

Lactation amenorrhea in Saudi women

Khalid A Madani, Rufaida H Khashoggi, Abdulrahman A Al-Nowaisser, Hassan A Nasrat, Muhammed H Khalil

Abstract

Study objective – The study aimed to investigate some aspects of breast feeding, namely – lactation amenorrhea, the average interval between pregnancies, and the extent of knowledge that an average Saudi woman has about breast feeding.

Design – This was a cross sectional study in which a pretested questionnaire was used to collect the information.

Setting – The study was conducted in the Taif area between January and April of 1990. Seventy nine primary health care centres participated.

Participants – Altogether 1019 of 2400 women contacted who agreed to participate and met the criteria were studied. Eligible subjects were defined as Saudi women, between 16 and 40 years old, who came with their infants for vaccination, and had delivered between one week and 12 months previously. Each mother had at least one other child.

Measurement and main result – At birth, the percentage of infants who were initially breast fed was 98% but within three days of delivery over two thirds (68.9%) of the mothers gave other supplementary liquids to their infants. At the time of interview more than half (55.1%) of mothers had lactation amenorrhea. The mean (SD) lactation amenorrhea period and birth interval were 5.95 (5) and 26.8 (14.1) months, respectively. Mothers obtained information on breast feeding mainly from their doctors and television. Within families, husbands had the primary role in encouraging their wives to breast feed, followed by the mother and then by the mother in law. It was found that a high percentage (94.2%) of women had breast fed their previous child.

Conclusion – The lack of adequate information on breast feeding and the short interval between births are local problems which should be considered by the health authorities.

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The benefits of breast feeding for mother and baby are widely documented.¹⁻³ Among these, particularly in developing countries, is the associated contraceptive effect,⁴⁻⁶ which means that prolonged lactation serves as the main limitation of population growth.⁷⁻¹¹ More births are prevented by lactation than by all other contraceptive methods. On the other

hand, for an individual woman, lactation does not offer reliable protection against pregnancy.¹² The crucial factors that determine the duration of this infertile period are the frequency and duration of suckling as well as the postpartum interval.¹³⁻¹⁶

There is abundant evidence to show that an adequate interval between births improves infant health and development and, for the mother, reduces the physical and emotional stress of pregnancies.^{17,18}

This study was carried out to examine some aspects of breast feeding – that is, lactation amenorrhea, the average interval between pregnancies, and the extent of knowledge that an average Saudi woman has on the practice of breast feeding. No data are available on this subject and this study aimed to provide useful data not only on the aspects of breast feeding but also on family planning matters.

Methods

These data were gathered as part of a larger study of breast feeding and fertility in Saudi women. The study was conducted in the Taif area in the western region of Saudi Arabia, between January and April of 1990. Taif was chosen because it lies inland and away from direct contact with other foreign cultures. The population of the city was estimated by the Ministry of Health to be 439 000 in 1989.

Seventy nine primary health care centres participated in the study. These centres were chosen to cover urban, semi-urban, and rural areas. One physician was selected from each of the 79 centres and all of them were trained as interviewers. Out of 2400 women who were asked to participate in the study, only 1019 met the criteria, and all of these agreed to participate. The remaining 1381 did not meet either one or more of the study criteria and hence were not included. Those eligible were defined as Saudi women aged between 16 and 40 years, who had come with their infants for vaccination, and had delivered between one week and 12 months previously. Each mother had at least one other child.

The objective of this cross sectional study was to investigate some aspects of breast feeding in Saudi women. To achieve this objective, a pretested questionnaire was administered in an interview session with each mother. This questionnaire requested information about the mother's age and literacy, the child's age, and the age of the child when solid food was first introduced. Questions were also asked about amenorrhea and the possibility of the presence of a new pregnancy. The birth interval was calculated after asking the mother about the age of the last child and the previous one. The

Directorate of Health Affairs,
Ministry of Health,
Taif Region,
Saudi Arabia
K A Madani
A A Al-Nowaisser
M H Khalil

Department of Nutrition,
College of Home Economics,
King Abdulaziz University,
Jeddah
R H Khashoggi

Department of Obstetrics and Gynaecology,
Faculty of Medicine,
King Abdulaziz University,
Jeddah
H A Nasrat

Correspondence to
Dr K A Madani,
PO Box 2183,
Jeddah, 21451,
Saudi Arabia.

