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DURATION AND CAUSES OF CESSATION OF BREAST FEEDING IN WORKING MOTHERS IN GHAZVIN, IRAN

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ABSTRACT

Questionnaires were filled out during Summer 1988 from 259 working mothers who terminated breast feeding, and at least had a living child aged three years or younger. The purpose of the study was to determine the duration and the reasons of termination of breast feeding in these working women.

An inverse correlation was found between the duration of breast feeding and the following parameters: The introduction of breast feeding for the first time after birth ($p<.05$) and the mother's ages at the first marriage, pregnancy and delivery, and also her age at last delivery ($p<.0001$, $p<.002$, $p<.003$ and $p<.006$ respectively).

A positive correlation also was found between the duration of breast feeding and the age of introduction of supplementary feeding. The difference between the mean duration of breast feeding and the kind of first food given after birth was statistically significant ($p<.02$).

Insufficient milk and work outside the home were the most common causes of termination of breast feeding among these working mothers.

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INTRODUCTION

Major changes have occurred in the past years in the way women feed their babies. The incidence and duration of breast feeding began to decline, a trend that was only reversed in better educated women in the developing countries in recent years.[1,2]

Prolonged breast feeding may protect normal development and functioning of the brain,[3] decrease the incidence of respiratory infections[4], and lower mortality rates.

Factors that may relate to duration of breast feeding have been investigated. Education, mother's age and also work outside the home, the late introduction of breast feeding after birth, and the early introduction of supplements are important factors that might affect the duration of breast feeding.[1,5,6]

Therefore, the purpose of this study was to determine the duration and the reasons for termination of breast feeding in working mothers in Ghazvin city with a population of 337, 016, located about 170 km. from Tehran.

MATERIALS AND METHODS

The study population consisted of 259 working mothers (paramedical and non-medical personnel*) who terminated breast feeding and at least had a living

*Paramedical personnel includes these women who worked in the medical, nursing or midwifery schools, hospitals or health centers.

Non- medical personnel include school teachers or employees of an educational organization.

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Table I. Correlation between the mean duration of breast feeding (B.F.) and the time of the first introduction of breast milk (B.M.) after birth

	No.	X	S.D.	r	p
Duration of B.F. (mo)	259	9.88	7.62		
Introduction of B.M. after birth (hr)	259	27.49	23.36	−0.1	<0.05

Table II. Mean duration of breast feeding (B.F.) and the first kind of liquid given after birth

First Kind of liquid given after birth. / Duration of B.F. (mo)	No.	X	S.D.	p (ttest)
Breast milk	11	14.82	6.06	<0.02
Sugar+Water	248	9.66	7.61	

Table III. Correlation between the mean duration of breast feeding (B.F.) and the age of introduction of supplement

	No.	X	S.D.	r	p
Duration of B.F. (mo)	259	9.88	7.62		
Age of introduction of supple (mo)	259	3.11	1.79	0.57	<0.0001

Table IV. Frequency distribution of mothers by education and the duration of breast feeding (BF)

Mother's education	Dura							
	0–6		7–12		12+		Total	
	No	%	No	%	No	%	No	%
Less than 12 years	11	27.5	16	40.0	13	32.5	40	100.0
12-14 years	88	45.4	52	26.8	54	27.8	194	100.0
B.S. degree or more	9	36.0	7	28.0	9	36.0	25	100.0

child aged three years or younger. Therefore, the questions were asked only from women whose last living child was 0-36 months.

About 1% of the population under study were either absent at the time of data collection, or were not cooperative.

The questionnaires which included the following information were filled out during the Summer of 1988: education of the mother, the age of the mother at first marriage, pregnancy and delivery, and also her age at last delively, the initiation of breast feeding, the first kind of food (liquid or solid) given after birth, the age of

Table V. Correlation between the duration of breast feeding (BF) and mean mother's age at the first marriage, pregnancy, delivery and also the age at last delivery

Mother's age (yr)	Duration of BF (mo) No = 259			
First:	X	S.D.	r	p
marriage,	22.01	3.45	−0.21	<0.0001
pregnancy,	23.22	3.45	−0.18	<0.002
delivery	23.89	3.46	−0.17	<0.003
Last delivery	28.61	4.54	−0.15	<0.006

