii: Iron tablet and Tonic Consumption

S.No	Particulars	No. of samples (N=150)	Percent
1.	Regular Consumption	112	75
2.	Irregular	38	25
	Total	150	100

Table (iii) shows that, among the 150 selected samples, Seventy five percent of the samples consumed iron tablet and tonic regularly to combat iron deficiency that they suffered during their pregnancy, the medicines were consumed as prescribed by the physician. An adequate iron intake is essential for the hormonal function of the immune system. Iron deficiency affects humoral and cellular immunity. (Beard et al, 1993)

3. Nutritional Assessment of the selected samples

The selected lactating mother's (0-6 months) the Nutritional Status was assessed by anthropometry, diet survey and clinical

assessment of all the selected samples and bio clinical assessment of the selected 50 sub samples.

4. Nutrient intake of the respondents

Table (iv) indicated that the average intake of different nutrients in comparison to the recommended dietary allowance RDA in the intake of nutrients derived from the diet that keeps nearly all people in good health.

It takes in to account the individual variation in nutrient needs and also availability of nutrients, while may vary from diet to diet (Gopalan, et al. 2002). As per RDA the energy consumption should have been 2425 kcal/dl.

Table iv: Average nutrient intake by the lactating mothers and comparison with RDA

Nutrients	RDA	Mean per day consumption	percent of RDA	Nutrient Adequacy Ratio(NAR)
Energy(kcal)	2425	1628.55	67.14	Marginally Inadequacy
Protein(g)	75	43.73	58.30	"
Fat(g)	45	28	62.2	"
Calcium(mg)	1000	609.3	60.93	"
Iron(mg)	30	18.045	60.15	"
B-carotene(mg)	3800	915.5	24	Inadequacy
Thiamine(mg)	1.2	0.8	6.62	Marginally Inadequacy
Riboflavin(mg)	1.4	1.07	76.42	"
Niacin (mg)	16	10.93	68.31	"
Vitamin-C(mg)	80	50.4	63	Inadequacy
Folic acid (mg)	150	41.87	27.9	

Adequacy of various nutrients is depicted in table IV. Which shows that intake of all the nutrients was found to be lower than the recommended dietary allowances (RDA). Mean consumption of energy was 1628 kcal per day which was 67.14 percent of the RDA. Protein consumption was only 58.30% of RDA, fat consumption was 62.2% of RDA mean consumption of calcium and Iron was 609.3(mg) and 18.045mg, which was 60.93 and 60.13 percent of RDA respectively. In case of water soluble vitamins mean intake were 0.8(mg), 1.07(mg), 10.931(mg) and 60.4(mg) for thiamine, riboflavin, Niacin and vitamin-c respectively. Which were 66.6, 72.42, 68.31 and 63 percent of RDA. B-

carotene and folic acid intake was found to be 27.9, 24 percent of RDA having a mean intake of 41.87(mg) and 915.5mg.

It also found that the major nutrients like Energy, Protein, fat, calcium, Iron, Thiamin, Riboflavin, Niacin and vitamin C intake were marginally inadequate. B-carotene and folic acid nutrient intake were inadequate when compared with the percentage of Nutrients Adequacy Ratio ().

The major risk factors include genetic susceptibility obesity physical inactivity and western life style including change in dietary pattern involving both the total quantity and altered quality of food intake as well as life stress (kahn, 1997).

5. Hemoglobin level of the selected sub samples

Table v: Hemoglobin level of the selected sub samples

S.No	Particulars	No. of samples (N=150)	Percent
1.	Below 9	5	10
2.	9-10	8	16
3.	10-11	10	20
4.	11-12	12	24
5.	Above 12	15	30
	Total	50	100

It can be noted from the table(v) thirty percent of the samples had the hemoglobin level above 12g/dl, twenty four percent of the samples had the hemoglobin level 11-12 g/dl, where as twenty percent of the samples had

the hemoglobin level 10-11g/dl, sixteen percent of the samples had hemoglobin level 9- 10 g/dl, remaining ten percent of the samples had hemoglobin level below 9g/dl.

