

BREASTFEEDING PRACTICE IN DAMMAM AREA OF SAUDI ARABIA

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هدف الدراسة: الغرض الرئيسي من هذه الدراسة تقييم الرضاعة من الثدي للأطفال أقل من 24 شهر وتحديد الأسباب التي تؤدي لفشل الرضاعة من الثدي للأمهات التي لا ترضعن أطفالهن.

طريقة الدراسة: أجريت هذه الدراسة على 1185 طفلا تحت سن 24 شهر مستخدمين مؤشرات الرضاعة الطبيعية والموصى بها من قبل منظمة الصحة العالمية لتقييم ممارسات الرضاعة الطبيعية عمليا خلال فترة 24 ساعة.

نتائج الدراسة: كان معدل الرضاعة الطبيعية (من الثدي فقط) 33.0%، 11.5% للرضاعة الطبيعية السائدة للأطفال تحت سن 4 شهور. وكان المعدل الزمني المتمم للتغذية 31.7% فقط. كل هذه القيم تختلف عن المعدلات الموصى بها، والسبب المفاد من الأمهات من ناحية فشل الرضاعة هو عدم كفاية لبن الثدي، إعلانات الألبان، التعلم من أمهات أخرى أدى إلى تتابع تكرار هذه الحالات.

الاستنتاجات: هذه الدراسة توضح الحد المتدني للرضاعة من الثدي للأطفال تحت سن 4 شهور كما توضح سبل تغيير سلوك الأمهات نحو الرضاعة الطبيعية من الثدي. ومن الممكن تحقيق ذلك بنظائر جهود موجهة للمجتمع وخاصة لأمهات المستقبل وتقديم الدعم التوعوي لهن بعد الولادة لتلافي الفشل في استمرار الرضاعة الطبيعية من الثدي.

الكلمات المرجعية: الرضاعة الطبيعية القاصرة على الثدي، التغذية المتممة، فشل الرضاعة من الثدي، التدعيم.

Objectives: The main objective of this study was to determine the breastfeeding status for children under 24 months and assess the causes of breastfeeding failure among those mothers who do not breastfeed their babies.

Methodology: This study was conducted on a sampled population of 1185 children under 24 months of age, using breastfeeding indicators recommended by World Health Organization, for assessing breastfeeding practices within a recall period of 24 hours, in the Dammam area of Saudi Arabia.

Results: The exclusive breastfeeding rate and predominantly breastfeeding rates were 33% and 11.5%, respectively, under 4 months of age among these children. The timely complementary feeding rate was 31.7% only. All the values were far behind those recommended. The reasons given in order of their frequencies by the mothers for failure to breastfeed were insufficient milk, advice and example of other mothers and formula milk advertisement.

Conclusion: This study recognizes the low level of exclusive breastfeeding among children under 4 months of age and lays emphasis on changing the behavior of mothers towards exclusive breastfeeding. This can be achieved by special integrated community-based approaches among potential mothers by supporting them after

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delivery and proper follow-up, to prevent failure of milk formation and discontinuation of breastfeeding.

Key Words: *Exclusive breastfeeding, complementary feeding, breastmilk failure.*

INTRODUCTION

Human milk is the natural, most appropriate of all available types of milk for an infant, and is uniquely adapted to its needs during the first 4 months of life. In many studies, breastfed children have been reported to be healthy and thriving, in spite of the variations in the individual breastmilk.^{1,2} This is important because an inadequate intake may result in compromised levels of activity before growth is affected.³ Even in infants who are small for their age a growth rate greater than that of NCHS 50th percentile has been observed.⁴ Detrimental effects of the early use of complementary feeding on the rate of growth and increased risk of mortality from diarrhoeal diseases is very well documented.⁵⁻⁷ However, fast urbanization and rapid socioeconomic changes in Saudi Arabia are putting breastfeeding in danger of decline. This study on the status of breastfeeding was conducted in the Dammam area of Saudi Arabia, in an attempt to determine breastfeeding practices for children under 24 months of age, with the emphasis on exclusive breastfeeding of infants under 4 months of age and assess the causes of the failure of mothers to breastfeed their babies.

MATERIAL AND METHODS

The population for this cross-sectional study consisted of children less than 24 months of age, who accompanied their mothers to five primary health care centers (PHCC) in the Dammam area of Saudi Arabia. For the selection of these health centers a simple random sampling method was adopted and all the children in this

age group were included in the study. A pre-designed and pre-tested questionnaire was used to collect information on age, sex, nationality, education of mothers and feeding practice of the preceding 24 hours. This 24-hour recall period has been used widely and found appropriate. The following recommended WHO indicators for assessment were used in the study.⁸

Breastfeeding: The child who receives breast milk (direct from the breast or expressed).