Table VI. Correlation between the mean duration of breast feeding (BF) and the reasons for cessation of BF

Reason	Duration of BF (mo)									
	0–6		7–12		13–18		18+		X^2	p
	No	%	No	%	No	%	No	%		
Illness of mother or baby	34	31.5	12	16.2	7	24.1	—	—	<0.0001	229.3
Insufficient milk	50	46.3	28	37.8	4	13.8	—	—		
Mother's work	24	22.2	34	45.9	4	13.8	1	2.2		
Baby is old enough	—	—	—	—	14	48.3	45	97.8		
Total	108	100.0	74	100.0	29	100.0	46	100.0		

introduction of supplement and the causes of termination of breast feeding. T tests, X^2 tests and correlation coefficient were used to identify the significant differences.

RESULTS

The initiation of breast feeding was 100 percent, but the time of its introduction ranged from 0 to 99 hours after birth. Majority (68.2%) of babies had received breast milk between seven to 24 hours after birth.

A significant negative correlation ($r= 0.1$, $p<0.05$) was found between the duration of breast feeding and the time of introduction of breast milk after birth (Table I).

As it has been shown in Table II, the difference between the mean duration of breast feeding and the kind of first food given after birth was statistically significant ($p<0.02$).

A significant correlation ($r= 0.57$, $p<0.0001$) also was found between the duration of breast feeding and the age of introduction of supplement (Table III).

Frequency distribution of mothers by education and the duration of breast feeding are presented in Table IV. No relationship was found between the duration of breast feeding and the mother's education.

As it has been shown in Table V there is a significant negative correlation between the duration of breast feeding and the mother's age at the first marriage,

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pregnancy and delivery, and also her age at last delivery ($p<0.0001$, $p<0.002$, $p<0.003$ and $p<0.006$ respectively).

The relationship between the duration of breast feeding and the causes of cessation of breast feeding also was statistically significant ($p<0.0001$) and the most common reasons given for the cessation of breast feeding were insufficient milk and the mother's work outside the home (Table VI).

DISCUSSION

Initiation of breast feeding in all babies confirms reports that breast feeding is still universal in the developing countries.[7-9]

Early initiation of breast feeding has a favorable effect on the duration of breast feeding[10]. Our results also showed a significant negative correlation between the mean duration of breast feeding and the time of introduction of breast milk after birth.

An important factor that affects successful lactation is the baby's sucking and therefore, the introduction of breast milk to the baby soon after birth. In the present study, a significant difference ($p<0.02$) was found between the mean duration of breast feeding in the babies who breast-fed and received breast milk as the first food after birth, and those whose first food after birth was water sweetened with sugar (14.8 ± 6.6, 9.66 ± 7.61 respectively, Table II).

The age of introduction of supplement also can affect the duration of breast feeding. Giving the food supplements before the recommended age[11] might interfere with the production of milk and early weaning. This is in agreement with the results of the present study, in which a significant correlation was found between the duration of breast feeding and the ages of the introduction of food supplement.

In developing countries, the duration of breast feeding has been shown to be shorter among the more educated mothers. Mothers might be educated to some extent, but not adequately knowledgeable about the advantages of breast milk or the recommended age of weaning, as in the present study we found no relationship between the duration of breast feeding and the mother's education.

The reports on the duration of breast feeding and its relation to mother's age is controversial.[7,12,13] However, in our study a significant inverse correlation found between the duration of breast feeding and the mother's age at first marriage, pregnancy and delivery, and also at last delivery, indicates that breast feeding duration is longer in younger mothers. These mothers probably have had fewer pregnancies and fewer children and therefore, better nutritional status and more free time to be with their babies for breast feeding than the older women.

Results of other reports and also this report indicate that the reasons commonly mentioned for early termination of breast feeding is insufficient milk and mother's work outside the home.[7,14-17] tion for their milk insufficiency can be due to some hospital's practices that prevented successful breast feeding such as prolonged and/or unnecessary separation of mother and infant, routine provision of infant formula, and also the stressfull life styles of these working women. Therefore, the insufficient milk is a biocultural phenomenon and needs further study for determining the factors leading to such a condition. Meanwhile, more educational support and advice for breast feeding, less use of formula supplementation during the hospital stay, and changing legislation, which extended the paid maternity leave, which may increase the duration of breast feeding should also be emphasized.

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