

Breast-feeding Patterns in a Rural Village in Giza, Egypt

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ABSTRACT

In a longitudinal study of infant feeding in rural Giza, Egypt, we found that 68.8% of the recruited mothers initiated early suckling of colostrum, but only 51.2% of the infants were exclusively breast-fed in the first week. Solid foods were introduced much earlier than at the recommended age of 4 to 6 months. Sixty percent of the mothers who participated in the study considered breast-feeding plus regular or irregular complementary feeding to be exclusive breast-feeding. (*Am J Public Health*. 1992;82:731-732)

Introduction

A high rate of breast-feeding is beneficial for the developing countries with regard to both economy and health. It is well known that colostrum improves the infant's chances of survival by providing both nutrition and immunization, specific and nonspecific, during the neonatal period.¹ Early suckling is therefore important to the infant and also stimulates the production of mature milk.²

Several studies³⁻⁵ that distinguish between exclusive and partial breast-feeding have shown that a high percentage of infants in the developing countries are exclusively breast-fed for very short periods. The early introduction of water and food in environments where contamination is common not only exposes infants to concentrated numbers of microorganisms that may overwhelm the immunological protection provided by breast milk,⁶ but also reduces stimulation of the breast, causing a reduction in the milk supply.⁷

Consequently, the study of infant feeding patterns during the neonatal period and the exclusive and partial breast-feeding periods is of crucial importance for an understanding of how to improve breast-feeding practices in the developing countries.

Methods

Mothers whose infants were born in 1989 and who attended the maternal and child health clinic in El-Kata, a rural village in Giza, Egypt, were asked if they would participate in a 1-year study of their infants' feeding patterns. The selected clinic and village are representative of rural Giza. The mothers of 250 infants were recruited.

At registration, the mothers were asked to provide information about themselves and their families, including the mother's level of education (no school, elementary school or less, or more than elementary school).

The mothers were interviewed for 1 year at weekly intervals from the time their infants were about 1 week old. At each interview, the mothers were asked about their infants' feeding. The mothers'

definitions of "exclusive breastfeeding" were recorded in their own words.

The obtained data have been divided into 12-month equal intervals, with special interest in the first week of neonatal feeding. The Data Base III Plus program was used for data analysis.

Results

Of the 250 women enrolled in the study, 176 (70.4%) had had no schooling, 10 (4%) had an elementary-school education or less, and 64 (25.6%) had more than an elementary-school education.

Early suckling of colostrum was initiated by 68.8% of the mothers. We found that 61.4% of the uneducated mothers and 84.4% of the educated mothers (those with more than an elementary-school education) initiated early suckling of colostrum (Table 1). Causes of delayed suckling were found to be as follows: insufficient milk, 48%; traditional habits, 34.7%; tired mother, 6.2%; cesarean section, 4.1%; sick mother, 3.8%; weak baby, 3.1%.

The percentage of infants who were actually exclusively breast-fed in the first week was only 51.2%. The rest of them were given sugary fluids, honey and butter, or milk formula, or were fed by another lactating woman in the family. We found that 47.2% of the uneducated mothers and 70.3% of the educated mothers practiced exclusive breast-feeding in the first week.

Our results revealed that 128 infants (51.2%) were exclusively breast-fed for 1 week, 125 (50%) for 2 months, 106 (42.4%) for 3 months, 97 (38.8%) for 4 months, 86 (34.4%) for 5 months, 72 (28.8%) for 6 months, and 46 (18.4%) for 7 months. None of the infants was exclusively breast-fed after the age of 7 months; instead, they were given any available food, either regularly or irregularly.