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Table 1 Age in months of introducing solid food in relation to the mother's amenorrhea status

Age at introduction of solid food (mth)	Lactation amenorrhea status		Total (%)
	Present (%)	Absent (%)	
No solid food introduced yet	243 (43.4)	77 (17.0)	320 (31.6)
< 1	34 (6.1)	46 (10.1)	80 (7.9)
1-2	19 (3.4)	22 (4.8)	41 (4.0)
3-5	116 (29.6)	218 (48.0)	384 (37.8)
6-8	77 (13.8)	65 (14.3)	142 (14.2)
> 8	7 (1.3)	15 (3.5)	22 (2.2)
Mother doesn't know	14 (2.5)	11 (2.4)	25 (2.5)
Total	560 (55.2)	454 (44.8)	1014 (100.0)

mothers were also asked whether or not they had received information or advice on breast feeding and if so what had been the main source of such advice – health personnel, a family member, or the media. The questionnaires were administered during an interview between a physician or nurse specially trained for this task and each woman in the study group.

The χ^2 test was used for comparison between different groups and the significance level was placed at $p > 0.05$. Missing data resulted in slightly different sample sizes for different analyses.

Results

At birth, the percentage of babies initially ever breast fed was 98% but within three days of delivery over two thirds (68.9%) of the mothers had given other supplementary liquids to their infants. Of these, 60.4% were given sugar in water, 33.1% milk formula, and 5.3% water.

At the time of the interview, more than half (55.1%) of the study women had lactation amenorrhea and 5% were pregnant. Of those who had begun to menstruate again, this had occurred within three months of delivery in 32.1%, within five months in 76.4%, and within six months of delivery in 89.3%. The mean (SD) period of lactation amenorrhea 5.95 (5) months. There was a significant negative association ($p < 0.001$) between the lactation amenorrhea status and the mother's literacy.

Table 1 shows that there was a significant negative relationship ($p < 0.001$) between the

Table 2 Lactation amenorrhea in the mother in relation to the infant's age

Age of infant (mth)	Lactation amenorrhea status		Total (%)
	Present (%)	Absent (%)	
≥ 3	99 (85.3)	17 (14.7)	116 (11.4)
3-5	190 (58.5)	135 (41.5)	325 (32.0)
6-8	125 (50.4)	123 (49.6)	248 (24.4)
9-11	102 (42.3)	139 (57.7)	241 (23.7)
≥ 12	46 (54.1)	39 (45.9)	85 (8.4)
Total	562 (55.5)	453 (44.6)	1015 (100.0)

Table 3 Distribution of respondents according to the source of information about breast feeding

Source of information	No	(%)
Person:		
Doctor	656	(64.8)
Relative	151	(14.9)
Nurse	51	(5.0)
Midwife	4	(0.4)
Neighbor	4	(0.4)
Others	147	(14.5)
Missing observations	6	—
Mass media:		
Television	663	(65.7)
Books	70	(6.9)
Radio	34	(3.4)
Magazines	25	(2.5)
Newspapers	3	(0.3)
Not through the mass media	214	(21.2)
Missing observations	10	—

Table 4 Family member who encouraged the mother to breast feeding

Family member encouragement from	No	(%)*
Husband	484	(52.0)
Mother (grandmother)	452	(48.4)
Mother in law	297	(31.8)
Sister	203	(21.7)
Others	43	(4.6)

* Adds up to more than 100% because some mothers gave more than one response.

age of the child when solid food was first introduced and the presence of lactation amenorrhea in the mother. When solid food was not introduced, the number of mothers with lactation amenorrhea was more than triple.

In 14.6% of the mothers, the interval between this birth and a preceding pregnancy was one year or less, whereas 44% and 79.5% had birth intervals of less than two and three years, respectively. The mean (SD) birth interval was 26.8 (14.1) months.

In the present study only 202 (19.9%) women were using a method of contraception.

