

ORIGINAL ARTICLE

KNOWLEDGE, ATTITUDE AND PRACTICE OF BREASTFEEDING AMONG MOTHERS IN THE PRE-BABY FRIENDLY HOSPITAL INITIATIVE IMPLEMENTATION AT SEVEN PRIVATE HOSPITALS IN MALAYSIA

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ABSTRACT

The knowledge, attitude and practice of breastfeeding among young mothers during pre-Baby Friendly Hospital Initiative implementation was conducted at seven private hospitals in Malaysia. A structured interviewer administered questionnaire was given to all mothers (n=252) visiting the antenatal/postnatal clinic of the hospitals. The main respondents were Malays (57.5%) and Chinese (35%). For most mothers, breastfeeding was combined with supplementary feeds of formula milk, with only 30% breastfed exclusively. The majority of mothers knew that breast-milk contained antibodies and can prevent illness, however many were unaware of breastfeeding's contraceptive effect if practised exclusively. Most mothers did not relate breastfeeding as being environmental friendly. Generally, there was no knowledge gained from the experience of having more children with reference to breastfeeding. Most mothers were influenced by their own beliefs regarding choice of feeding method. Therefore, if a mother was empowered with the knowledge of all practical aspects of breastfeeding, it would encourage her to breastfeed her baby.

Key words: Breastfeeding, baby friendly hospital initiative, KAP questionnaire

INTRODUCTION

The Baby-Friendly Hospital Initiative (BFHI), launched in 1991, is an effort by UNICEF and the World Health Organization to ensure that all maternities whether free standing or in a hospital, become centers of breastfeeding support. A maternity facility can be designated 'baby-friendly' when it does not accept free or low cost breast milk substitutes, feeding bottles or teats, and has implemented specific guides developed by UNICEF and the World Health Organization¹.

Breast milk is the best food for babies. It contains the right amount of nutrients, in the right proportions, for the growing baby^{2,3}. Various researches have proven that breastfeeding has enormous advantages not only to infants and mothers, but also to families and society. These include health, nutritional, immunologic, developmental, psychological, social, economic, and environmental benefits^{2,4}. Despite advances in science and manufacturing, infant formula have yet to duplicate the complexity of breast milk which changes as the baby's needs change^{2,3}.

Epidemiologic studies in the United States, Canada, Europe, and other developed countries⁴, have reported that breastfeeding decreases the incidence and/or severity of diarrhea^{2,5,6}, respiratory infection^{2,3,7}, otitis media^{2,8}, bacterial meningitis^{2,9}, botulism¹⁰, urinary tract infection¹¹ and necrotizing enterocolitis¹². A recent study

in Italian of infants aged 1-18 months admitted to an infant ward, shows that fewer breastfed infants were contracted with rotavirus infection i.e., 10.6% v 32.4%, and none of these became symptomatic^{3,13}. Another study has shown that human milk lactadherin prevents symptoms in breastfed infants infected with rotavirus by binding to the virus and inhibiting its replication^{3,14}.

Breastfeeding may also have health benefits for mothers by increasing the levels of oxytocin, resulting in less postpartum bleeding and more rapid uterine involution^{2,15}. Frequent breastfeeding suppressed ovulation; therefore less menstrual blood is lost over the months after delivery¹⁶. Studies demonstrated that lactating women have an earlier return to pre-pregnant weight^{2,17}. Furthermore, breastfeeding reduced the risk of pre-menopausal breast cancer^{2,18} and may also decreased the risk of uterine and ovarian cancer^{2,19}.

In addition, small changes in prevalence or disease severity would have a major impact on the health of the nation³. The US Department of Agriculture, Food and Nutrition chose otitis media, gastroenteritis and necrotizing enterocolitis, and estimated that the United States would save a minimum of US\$3.6 billion dollars a year if breastfeeding rates increased by 10% at initiation and by 20% at the age of six months^{3,20}. Despite the demonstrated benefits of breastfeeding, only 59.4% of women in the United States were breastfeeding either exclusively or in combination with formula feeding at the time of hospital

