

# Impact of Nutritional Milk for Lactating Mothers upon Efficiency of Breast Feeding for Iraqi Mothers at Maternity Hospital in Baghdad City

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## Abstract

Objective: This study conducted to find out: The impact of nutritional milk for lactating mothers upon efficiency of breast feeding 2.The impact of nutritional milk for lactating mothers upon the number of breastfeeding 3.The impact of nutritional milk for lactating mothers upon t babies' weight. This study conducted at AL-Elwaya Maternity Hospital in Baghdad City. The study started in January 2019 to march 2019. The study sample included (100) lactating mothers that feed their newborns by breast feeding only despite of the method of delivery (normal vaginal delivery & caesarian section) this sample divided in two groups the first one is the( study group) consist of (50) lactating mothers that consumption nutritional milk for three weeks and the other (control group ) consist of (50) lactating mothers that not consumption nutritional milk and then comparison between the two groups to detecting the impact of nutritional milk on the efficiency of breast feeding . results showed that the nutritional milk have impact upon the efficiency of breast feeding for the lactating mothers who were consumption the nutritional milk for at least three weeks and have impact upon their babies' weight and growth.

**Keywords:** Nutritional milk, Lactating mothers, Breast feeding, Maternity hospital.

## Introduction

Most studies regarding the lactation have focused on the quality and quantity of breastfeeding or on the benefits of the breast milk on infants. Far fewer studies have targeted the effects of lactation on short- or long-term maternal health. The breastfed infant doubles its weight in the first 4 to 6 months after birth and has additional energy demands beyond the gains in energy stores associated with growth. The metabolic adjustments that redirect nutrient use from maternal needs to milk synthesis and secretion involve nearly every maternal organ system<sup>1</sup>. Breast feeding results in a number of physiological adaptations which exert direct effects on maternal health. Nutrient needs during lactation depend primarily on the amount and composition of milk produced and on the mother's initial nutrient needs and nutritional status. Among women exclusively breastfeeding their infants, the energy demands of lactation exceed pre-pregnancy demands by approximately 640 kcal/day during the first 6 months postpartum compared with 300kcal/day during the last two trimesters of pregnancy (NRC,

1989). In contrast, the demand for some nutrients, such as iron, is considerably less during lactation than during pregnancy<sup>2</sup>. Breast milk is the best food for newborns and infants. The nutritional stores of a lactating woman may be more or less depleted as a result of the pregnancy and the loss of blood during childbirth. Lactation raises nutrient needs, mainly because of the loss of nutrients, first through colostrum and then through breast milk. Breast milk volume varies widely. The nutrients present in this milk come from the diet of the mother or from her nutrient reserves. The conversion of nutrients in food to nutrients in breast milk is not complete. To have good nutritional status the breastfeeding woman has to increase nutrient intake. Human breast milk has a fairly constant composition, and is only selectively affected by the diet of the mother. The fat content of breast milk varies somewhat. The carbohydrate, protein, fat, calcium and iron contents do not change much, even if the mother is short of these in her diet<sup>3</sup>.

### Methodology

Experimental design was carried out throughout the present study with the application of a pre-test and post-test for the study group. The study was conducted at AL-ALwaya Maternity Hospital which is located at the center of Baghdad city, in Al-Rasafa sector. Non-probability (purposive sample), the study sample consists of (50) lactating mothers who were selected from Hospital, the study group was consumption nutritional milk for at least three weeks , nutritional milky that used in this study was ( naktalia mama) is drink specifically formulated to meet the needs of mothers wishing to get pregnant, and those who are already pregnant or breastfeeding that supported with vitamins and essential minerals such as ( calcium carbonate , potassium phosphate, magnesium carbonate, ferrous lactate , zinc sulphate , manages sulphate , cupper sulphate , sodium selenite, potassium iodide, Fer/iron )Fish oil, soya lecithin,

antioxidant, fructose , oligofructose Vitamins (C,E, PP, D3,B8,B5,A, B6, K1, B9,B1) and the control group consist of (50) lactating mothers who were do not consumption the nutritional milk ; the criteria of this sample was lactating mothers in reproductive age, with different educational levels, who were feeding their babies with breastfeeding only. Data for such assessment was collected from the maternity hospital through the presence of the researcher in maternity hospital and her contact with lactating mother during one month period from 12 January 2019 through 12 marches 2019.the criteria of this sample were Lactating mothers, Feeding their baby with breast feeding only and they delivered with normal vaginal delivery or C/S. The exclusion criteria Mothers who were feeding their baby by mixed or bottle feeding and Lactating mothers who were not persisting in consumption the nutritional milk for at least 3 weeks.

