

Nutritional aspects in lactation

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Abstract

The present study was conducted to determine the consciousness of lactating women (0-6 months) towards betterment of their health. Fifty lactating women participated in this study. The demographic profile indicated predominance of lactating women to be in the age group of 22-32 years, belonging to nuclear family and house owned by her husband. The 24 hour recall showed a better consumption pattern of pulses and milk or milk products in the diet. Physical activity was also adopted by lactating women for the betterment of their health. Consciousness among lactating women for the betterment of their health was assessed through a questionnaire. On analysis, it was concluded that they were little conscious about their health. They were consuming diet rich in fat but low in carbohydrates and proteins.

Keywords:

Introduction

Breast milk is produced by mammary glands located in the breast tissue. These glands are present from birth, but become fully functional for milk production only during pregnancy. Several hormones regulate the development of the mammary glands as well as the initiation and maintenance of lactation. The most important of these hormones are prolactin and oxytocin, both of which are produced in the pituitary gland in the brain. Prolactin, together with other hormones (e. g., estrogens and progesterone), regulates the final development of the mammary glands during pregnancy. After birth, the woman hormonal environment changes, and in this setting prolactin can initiate milk secretion from the mammary glands. During pregnancy, hormonal action prepares the female mammary glands to produce milk, which will continue to be produced in the postpartum period in response to the infant suckling at the breast (Lawrence & Lawrence 2005). Interventions aimed at increasing

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breastfeeding rates do not have to be expensive and complicated to be successful, and a successful program can have a substantial impact on the health of mother and their children (Sheila & Timothy 2000). Breastfeeding enhances mother and baby emotional attachment and contributes to optimal short and long term health outcomes for both. Statistically a baby who is not breastfeeding has more health care needs than its breastfed counterparts (Riordan 1997). Energy or calorie needs during lactation are based upon the women's basal metabolic rate, age, activity, how much breast milk is being produced, and other factor. While calorie are needed for milk production, the mother does not need to eat substantially more than she did in her pre-pregnancy state to sustain milk production (Riordan 2005). Nutrient are mobilized from maternal stores to produce breast milk and the lactating women is vulnerable to depletion of her nutrient stores. She should be encouraged to consume foods high in calcium, Vitamin A, B1 (thiamine), B2 (riboflavin), Vitamin B6, B12, folate and iodine to minimize losses and to maintain her health and wellbeing (Institute of Medicine, 1990). Obese mothers are more likely to have delayed lactogenesis and reduced lactation. Therefore, weight control and breastfeeding promotion should be reinforced before and during pregnancy. In overweight and obese mothers, breastfeeding should be closely monitored after birth (Lepe 1998).

The aim of study was to assess the nutritional status, factors contributing for it and determine common practices followed by the lactating women (0-6 months) for the betterment of their health and nutritional status.

Material and Methods

This study was conducted on 50 lactating women (0-6 months) randomly selected for assessing the common practices followed by lactating women for betterment of their health or nutritional status. The standardized pretested questionnaire consisting of closed-ended questions regarding frequency of intake of junk food, skipping meals, consumption of carbonated drinks, balanced diet and general awareness about health concern was developed and the data was recorded from selected subjects. Lactating women were examined for

anthropometric measurement, biochemical parameters, clinical analysis and dietary pattern using 24 hours recall scale. The questionnaire covered demographic characteristics of the subjects. These are namely age, occupation and marital status, economic status, medications used, clinical assessment of eyes, hair, nails, teeth, skin were observed and recorded. Further, the number of symptoms experienced by each individual was compiled and percentage was calculated, involvement in drinking, smoking, restrictions in daily activities due to health problems, information regarding social life, habitual exercise etc. Anthropometric parameters included recording of weight and height. The information was further used for determination of body mass index (BMI). The haemoglobin level in the blood was measured by cynomethaemoglobin method. Clinical assessment is the oldest method and is widely used in all nutritional survey. In clinical investigation changes in the superficial tissues, especially the skin, eyes, gums, hair, nail and buccal mucosa were seen. Dietary survey was done by 24 hour recall technique in which respondent was asked to name approximate amounts the foods eaten during the previous day at each meal and between meals.

Results

Present study was conducted to find out the consciousness among lactating women (0-6 months) for the betterment of their health.

Table 1-Religion of lactating women

Religion	Subject no.	Percentage
Hindu	42	84%
Muslim	3	6%
Sikh	3	6%
Christian	2	4%

Out of 50 samples 84% were Hindu, 6% were Muslim, 6% were Sikh and 4% were Christian.

Table 2-Eating habits of lactating women

Eating habit	Subjects no.	Percentage
Vegetarian	37	74%
Non vegetarian	7	14%
Ova vegetarian	6	12%

Out of 50 samples 74% were Vegetarian, 14% were Non vegetarian and 12% were ova vegetarian.