discharge; only 21.6% of mothers were nursing at 6 months, and many of these were supplementing with formula^{4,21}. A study in United States reported that the highest rates of breastfeeding are observed among higher-income, college-educated women >30 years of age^{4,21}. However, other studies have reported that educated mothers tend to discontinue breastfeeding earlier than their illiterate counterparts^{22,23}. Working mothers have been observed to find it difficult to breastfeed their infants and wean them quite early, while those working in the organised sector tend to breastfeed them longer and frequently^{22,23}. A recent study among the illiterate and low income migrants in Brazil reported only a little over half of the pregnant women had received any information on newborn healthcare. Even though almost all the pregnant women declared their intention to breastfeed, less than half had a concrete response regarding how long to do it for²⁴. This information may prove useful in establishing new promotional and educational programs in relation to breastfeeding²⁴.

Some of the obstacles⁴ to the initiation and continuation of breastfeeding include physician apathy and misinformation²⁵, insufficient prenatal breastfeeding education²⁶, disruptive hospital policies²⁷, inappropriate interruption of breastfeeding²⁵, early hospital discharge²⁸, lack of timely routine follow-up care and postpartum home health visits²⁹, maternal employment³⁰, lack of broad societal support³¹, media portrayal of bottle-feeding as normative³² and commercial promotion of infant formula through distribution of hospital discharge packs, coupons for free or discounted formula³³.

Several knowledge, attitude and practice (KAP) studies on breastfeeding have been conducted by researchers worldwide including in United States^{38,39}, Brazil²⁴, Singapore³⁶ and Malaysia³⁵. These studies have been done among breastfeeding mothers^{24,36}, pediatricians³⁹, nurse practitioners and nurse midwives³⁸ and medical students³⁵. The results of these studies can be used to improve health promotion on breastfeeding to mothers at antenatal clinics by enhancing the interaction between breastfeeding mothers, families and pediatricians³⁹. In order to achieve the objective, there is a need for experienced and knowledgeable healthcare providers who are willing to assist breastfeeding mothers. Therefore, it is important to identify their educational needs regarding breastfeeding by recommending that the breastfeeding component to be integrated in the medical curriculum^{35,39}.

This study has been conducted to determine if the young mothers have the satisfactory knowledge, attitude and practice of breastfeeding before implementing the Baby Friendly Hospital Initiative (BFHI) activities. The knowledge, attitude and practice of breastfeeding among mothers are crucial in the preservation of breastfeeding culture in Malaysia.

METHODOLOGY

Questionnaires were sent out to private hospitals in Malaysia. Seven private hospitals responded and all were taken as samples. They were not named to prevent discrimination and to respect their privacy. There were 2 hospitals in Kuala Lumpur, 1 in Selangor, 1 in Kelantan, 1 in Johor, 1 in Pahang, and 1 in Perak.

A structured interviewer administered questionnaire²³, was given to all mothers (n=252) visiting the antenatal/postnatal clinic of the hospitals within two weeks in October 2002. They were mothers who had given birth to at least one child and the age of the youngest child was less than 2 years old. The questions were asked face to face to the mothers and their verbal answer was then marked against the stems given in the questionnaires. Any answers not in the questionnaires were noted under other response. For the practice component, the mothers were given a doll or used their baby to demonstrate how they positioned the baby for breastfeeding. The interviewer then marked against the checklist given for the practice component.

The answers were collected and analyzed using SPSS version 13.0. The results are presented in the form of frequency tables and charts.

RESULTS

A total of 252 respondents participated in this study. Majority were Malays (n=145, 57.5%) followed by Chinese (n=88, 34.9%), Indian (n=14, 5.6%) and others (n=2%).

Table 1 shows the distribution of respondents by feeding method (results of all hospitals was consolidated into one table).

Table 1. Respondents by feeding method (N=252)

Feeding method	Para 1 n=139		> Para 1 n=113	
	Freq	%	Freq	%
Breastfeeding	47	34	34	30
Mixed Feeding	79	57	70	62
Formula Feeding	13	9	9	8

The results showed that the most common method of infant feeding was mix feeding of breastfeeding and formula. Only about 30% of mothers were fully breastfeeding. The Malaysian government's campaign to encourage breastfeeding seemed to have an impact on mothers that use private hospital services. Less than 10% of mothers were feeding using formula only.

Table 2 shows the number of mothers who received advice by the healthcare providers on breastfeeding whether in antenatal or postnatal clinic in each hospital.