(III) Health status of the selected infants

1. Age of the selected infants

Table vi: Age of the selected infants

S.No	Particulars	No. of samples (N=150)	Percent
1.	0-1 month babies	29	19
2.	1-2	28	19
3.	2-3	27	17
4.	3-4	24	16
5.	4-5	22	15
6.	5-6	20	14

	Total	150	100
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2. Table vii: Birth weight of the selected infants

S.No	Birth weight(kg)	No. of samples (N=150)	Percent
1.	Below 2.5	15	10
2.	2.5 – 3	46	31
3.	3.1 – 4	60	39
4.	3.6 -4	27	19
5.	Above 4	2	1
	Total	150	100

3. Table viii: Birth height of the selected infants

S.No	Particulars	No. of samples (N=150)	Percent
1.	0-1 month babies	29	19
2.	1-2	28	19
3.	2-3	27	17
4.	3-4	24	16
5.	4-5	22	15
6.	5-6	20	14
	Total	150	100

4. Details on Lactation Pattern, and weaning practices of the selected infants**Table ix: Lactation Pattern and weaning practices of the selected infants**

S.No	Particulars	No. of samples (N=150)	Percent
1.	Type of feeding		
	Breast feeding (only)	93	62
	Bottle feeding (only)	7	7
	Breast feeding and Bottle feeding	50	32
2.	Frequency of breast feeding per day		
	3 times	-	-
	4 times	-	-
	Above 4 times	150	100
3.	Additional feeding		
	Yes (Bottle feeding)	57	38
	No	93	62
4.	Type of bottle feeding		
	Amulspray	3	2
	Lactogen	54	36
	Breast feeding only	93	62
5.	Type of weaning food		
	Cerelac	52	34
	Mashed Dhal	15	10
	Biscuits	46	30
	Idly	12	8
	Breast feeding only	25	18

Table (viii) indicates that Sixty two percent of the samples gave only breast feeding, thirty two percent of the samples gave breast feeding and bottle feeding, seven percent of the samples gave only bottle feeding. Data from the National family Health Survey(1994) indicated that breast feeding is nearly universal with over 98 percent of infants being breast feeding. Table (viii) indicates that hundred percent of the selected samples breast fed their babies more than four times per day. From the Table (viii) sixty two percent of the samples did not give additional feeding to their baby, thirty eight percent of the

samples provide additional feeding to the baby. out of sixty two percent thirty six percent of the samples gave lactogen and two percent gave amulspray. The mothers believed that giving additional commercial formulas will increase their babies weight. From Table (viii) shows that thirty four percent of the samples introduced cerelac as weaning food, thirty percent of the samples introduced biscuits as weaning food, ten percent of the samples introduced mashed dhal as weaning foods, eighteen percent of the samples gave breast feeding only.

5. Common illness of the selected Infants

Table x: Common illness of the selected Infants

S.No	Particulars	No. of samples (N=150)	Percent
1.	Common cold	22	15
2.	Vomiting	13	9
3.	Fever	12	8
4.	Diarrhea	3	2
5.	Healthy babies	100	66
	Total	150	100

Table (ix) shows that, among the selected one fifty samples fifteen percent of the samples infants suffered from common cold, nine percent suffered from vomiting, eight percent suffered from fever, two percent suffered from diarrhea.

CONCLUSION

The results of the present study reveals that nearly seventy five percent of the selected lactating mothers (0-6 months) are poorly nourished and their nutritional status is also poor. the nutrient intake was deficit for the essential nutrients like calorie, energy , B-carotene and folic acid majority of them. Half of them had low hemoglobin level.the importance of healthy dietary practice for successful maternal cycle and inturn healthy offspring for nation's future economic development.

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