Table 3-Educational status of lactating women

Qualification	Subject	Percentage
Post graduate	8	16%
Graduate	6	12%
12 th Pass	29	58%
10 th Pass	7	14%

Out of 50 samples 16% lactating women were post graduate, 12% were graduate, 58% were 12th pass and 14% were 10th pass.

Table 4- Type of family of lactating women

Type of family	Subjects no.	Percentage
Joint	17	34%
Nuclear	33	66%

Out of 50 samples 34% lactating women were belong from joint family and 66% of lactating women were belong from nuclear family. 18% of lactating women were having Rs. 30,000-40,000 income per month, 20% were have Rs. 40,000-50,000 income per month, 28% were have Rs. 50,000-60,000 income per month, 16% were have Rs. 60,000-70,000 income per month and 18% were have above Rs. 70,000 income per month. Out of 50 samples 42%

lactating women were house owned by her husband, 26% were have government quarters and 32% were on rent.

Table 5-Weight of lactating women

Weight	Subject no.	Percentage
50-55kg	7	14%
55-60kg	15	30%
60-65kg	21	42%
65-70kg	7	14%

Out of 50 samples 14% lactating women were have 50-55kg of weight, 30% were have 55-60kg weight, 42% were have 60-65kg weight and 14% were have 65-70kg weight. 84% lactating women were have height between 5'5"-5'5" and remaining 16% were have height between 5'5"-6'. 12% of lactating women were underweight i.e. BMI <18.5kg/m², 28% were have normal BMI i.e. 18.5kg/m²-22.5kg/m², 44% were little overweight i.e. BMI between 22.5kg/m²-25kg/m² and 16% were obese i.e. BMI >23kg/m².

Table 6-Haemoglobin level of lactating women

Hb level	Subject no.	Percentage
8-9g/dl	6	12%
9-10g/dl	14	28%
10-11g/dl	22	44%
11-12g/dl	8	16%

Out of 50 samples 12% had haemoglobin level of 8-9g/dl, 28% had 9-10g/dl level, 44% had 10-11g/dl level and 16% had 11-12g/dl level. Only 14% were following special diet and 86% were not. 84% were breastfeeding in every 2 hours, whereas 16% in every 3 hour.

Table 7-Meals taken in a day

No. Of meals	Subject no.	Percentage
2 Meals	2	4%
3 Meals	6	12%
4 Meals	34	68%
5 Meals	6	12%
6 or more Meals	4	8%

Out of 50 samples 4% were taking 2 meals, 12% were taking 3 meals, 68% were taking 4 meals, 12% were taking 5 meals and 8% were taking 6 or more meals in a day. 88% lactating women were skipping meals and 12% were not. 50% women skipped breakfast, 18% were skipping lunch and 20% were skipping dinner. 74% skipped meals because of lack of time, 18% skipped meals because meal was not tasty and 8% skipped meals because meal was not of their choice.

Table 8- Consumption of Milk, Fruits, and Balanced Diet

Category	Milk	Fruits	Balanced Diet	Extra Physical Activity
Yes	88%	86%	80%	40%
No	12%	14%	20%	60%

Out of 50 samples 86% of lactating women consumed fruits daily and 88% consumed milk daily. 38% lactating women consumed green leafy vegetable daily while 62% were not consuming green leafy vegetable daily. 92% lactating women were consume salad daily, while 4 i.e. 8% were not consume salad daily. 80% lactating women were aware regarding well-balanced diet whereas 20% were not. 40% of lactating women did extra physical activity for the betterment of their health and 60% didn't.

Table 9-Dietary recall of lactating women (0-6 months)

Nutrient	RDA	Intake
Energy(kcal)	2425 kcal	1986.8 kcal
Protein(g)	75 g	56g
Fat(g)	45 g	46.7g
Carbohydrate(g)	404.16g	347.3g

The average calorie intake of lactating women was 1986.8 kcal which was below the RDA i.e. 2425 kcal because they were not consuming proper food. The intake of carbohydrates among the lactating women was little less the amount required whereas the protein intake of the lactating women was very less. The intake of fats was slightly high due to myth of increased requirement of same for speedy recovery in post-partum period.

Summary and conclusion

It was concluded that majority of lactating women were married and belonged to Hindu religion. Most lactating women were 12th pass, belonged to nuclear family, with mixed income group, and in overweight category. Most of the lactating women were anaemic, were not following any special diet and skipping their meals. Majority were consuming milk, fruit in their daily life which helped in fulfillment of nutrient requirement during lactation. Most of the lactating women were conscious about their health so that they did many kind of physical activity according to their ease. It was concluded that the nutrient intake of lactating women was not fulfilled according to recommended dietary allowance because they were not taking proper food. The intake of Calorie, protein and carbohydrate was low as per the required daily allowance.

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