

# Infant Feeding Practices and Attitudes of Mothers in Kelantan Towards Breastfeeding

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## Summary

The incidence of breastfeeding among 96 mothers (88/96 were Malays) who were attending various clinics at Universiti Sains Malaysia Hospital and Kota Bharu General Hospital was about 95%. The feeding patterns show that about 72% of mothers gave mixed feedings (breastmilk plus infant formula) while only 30% gave exclusive breastmilk to their infants in the first six months. Two main reasons for giving mixed feedings were that mothers had to start working soon after giving birth and reported "insufficient milk". Mixed feedings were seen to be more prevalent in the higher income group mothers (> RM1000 per month). About 64% of them who breastfed their child continued to do so beyond 6 months. Regarding their knowledge on breastfeeding, most mothers (98%) knew that breastmilk is good for baby's health, economical, strengthens bonding between mother and child, and was sufficient for the sustenance of the baby. However, when asked about colostrum, 66% of mothers who breastfed their child threw away the colostrum before feeding; some of the reasons given were that colostrum is dirty, and not suitable for the baby's health and it might cause some diseases.

**Key Words:** Breastfeeding, Mixed feedings, Colostrum, Malay

## Introduction

The numerous benefits of breastfeeding for both mothers and infants have been widely acknowledged. The big question is how well this knowledge on breastfeeding, once upon a time a natural art, is being matched by its actual practice? This will largely depend on ensuring policies and practices that promote, protect and support breast-feeding. Health workers and professionals, which range from paediatricians, obstetricians, nurses, midwives, and breastfeeding voluntary groups play an important role in ensuring that the policy on breastfeeding is carried out.

Infant feeding practices in Malaysia are undergoing

considerable change. A study conducted by Patmanathan in 1973-1974 showed the incidence of breastfeeding among 8750 mothers to be about 64%<sup>1</sup> (90% predominantly Malays), with only 40% of the mothers continuing to breastfeed for a period of 6 months. In 1978 and in 1980 the incidence of breastfeeding was 49%<sup>2</sup> (80% predominantly Malays) and 88%<sup>3</sup> (100% predominantly Malays) respectively. However a study conducted by the Ministry of Health<sup>4</sup> in 1983 among 91,737 mothers revealed a low incidence of breastfeeding of 48% with only 3.6% mothers continued to breastfeed for 6 months. A study by Chia<sup>5</sup> in 1992 among 126 mothers showed an incidence of breastfeeding of 61% (84% predominantly Malays) while only 18.3% continued to breastfeed for six months.

The Ministry of Health has introduced and revised the Malaysian Code of Ethics for Infant Formula Products in 1979 and 1983 respectively. The aim of the code is: i) to provide safe and adequate nutrition among Malaysian infants by the protection and promotion of breastfeeding, and ii) to ensure adequate standards and proper use of Infant Formula Products, which are defined as any milk products derived from animal or plant origin, used for feeding of infants up to 12 months of age, as an alternative to human milk.

Since the introduction of the Code, the Ministry of Health has tried hard to promote breastfeeding among mothers of all races in Malaysia with the sole aim of providing the best form of nutrition for infants during the first six months of their life and for maximum survival for infants. Health personnel were trained and encouraged to promote breastfeeding among mothers who attended their clinics, which includes small government clinics in rural areas and also the general hospitals in major towns and cities. This task has been made more difficult by infant formula companies. Mothers attending antenatal clinics have been offered free samples (ostensibly meant for the mothers themselves and their older infants.) Health-care workers have also been offered such products at discount prices.

The aim of this study was to see the effectiveness of the promotional activities on breastfeeding by the Ministry of Health in the north east region of Malaysia by studying the incidence of breastfeeding and the knowledge of breastfeeding acquired by mothers who attended government hospitals.

**Materials and Methods**

A total of 96 mothers were interviewed while waiting to be examined at the Antenatal Clinic, Community Medicine Clinic, Paediatric Clinic of Universiti Sains Malaysia Hospital, Kubang Kerian, Kelantan and the Antenatal Clinic of General Hospital, Kota Bharu, Kelantan.