### Results and Discussion

**Table (1) Distributions of Mothers’ Reproductive History**

List	Items f	Study Group (N=50)		Control Group (N=50)		
		%	f	%		
1	Number of Para (Birth)	Primipara	16	32	16	32
		2 – 4	25	50	17	34
		5 ≤	9	18	17	34
2	Number of Gravida (pregnancy)	Primipara	17	34	16	32
		2 – 4	28	56	22	44
		5 ≤	5	10	12	24
3	Number of Abortion	None	30	60	41	82
		1 – 4	19	38	9	18
		5 ≤	1	2	0	0
4	Type of Delivery	Normal	19	38	20	40
		Cesarean section	31	62	30	60
5	Gestational Age	1 – 12 weeks	0	0	0	0
		13 – 26 weeks	0	0	0	0
		27 – 40 weeks	50	100	50	100

f: Frequency, %: Percentage

**Table (2) Distributions of Mothers' Previous Medical History**

List	Items f	Study Group (N=50)		Control Group (N=50)		
		%	f	%	f	
1	Body Mass Index	Underweight	0	0	1	2
		Normal weight	25	50	26	52
		Overweight	18	36	20	40
		Obese	7	14	3	6
2	Diabetes Mellitus	Yes	1	2	2	4
		No	49	98	48	96
3	Anemia	Yes	20	40	25	50
		No	30	60	25	50
4	Chronic Medication use	Yes	1	2	3	6
		No	49	98	47	94
5	Amount of Enough Breast Milk	Yes	22	44	28	56
		No	28	56	22	44
6	Taking Herbals Supplement to Increase Milk Production	Yes	8	16	14	28
		No	42	84	36	72
7	Allergy toward Foods	Yes	2	4	5	10
		No	48	96	45	90
8	Eating more than Three Meals per Day	Yes	23	46	30	60
		No	27	54	20	40
9	Taking Supplemental Vitamins during Lactation	Yes	11	22	26	52
		No	39	78	24	48
10	Difficulty in breast feeding	Yes	14	28	13	26
		No	36	72	37	74
11	Type of Mother' Nipple	Normal	25	50	25	50
		Protruded	15	30	14	28
		Extruded	10	20	11	22

f: Frequency, %: Percentage

**Table (3) Distribution of Babies' Demographic Characteristics**

List	Characteristics		Study Group (N=50)		Control Group (N=50)	
			%	f	%	f
1	Age	Newborn	49	98	50	100
		Infant	1	2	0	0
2	Weight at Delivery	< 250 gram	9	18	16	32
		250 – 300 gram	32	64	22	44
		300 < gram	9	18	12	100
3	Height	< 50 cm	3	6	0	0
		50 cm	46	92	50	100
		50 < cm	1	2	0	0
4	Type of Feeding for Previous Baby	Breast feeding	42	84	31	62
		Bottle feeding	5	10	5	10
		Mixed	3	6	14	28
5	Type of Feeding for Current Baby	Breast feeding	50	100	50	100
		Bottle feeding	0	0	0	0
		Mixed	0	0	0	0

f: Frequency, %: Percentage, cm: Centimeter

**Table (4) Breast Feeding Efficiency (before and after) Consumption of Nutritional Milk**

List	Items	Study Group (N=50)				Control Group (N=50)				
		Pre-test		Post-test		Pre-test		Post-test		
		f	%	f	%	f	%	f	%	
1	Number of Feeding/Day	< 6	28	56	1	2	40	80	10	20
		6	22	44	25	50	8	16	21	42
		6 <	0	0	24	48	2	4	19	38
2	Number of Defecation / Day	< 3	32	64	0	0	39	78	7	14
		3	18	36	22	44	11	22	26	52
		3 <	0	0	28	56	0	0	17	34
3	Number of Urination / Day	< 6	30	60	50	100	43	86	7	14
		6	19	38	0	0	7	14	26	52
		6 <	1	2	0	0	0	0	17	34
4	Observing Signs of Growth	Yes	50	100	50	100	0	0	50	100
		No	0	0	0	0	50	100	0	0