Only 3 hospitals had a respond rate of above 50% in the provision of advice on breastfeeding to mothers whether

antenatal or postnatal. The criteria for passing the Baby Friendly Hospital assessment for this part of the test is the provision of lactation management knowledge to 80% and above of mothers visiting the antenatal and postnatal clinic. Following that criteria, only one hospital (PH6) would pass this criteria.

Table 2. Respondents by advice on breastfeeding given by healthcare providers in each hospital

	PH1 n=13		PH2 n=20		PH3 n=30		PH4 n=51		PH5 n=49		PH6 n=45		PH7 n=44	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Antenatal	0	0	7	35	2	6	24	47	2	4	27	60	8	18
Postnatal	0	0	7	35	6	20	14	28	2	4	12	27	6	14
None	13	100	6	30	22	74	13	25	45	92	6	13	30	68

Table 3 shows the distribution of respondents according to knowledge on the benefits of breastfeeding. The respondents were prompted to tell the benefits that they knew and the interviewer then ticked the appropriate respond. The interviewer never asked the questions directly for the respondents to answer. All responses were recorded and more than one respond was allowed. Respondents were subdivided into Para 1 and Para 2 and above to see if there was any significant difference in the two groups. This was done to see if experience had anything to do with knowledge on the benefit of breastfeeding.

The results showed that the majority of mothers (n=208, 82%) knew that breast-milk contains antibodies. However, only half think that breastfeeding is easy (n=125, 49%) and prevents illness (n=151, 60%). Most mothers (n=208, 82%) did not relate breastfeeding as being environmental friendly. Majority (n=203, 81%) were unaware of breastfeeding's contraceptive effect if practised exclusively, the child was below 6 months and there is no return of menstruation post-delivery.

Using Chi square test it was found that there was no significant difference in knowledge for first time mothers compared with mothers who had two or more children (p>0.05). Therefore there was no further knowledge gained from having more children with reference to breastfeeding knowledge.

Table 5 shows the distribution of respondents according to their attitude on breastfeeding practise.

The majority of mothers (n=84, 33%) felt that breastfeeding was neither hard nor easy. Using the Chi square test it was found that there was no difference between mothers with one child compared to mothers with two or more children with reference to the ease of breastfeeding (p>0.05)

Table 6 shows the distribution of respondents by person influencing choice of feeding practise. The respondents were allowed more than one choice.

Table 3. Respondents by knowledge on the benefits of breastfeeding based on positive answer

Breastfeeding Benefit	Right answer	
	Freq	%
Contains antibodies	208	82.0
Easy/Convenient	125	49.0
Prevents Illness	151	60.0
Smarter Baby	98	39.0
Contraceptive effect	49	19.0
Protects mother from cancer	90	36.0
Bonding	120	48.0
Economical	113	45.0
Environmental Friendly	44	17.0
Total	998	44.8

Table 4. Comparison of knowledge on the benefits of breastfeeding between first time mothers and mothers with two or more children

Breastfeeding Benefit	Para 1		> Para 1	
	Freq	%	Freq	%
Contains antibodies	119	22.0	89	19.5
Easy/Convenient	68	13.0	57	12.5
Prevents Illness	87	16.0	64	14.0
Smarter Baby	57	11.0	41	9.0
Contraceptive effect	21	4.0	28	6.0
Protects mother from cancer	50	8.5	40	9.0
Bonding	66	12.0	54	12.0
Economical	53	9.5	60	13.0
Environmental Friendly	21	4.0	23	5.0
Total	542	100.0	456	100.0

Table 5. Respondents by ease of breastfeeding practise

Item	Para 1		> Para 1		Total	
	Freq	%	Freq	%	Freq	%
Very Easy	27	19.4	23	20.9	50	20.1
Easy	33	23.7	33	30.0	66	26.5
Not so easy, not so hard	53	38.1	31	28.2	84	33.7
Quite difficult	23	16.5	17	15.5	40	16.1
Difficult	3	2.1	9	8.2	12	4.8
Total	139	100.0	110	100.0	249	100.0

Table 6. Respondents by person influencing choice of infant feeding practise

Person	Frequency n=252	Percentage %
Doctors	36	14.3
Nurses	40	15.9
Own beliefs	209	82.9
Husband	42	16.7
Mother/mother-in-law	68	27.0

Table 6 shows that most mothers (83%) are influenced by their own beliefs with reference to the choice of infant feeding method. This would be influenced by her knowledge of infant feeding practise. If a mother was empowered with the knowledge of breastfeeding from the start or before pregnancy, it would encourage her to attempt breastfeeding when she delivers her baby. Doctors have the least influence on infant feeding practise.