Most of the questions asked were relevant and pertinent to breastfeeding practices and care was taken so as not to be biased towards any form of feeding

**Table I**  
**Background of mothers who were interviewed**  
**(Total of 96)**

Age (yrs)	Total	%
20 - 29	50	52.1
30 - 39	41	42.7
40 - 50	5	5.2
<b>Race</b>		
Malay	88	91.7
Chinese	7	7.3
Indians	1	1.0
<b>Education</b>		
No education	3	3.1
Primary school	12	12.5
Lower secondary school	12	12.5
Upper secondary school	69	71.9
<b>Occupation</b>		
Working	40	41.7
Not working	56	58.3
<b>Family income (per month)</b>		
< RM600	40	41.7
RM600 - RM1,000	15	15.6
> RM1,000	41	42.7
<b>No. of children</b>		
1 child	16	16.7
> 1 child	48	50.0
No children (first pregnancy)	32	33.3
<b>Breastfeeding practices</b> (from 64 mothers who have children)		
Yes	61	95.3
No	3	4.7

during the interview. There were 2 interviewers throughout the study who were trained to ask questions in a similar manner. Mothers were asked to recall their experiences on breastfeeding of their youngest-child. Only after the interview was over, the mothers were told of some of their misconceptions

**Table II**  
**Knowledge of mothers on breastfeeding**

Breast milk:	Number	Per cent (%)*
is economical	60	62.5
is good and healthy for baby	81	84.4
is easily available	57	59.4
generates strong bonding between mother and infant	61	63.5
contains anti infective factors in colostrum	21	21.9
is sufficient for baby without any supplementation for the first six months	63	65.6
does not depend on breast size.	51	53.1

\*each response is per cent of total mothers interviewed

about breastfeeding, and the benefits of breastfeeding were explained.