f: Frequency, %: Percentage

The highest percentage among study group is present a mothers with age group of 30-39 years old (36%), while 60% among the control group are mothers with age group of 20-29 years old. Regarding occupation,

most of mothers in both group; study and control are housewife (98% and 94%); and also fathers are free job in both group (study=74% and control= 60%). The socio-economic status indicates a moderate among the subjects

in the study group (68%) and in the control group (64%). 82% of mothers in both groups; the study and control are living in urban areas. Previous studies have found that factors such as socioeconomic and employment status, maternal and child characteristics, maternal/family intention and health care management contributed to breastfeeding initiation and/or duration. Among those factors, the effect of maternal age on breastfeeding practice is one of the most interesting research targets. This is because in the past 20 years, increasing maternal age at first childbirth in most developed countries has been observed (4,5,6). The present findings that both older maternal age of  $\geq 35$  and primipara were negative factors of success of EBF initiation (7,8). The findings reveal that half of mothers in the study group are got 2-4 pregnancy (50%), the mothers in the control group are having pregnancy 2-4 and more than 5 (34%). 56% of mothers in the study group and 44% in the control group are associated with 2-4 gravida. Regarding number of abortion, the highest percentages are showing no previous abortion (study=60% and control=82%), but 38% in the study group and 18% in the control group showing they have 1-4 abortion. More than half of mothers are confirmed they have cesarean section as type of delivery (study=62% and control= 60%). Most of mothers in both groups; the study and control showing that their gestational age were 27-40 weeks (100%). In previous study, 20–30% of mothers who did not initiate EBF at the time of discharge eventually turned out to have successful initiation at one month. Dewey et al. (2003) indicated that lactation difficulties during the first week postpartum are not uncommon, even among women who are highly motivated to breastfeed exclusively and receive good lactation guidance; and that early lactation success is strongly influenced by parity, but may also be affected by potentially modifiable factors such as labor medications; therefore, all breastfeeding mother-infant pairs should be evaluated at 72 to 96 hours' postpartum (9,10). 84% of mothers in the study group and 72% in the control group are not taking a herbal supplements for increasing their milk and the remaining were used. Most of mothers in both groups have negative history of allergy toward foods (study= 96% and control= 90%). 54% of mothers in the study group are eating less than three meals per day while more than half of mothers in the control group are eating more than three meals per day (60%). Those mothers in the study group reveal that they not take vitamins supplements (78%) and only 22% taking vitamins; the mothers in the control group taking those vitamins (52%). More than two third of mothers

in the study group and control group are showing a difficulties in breast feeding (72% and 74%). Half of sample in both groups showing that they have normal nipple (50%); and the remaining show a protruded nipple (30% and 28%). Maternal diabetes was a strong predictor of diabetes in children. Maternal preeclampsia was associated with increased risk for early and later onset of diabetes. <sup>11</sup> The World Health Organization recommends early initiation of breastfeeding (within the first hour after birth) and exclusive breastfeeding (no water, other fluids or foods) for 6 months <sup>12</sup>. Breastfeeding reduces their risk of type 2 diabetes. This could be due to improving glucose hormones <sup>13</sup> Reduces their risk of developing hypertension and cardiovascular diseases (14,15) Helps them to lose weight, especially while their infants are being exclusively breastfed <sup>16</sup>.

## Conclusion

The study showed that the nutritional milk have impact upon efficiency of breastfeeding. The study showed that nutritional milk have impact upon the number of breastfeeding. The study showed that the babies' weight of lactating mothers who were consumption nutritional milk have increasing in their weight

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**Conflict of Interest:** None to declare.

**Ethical Clearance:** All experimental protocols were approved under the College of Nursing, University of Baghdad and all experiments were carried out in accordance with approved guidelines.

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