More than half (52%) of the mothers delivered in a public hospital, 30.9% delivered at home, and only 10.9% delivered at primary health centres.

Table 2 indicates that a significant relationship was observed ($p < 0.001$) between the infant's age and the lactation amenorrhea status of the mothers.

Table 3 shows that 64.8% of the mothers were instructed about breast feeding by their doctors, 14.9% by relatives, and only 5% by nurses. In addition, of the mothers who were informed about breast feeding by the media, 65.7% were advised by television and only 6.9% by reading books.

Encouragement and support for breast feeding were mainly provided by the husbands and the nursing mother's own mother in 52% and 48.4% of the cases, respectively. Other relatives such as mothers in law and sisters played a less important role (table 4).

Discussion

Among the many benefits of breast feeding, especially for people in developing countries, is its contraceptive effect. There is evidence

from a wide variety of sources¹⁹⁻²¹ that lactation is associated with prolongation of postpartum amenorrhea. Potts *et al*²² have shown that even after menstruation resumes, conception rates are lower in mothers who continue to breast feed than those who stop breast feeding.

In our study, the birth interval was short, about two years, while in Bangladesh it is approximately three years,²³ and in the Bush people of the Kalahari it is almost four years.²⁴ Prolonged lactational amenorrhea is a major association with such a long birth interval.^{23,24} Women in this study had a short duration of postpartum amenorrhea compared with those in other countries,^{25,26} which might be attributable to the fact that most mothers in our study introduced food supplements too early, a practice which should be discouraged.

The effect of the preceding birth interval on child survival is a powerful motivational factor. Infant mortality can be greatly reduced if the child is born at least two years after its elder siblings.^{27,28} Too short a birth interval also has an adverse effect on the child's health and development,¹⁷ as well as on maternal morbidity.¹⁸ Prolonging the duration of lactation amenorrhea may give additional maternal benefits, since amenorrhea conserves the mother's usually limited store of iron and other essential nutrients.

It has been shown^{29,30} that women who breast feed fully have a lower probability of early resumption of menstruation than women whose infants are given supplemental food such as fluids by bottle or solids in addition to breast feeding. We have also shown that the infant's age when solid food was first introduced, does make a significant difference to the lactation amenorrhea status of the mother.

Cochrane's³¹ review of studies of the relationship between education and fertility concluded that education may increase or decrease individual fertility. In the present study there was a significant negative association between literate mothers and the lactation amenorrhea status.

In the present study, more than half the mothers had their delivery at public hospitals. Encouragement from hospital staff strongly promotes lactation, especially if staff members themselves have personal experience of breast feeding.³²

Our mothers reported that they had obtained information on breast feeding mainly through their doctors. This finding was surprising since, traditionally, nurses have closer contact with the mothers during pregnancy and after delivery. In other studies^{33,34} doctors were generally less helpful than nurses and midwives, who were more positive and influential. Television was the major media source of information. This finding suggests that required knowledge on breast feeding based on scientific facts can be transmitted through television if programmes are well prepared. In Brazil, several evaluations were carried out in conjunction with extensive media campaigns of 1981, and these showed that the proportion and duration of women breast feeding their children increased as a result.³⁵

In the present study, it was found that a high percentage (94.2%) of women reported that they had breast fed their previous child. This is an appropriate practice and must be reinforced by making the mothers aware of the advantages of breast feeding. Women in Saudi Arabia seem to lack accurate information on the art of breast feeding and the management of lactation problems, however, which may lead them to stop breast feeding and give their baby a bottle instead.³⁶ Suitable instructions in lactation management, given by medical personnel during the antenatal and post partum periods, might ensure success and thereby influence the practice of breast feeding.

As Saudi Arabia has undergone a very rapid socioeconomic transition, there is a decreasing prevalence of breast feeding along with a diminishing length of the nursing period.³⁷⁻³⁹

At the beginning of 1982, the Saudi Arabian government decided to ban all advertising of infant formula in all mass media. Currently, the Ministry of Health follows the UNICEP-WHO initiative of baby-friendly hospitals in many cities of the kingdom.

The reduction in breast feeding and the short interval between births are problems which need to be addressed urgently by the health authorities.

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