Exclusive breastfeeding: The infant has received only breast milk from its mother or a wet nurse, or expressed breast milk, but no other liquids or solids with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines.

Predominant breastfeeding: The infant's predominant source of nourishment has been breast milk. However, the infant may also have received water and water based drinks (sweetened and flavored water, tea, infusions, etc), fruit juices, oral rehydration salts (ORS) solutions, drops and syrup forms of vitamins, minerals and medicines, and ritual fluids (limited quantities). With the exception of fruit juices and sugared water, no food-based fluid is allowed under this definition.

Complementary feeding: The child who has received both breast milk and solid (or semi solid) food.

Bottle-feeding: The child has received liquids/semi liquid food from a bottle with a nipple or a teat.

RESULTS

A total of 1185 children under 24 months of age were covered in the study. Out of these, 52.4% were boys and 47.6% were girls. The percentage of Saudi children was 87. The age

group distribution of these children was done keeping the recommended indicators in view (Table 1). These measuring indicators are 4 periods of equal duration (4 months/120 days), which take into consideration age-based recommendations. Table 2 shows results of the study group compared with the recommended levels. There were 33.8% children who were

Table 1: Distribution of children under 24 months in the study

Age group in months	N	Boys (%)	Girls (%)
< 4	260	120 (49.23)	132 (50.7)
4 – 5	75	36 (48.0)	39 (52.7)
6 – 9	205	112 (54.63)	93 (45.37)
10 – 11	105	55 (52.38)	50 (47.62)
12 – 15	250	135 (54.0)	115 (46.0)
16 – 19	150	80 (53.33)	70 (46.67)
20 – 23	140	75 (53.57)	65 (46.43)
Total	1185	621 (52.41)	564 (47.59)

Table 2: Comparison between observed and recommended levels of breastfeeding (BF)

Feeding Indicator	Age *	Recommended levels	Observed levels (%)
Exclusive Breastfeeding	< 4	100%	33.08
Predominant Breastfeeding timely	< 4	-	11.54
Complimentary Feeding rate	6-9	All infants after 6 months	31.71
Continued Breastfeeding rate at 1 year	12-15	Preferably breastfed	42.0
Breastfeeding rate at 2 years	20-23	Preferably breastfed	33.14
Bottle feeding rate	< 24	Nil	47.17

* in months

Table 3: Distribution of indicators with other countries

	Exclusive breast-feeding rate < 4months	Predominant breast-feeding rate <4months	Breast-feeding rate 12-15 months
Study group	33.0%	11.5%	42.0%
Egypt	63.0%	21.0%	82.0%
Philippines	29.0%	27.0%	49.0%
Sri Lanka	29.0%	48.0%	82.0%
Recommended WHO	100%	-	Preferably breastfed

Table 4: Reasons given by the mothers for failure to breastfeed

Reasons	%
Insufficient breastmilk	25.0
Learning from other mothers	19.0
Advertised baby foods	15.0
Pregnancy	9.0
Lactation failure	7.3
Working outside home	7.0
Use of medicine	6.8
Refusal after illness	3.0
Breast infection	3.0
Advised by the doctors	2.4

exclusively breastfed up to 4 months of age. Predominantly breastfed children were only 11.54%. The timely complementary feeding rate was only 31.71%. However, continued breastfeeding rates at the ages of 1 year and 2 years were 42% and 32.14%, respectively. As we compare the observed levels with the recommended levels, we find that the children in the study group are far behind the recommended levels. However, the comparison with other countries is shown in Table 3.

Table 4 shows the causes of breastfeeding failure in order of their frequency as learnt from the mothers. The majority of mothers attributed the failure to the insufficiency of milk; the next group stopped on the advice of

other mothers and some as a result of advertised milk formula.