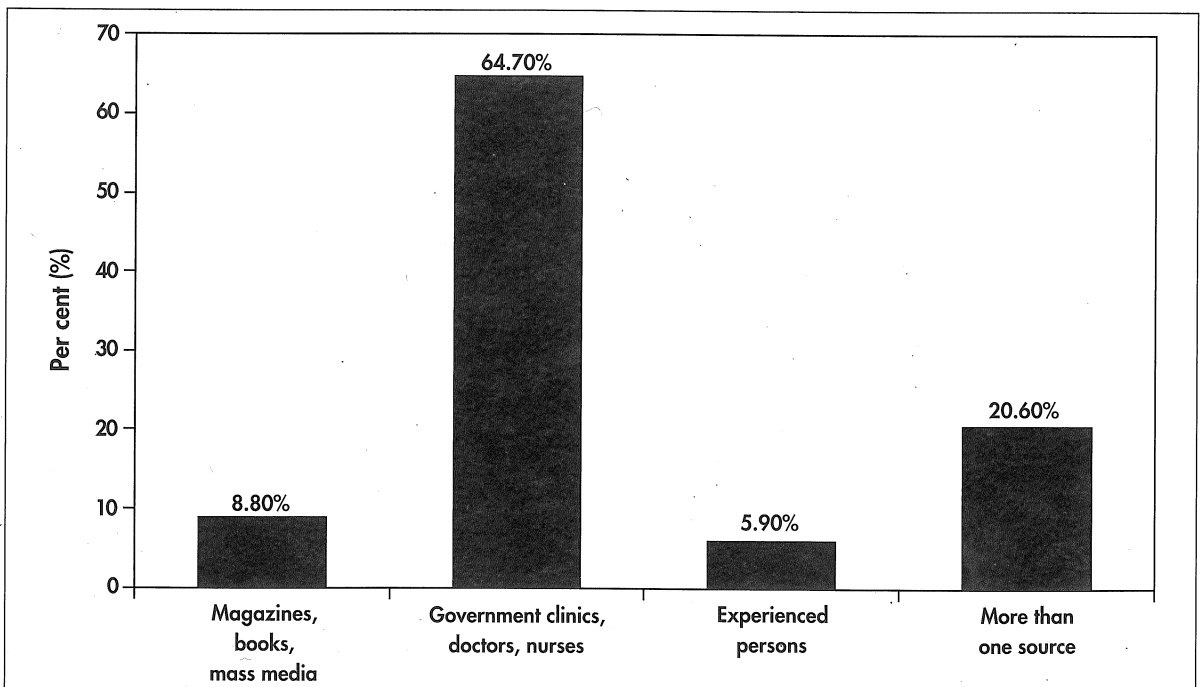
### Results

Table I summarises the background of mothers that were interviewed. A total of 64 mothers have between 1-3 children, while 32 were pregnant for the first time. Among the 64 mothers who have children, only 3 had never breastfed their child, while the rest (95%) breastfed their child. Among the pregnant mothers, 31 of them (97%) planned to breastfeed while one of them did not intend to do so. Fifty mothers delivered their last child in the hospital while 14 of them had home deliveries under the supervision of midwives.

### Knowledge on breastfeeding

Figure 1 shows that the majority of mothers obtained knowledge on breastfeeding from health personnel in government clinics.

Table II shows that mothers' knowledge of breastfeeding seemed to be quite satisfactory except for



**Fig. 1: Sources on knowledge of breastfeeding**

the benefits of colostrum. About 66% of mothers who breastfed (40/61) discarded the colostrum before feeding and 22 of these mothers obtained information on breastfeeding from government clinics. Some of the reasons given were that colostrum is dirty, not suitable for baby's health, and can cause diseases.

Regarding the best form of feeding, about 78% believed that breast milk is the best while, the remaining 22% opined that infant formula is the best for baby (see Fig. 2).

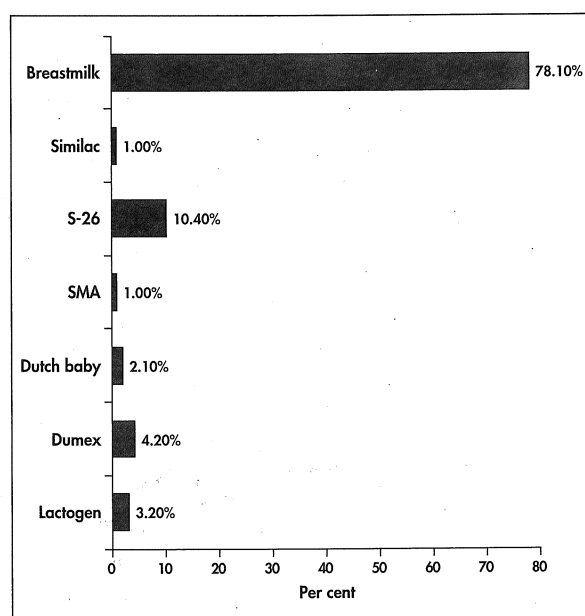


Fig. 2: Mothers' opinion on the best form of feeding for babies

**Feeding patterns**

About 61% of mothers initiated breastfeeding immediately, that is, within 1 hour after birth and 5% within 4 hours after birth. 35% of the mothers started breastfeeding 3 days later and some were as late as 2 weeks after delivery.

About 74% of the mothers breastfed their babies on demand while the remaining 26% fed their babies every 2-4 hours. Duration of breastfeeding varied between mothers (Table III); about 52% breastfed their babies for only 10 minutes.

72% of mothers gave mixed feedings and only 28% gave exclusive breastmilk to their babies of less than 6 months old. Among the reasons given for mixed feedings were insufficient milk (36%) and working outside home (48%) (see Fig. 3). Incidence of mixed feedings were seen to be more prevalent in the higher income group (Fig. 4).

Introduction of solid food were mainly done when the infants were 4-6 months old but 9 mothers introduced solid food as early as 1-3 months (Fig. 5).