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TABLE 1—Percentages of Women Who Initiated Breast-feeding in the First Week

Start of Breast Suckling	Total (n = 250) No. (%)	Mother's Education		
		No School (n = 176) No. (%)	≤ Elementary (n = 10) No. (%)	> Elementary (n = 64) No. (%)
Colostrum				
Immediately after birth	60 (24.0)	52 (29.6)	0 —	8 (12.5)
After a few hours	61 (24.4)	26 (14.8)	5 (50.0)	30 (46.9)
Second day	44 (17.6)	28 (15.9)	0 —	16 (25.0)
Third day	7 (2.8)	2 (1.1)	5 (50.0)	0 —
Transitional				
Fourth day	22 (8.8)	22 (12.5)	0 —	0 —
Fifth Day	38 (15.2)	38 (21.6)	0 —	0 —
Sixth day	5 (2.0)	5 (2.8)	0 —	0 —
Seventh day	13 (5.2)	3 (1.7)	0 —	10 (15.6)

Only 40% of the mothers defined exclusive breast-feeding as giving breast milk only; 60% considered exclusive breastfeeding to include complementary feeding (giving breast-milk in conjunction with other foods). Also, 93.3% of the educated mothers described exclusive breast-feeding as giving breast milk with regular supplementary feeding (substituting 1 or more breast-feedings with other foods regularly) (Table 2).

Discussion

Mothers are encouraged to breast-feed their infants, but sooner or later, other foods and milk must be given to the infants.⁸ In many cultures, colostrum is withheld or given sparingly.⁹ In our study, the majority of the rural women (68.8%) initiated suckling of colostrum within the first 3 days; the remaining 31.2% started breast-feeding later. Only 51.2% of the infants were exclusively breastfed. The rest were given mixtures of sugar and water, honey and butter, tea and biscuit, formula, or were fed by another lactating woman in the family. Such foods were given in con-

junction with breast milk for about 1 week or until mature milk became available. This practice was followed mainly because colostrum was said to be insufficient for the infant's energy needs and also because of the traditional belief that breast milk is not available for the neonate before 3 days, during which the infant may be fed by another lactating woman.

Maternal education, health behavior awareness, and increased capacity to change health belief systems are strongly correlated with initiation of breast-feeding.¹⁰ In the present study, educated mothers were more likely to initiate early breast-feeding than were uneducated mothers. Similarly, infants of educated mothers were more likely than those of uneducated mothers to be exclusively breast-fed in the first week.

We found that 48.8% of the infants received not only mixtures of sugar and water, milk formula, and solids soon after birth and for about 1 week thereafter, but also complementary foods now and then until this became a regular practice. Solid foods were introduced much earlier than at the recommended age of 4 to 6 months¹¹ in

51.6% of the infants studied, often (in 3.2% of the infants) in the first month of life.

Mothers were frequently advised to introduce complementary foods on the basis of presumed milk insufficiency as soon as a problem, no matter how trivial, came up.¹² This pattern could be defined as regular complementary feeding or partial breast-feeding. Sixty percent of the mothers, however, described such a feeding pattern as exclusive breast-feeding.

It is crucial that we be aware of the very low prevalence of exclusive breast-feeding and the widespread practice of very early and irregular complementary feeding in the developing countries. Breast-feeding should be encouraged, but it is also important that irregular complementary feeding during the early weeks of life be strongly discouraged, unless such feedings are medically indicated. It seems likely that a change in this very early feeding pattern would contribute to a significant decline in the prevalence of neonatal systemic infection in the developing countries. □

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TABLE 2—Mothers' Definitions of Exclusive Breastfeeding

Definitions	Total (n = 250) No. (%)	Mother's Education		
		No School (n = 176) No. (%)	≤ Elementary (n = 10) No. (%)	> Elementary (n = 64) No. (%)
Breast milk (BM)	100 (40)	96 (54.6)	0 —	4 (6.2)
BM & sugary fluid	35 (14)	28 (15.9)	7 (70)	0 —
BM & tea and biscuit	20 (8)	17 (9.7)	3 (30)	0 —
BM & available foods	25 (10)	25 (14.2)	0 —	0 —
BM & regular monthly supplements	70 (28)	10 (5.6)	0 —	60 (93.8)