DISCUSSION

Though the changes in child mortality are difficult to measure and cannot be easily attributed to a specific intervention, the estimated benefits and the protective effects of breastfeeding against infant mortality and in terms of child survival have been well documented.^{9,10} The infant should be exclusively breastfed for at least 4 months of life and if possible for 6 months, as recommended by WHO and UNICEF. Human milk meets all the nutritional requirements of infants for the first 6 months of life, and is associated with a lower incidence of diarrhea than partial or artificial feeding.¹¹⁻¹³ In our study (Table 2), the breastfeeding indicators, particularly exclusive breastfeeding under 4 months of age, which was only 33% were far below the recommended levels but comparable to the results from other countries as reported by WHO (Table 3).¹⁴ The declining trend of exclusive breastfeeding from 90% to 50% at the age of 3 months has also been reported in Saudi Arabia.¹⁵ The low level of exclusive breastfeeding is a matter of concern, because this indicates that these infants are being exposed to increased nutritional and other risks with the introduction of complementary foods. Even in societies where breastfeeding is the norm, mothers often introduce complementary feeding or drinks at an early age.

The exact age at which complementary feeding should be introduced varies from child to child. However the preference for 4-6 months is that all infants of less than 4 months should be fed exclusively on breastmilk. Retarded growth on breastmilk means that the child is receiving complementary feeds. Solids/semi solid foods should not be introduced to infants before

the age of 4 months.¹⁶ After 6 months all infants should receive other foods in addition to the breastmilk, since this does not provide the adequate amounts of nutrients needed by an infant of that age. However, it has been shown that the children who remain breastfed are less likely to develop deficiency signs.¹⁷⁻¹⁹ One of the commonest reasons given by the mothers in our study, for not breastfeeding their babies and introducing complementary foods early, was that the milk was insufficient for the baby. This assessment by mothers regarding the insufficiency of milk and the poor quality of milk has also been reported by WHO and many independent studies.²⁰⁻²⁴ It is well-known that almost all mothers can produce enough milk for one or even two babies, provided the baby suckles effectively and breastfeeds as often as he or she wants. Even when the mother thinks her milk is insufficient, her baby gets all the milk he or she needs. In societies where the mother's diet is often poor, most are able to produce breastmilk in amounts adequate for the proper growth of their babies.^{14,25}

All the causes shown in table 4 are simple and modifiable and do indicate that if informed about the benefits and process of breastfeeding, these mothers are likely to start breastfeeding. Basically, breastfeeding requires a behavioral change, involving a change in attitude towards breastfeeding. A mother who wishes to breastfeed her baby, with professional and family support is likely to succeed as mothers of earlier generations had done even with little breast preparation. Doctors who are in frequent contact with mothers during perinatal period, the most sensitive and receptive period, are in a good position to encourage breastfeeding, give support and solve problems. Lactation problems which generally arise in the immediate postnatal period, particularly among new mothers, lead to breastfeeding failure if not resolved in time. It has been shown that a coherent approach to breastfeeding by health

workers has a major impact on the initiation and sustaining of breastfeeding.²⁶

Other aspects of breastfeeding which have been examined include ethnicity, income, education, personal and social determinants. It has been emphasized that urbanization, education and standard of living directly influence breastfeeding practice and as these factors increase breastfeeding declines.^{27,28} Moreover, with the influence of aggressive marketing of infant formulas directly to parents via television and the media, breastfeeding is no longer fashionable.²⁹ In Saudi Arabian society, the tremendous socioeconomic change, and urbanization have contributed to the downward trend. Special practical approaches applicable to our society should be developed and adopted to make exclusive breastfeeding successful. This could be done by building mothers' confidence on their ability to provide enough breastmilk, by removing her doubts on how breastfeeding works, emphasizing its advantages and giving proper follow-up support.^{30,31} Although maternity services, training in lactation management and rooming in, in certain places have increased the initiation of breastfeeding, what is needed is support for the continuation of breastfeeding at home particularly in the rural areas, where a substantial proportion of deliveries generally occur. We have to develop integrated community-based approaches such as voluntary mother counseling through home visits and self-help groups, assist and foster the role of medical personnel during perinatal period.

In conclusion, we believe that the practice of exclusive breastfeeding is very low and its improvement can further reduce infant morbidity and mortality and that breastfeeding up to 2 years of age should be encouraged. In order to achieve the

recommended goals for breastfeeding, certain things must be done:

1. Assist expectant mothers in pre- and postnatal periods to initiate breastfeeding.

2. Increase community-based educational programs for mothers and families to dispel the myths and misconceptions about breastfeeding.

3. Popularize breastfeeding in the media to counter aggressive advertisement of infant formulas.

4. Ensure post delivery support with the proper follow-up to provide information and solve lactation problems.

5. Prepare future doctors to meet this challenge of helping mothers to breast-feed their babies successfully in order to improve their children's health.

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