**Table III**  
Time taken to breastfeed

Duration of breastfeeding	Number	Per cent (%)
10 minutes	38	62.3
15 minutes	3	4.9
20 minutes	12	19.7
1/2 hour	8	13.1

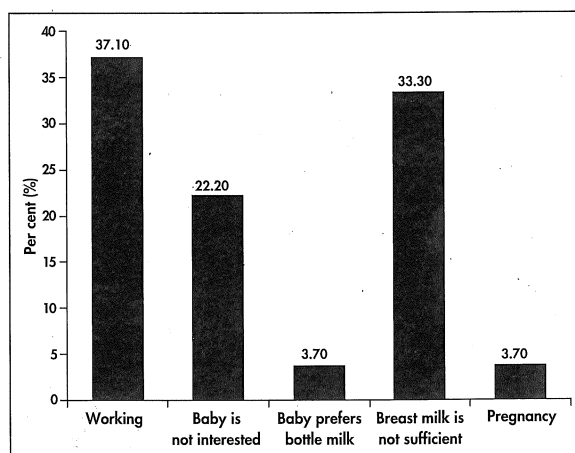
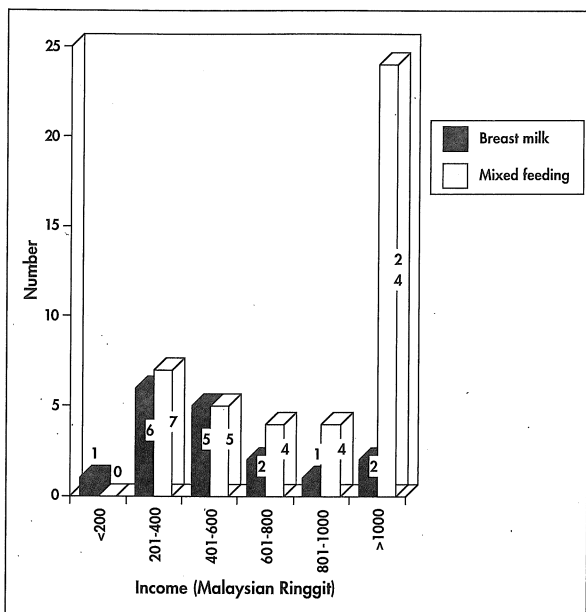
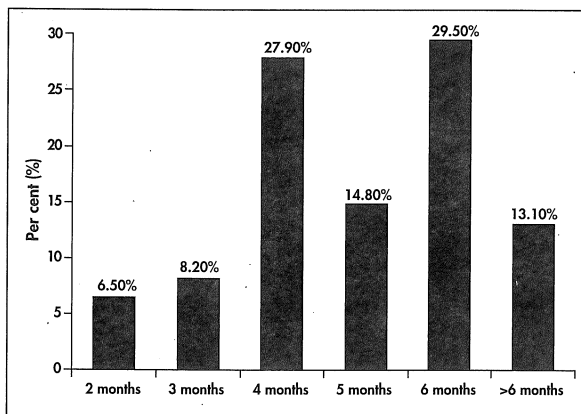


Fig. 3: Reasons for breastfeeding infant for less than six months



**Fig. 4: Relationship between infant feeding practices and mothers' incomes**



**Fig. 5: Introduction of solid food**

**Discussion**

Infant feeding practices in Malaysia are undergoing considerable changes. As seen from the studies that have been performed in Malaysia the incidence of breastfeeding is increasing slowly. The higher incidences of breastfeeding is mainly in the Malay population both in urban and in rural population<sup>1-3</sup>. This study shows that incidence of breastfeeding is quite high among Kelantanese mothers (80% of mothers were

from urban areas while 20% were from rural areas), that is, about 95% of the mothers who have children have breastfed their youngest child. The majority of the mothers interviewed were Malays which reflects the racial distribution in the state of Kelantan. Since the incidence of breastfeeding is quite high among the mothers in which the educational background ranges from no schooling to higher institutions, it is thus difficult to make any correlation between maternal education and its effects on breastfeeding practices.

While breastfeeding is becoming popular, supplementary feedings are being introduced earlier, depriving babies of exclusive breastfeeding. Exclusive breastfeeding has been recognized by WHO and UNICEF to be vastly superior to any other form of infant feeding during the first six months of baby's life. The nutritional, anti-infective, and child spacing effects of breastfeeding, which give the infant the best chance of survival, are dependent on exclusive breastfeeding<sup>6</sup>. This study shows that only 30% of mothers breastfed their infants exclusively for the first 6 months of the baby's life while the rest supplemented with infant formula. Various reasons were given by mothers for the early supplementation : insufficient milk, work, illness of the mother, and baby refusing to breastfeed. Mothers need to be educated that early introduction of supplementary formula and reduced frequency of breastfeeding lead to inadequacy of breast milk.

Another reason for giving early supplementation to babies is the belief that the breasts function like a bottle in delivering milk to babies. This has led to some mothers to keep comparing the amount, consistency and even colour of breastmilk with that of cow's milk. The watery nature of breastmilk has led to the wrong notion that breastmilk is weak and it alone is not sufficient and therefore 35% of mothers felt that their babies need supplementation. In countries like Pakistan, India, Indonesia<sup>6</sup> and even in Malaysia, in this study, rural uneducated mothers have been introducing solid food as early as one month of age (Fig. 5) This practice may result in a higher incidence of diarrhea and subsequent malnutrition.

The study also shows that the majority of mothers from the higher income group tend to introduce bottle feeding earlier to their infants. Early supplementation

with bottle feedings and the low rate of exclusive breastfeeding have been associated with higher education, upper socioeconomic status, urban residence, employment outside the home, the use of oral contraceptives and hospital deliveries<sup>6</sup>.

Regarding mothers knowledge of breastfeeding, although most mothers knew the benefits of breastfeeding, however their misconceptions about colostrum pose a major problem to their baby's health. The practice of discarding colostrum appears to be common in most mothers who breastfed (about 66%) and even 82% of mothers who received information from health workers threw away the colostrum. It is also interesting to note that about 83% of mothers delivered their child in the hospital, therefore for the first 48 hours were under the supervision of health workers, and yet they threw away the colostrum. The belief that colostrum is dirty and harmful appears to be prevalent and has important implications for health education programs and neonatal feeding strategies. Some of the dangers of discarding colostrum are: it interferes with the establishment of lactation and is a primary cause of the common iatrogenic "insufficient milk syndrome"<sup>6</sup>; it deprives the newborn of critical doses of vitamin A, carotene, iron, secretory proteins, IgA and other important anti-infective factors.

In conclusion, this study shows that although the incidence of breastfeeding is high (about 90%) among mothers who were interviewed, their knowledge of breastfeeding is still inadequate. It shows that although health workers have been trying hard to promote breastfeeding among mothers who visited their clinic,

they still did not supply adequate information to mothers, especially information on the benefits of colostrum. Exclusive breastfeeding is still low in Malaysia and the increased use of bottle and formula attest to that. Although most clinics and hospitals have stopped displaying infant formula posters after the introduction of the Malaysian Code of Ethics for Infant Formula, some milk companies have given to the clinics booklets which display beautiful babies on the front cover. The book is given to mothers to keep records of their baby's weight, immunization dates and motor and physical development. However, the milk company's brand and logo is discretely displayed at the bottom corners of the book. A more stringent control of infant formula marketing strategies is needed in order to curb milk companies from supplying free samples of milk (even though the milk is meant for the pregnant mothers and older infants) to mothers and health personnels.

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### References

1. Pathmanathan I. Breastfeeding : A study of 8750 Malaysian infants. *Med J Malaysia* 1978;33 : 113-9.
2. Chen ST. Infant feeding practices in Malaysia. *Med J Malaysia* 1978;33 : 120-4.
3. Singh PJ, Chan GE, John P. Infant Health Care Practices : A Study in 3 Communities. *Med J Malaysia* 1978;36 : 166-70.
4. Ministry of Health Malaysia (1983). Incidence of Breast feeding.
5. Chia SF. A Survey of Breastfeeding Practices in Infants Seen in General Practice. *Med J Malaysia* 1992;47 : 134-8.
6. Baumslag N. Breastfeeding Trends and Influencing Factors. *International Child Health: A Digest of Current Information* 1992;3 : 39-46.