Table 7 shows the distribution of respondents by practical aspects of breastfeeding. The mothers were asked to show how they positioned their babies at the breast.

The results showed that all practical aspects of breastfeeding were below 80% of correct practice, which is the passing mark for passing the Baby Friendly Hospital assessment. Much work needs to be done to teach mothers the correct positioning and latching on in order to be successful in breastfeeding.

DISCUSSION

Generally, this study showed that although many mothers knew about the practice of breastfeeding (above 50% but below 80% in practice skills), only 40% chose to exclusively breastfeed. Our data showed no difference in the knowledge on benefit of breastfeeding among first time mothers as compared to those who had two or more children. According to the National Health and Morbidity Survey (NHMS-1996) conducted by the Ministry of Health of Malaysia (MOH) in 1996, the overall prevalence of children ever breastfed was 88.6%³⁴. Another recent survey among the Singaporean Chinese,

Table 7. Respondents by signs of good positioning and attachment

Positioning	Frequency (n=252)	Percentage %
Baby to mother	180	71.4
Stomach to stomach	182	72.2
In one straight line	142	56.3
Baby's head position	141	56.0
Attachment	Frequency	Percentage
Baby's mouth wide open	188	74.6
Areola area	157	62.3
Full rounded cheeks	146	57.9
Baby's chin touches breast	159	63.1

Malay and Indian populations reported that about 94.5% of the mothers attempted breastfeeding. At 1 month, 71.6% were still breastfeeding, 49.6% continued to do so at 2 months, and 29.8% persisted until 4 months. By 6 months, the breastfeeding prevalence rate fell to 21.1%. However for most mothers, breastfeeding is combined with supplementary feeds of powdered milk. Only 7% breastfed exclusively at 4 months and almost zero at 6 months³⁶. The Copenhagen cohort study found a positive association with maternal education and age, and a negative association with the amount of formula given at the maternity ward. According to the study, 79% of the mothers with higher school education were still breast feeding 6 months after delivery as compared to 29% with a low school education³⁷. Factors such as understanding of breastfeeding benefits, advice from health professionals and previous breastfeeding experience need to be address to promote breastfeeding to women³⁷.

Interestingly, this study showed that most mothers were influenced by their own beliefs with reference to the choice of infant feeding method (83%). Therefore, support of healthcare providers who are directly involved with breastfeeding mothers may enhanced the success of breastfeeding. However, our data showed that only three hospitals had a respond rate of above 50% in the provision of advice on breastfeeding to mothers whether antenatal or postnatal. Only one hospital had a respond rate of 80%

and above in the provision of lactation management knowledge. A recent study among paediatric physician practitioners and advanced nurse practitioners showed that 95% agreed that it was their role to recommend breastfeeding to expectant mothers, however only 77% of physicians and 52% of advanced nurses believed that it was within the scope of their role to assist women with breastfeeding in the hospital³⁸. Other study among active fellows of American Academy of Paediatrics revealed that only 65% recommended exclusive breastfeeding for the first month of life and 37% recommended breastfeeding for one year³⁹. Another study showed that only 73% of paediatric practitioners and 75% of paediatric residents believed that breastfeeding is the most beneficial form of infant nutrition⁴⁰. Support from experienced and knowledgeable healthcare providers in assisting breastfeeding mothers may contribute to the increase of breastfeeding rates.

Medical students, as future healthcare providers may also play important role to the success of breastfeeding. A recent study conducted in a public university in Malaysia reported that only 37.3% of the medical students had adequate knowledge, while 62.7% of them had inadequate knowledge concerning breastfeeding. More than half i.e., 57.1% of the students had positive attitude towards breastfeeding while 42.9% of them showed negative attitude³⁵. As medical students are the future healthcare providers, it is important that breastfeeding management should be included in their course syllabus.

CONCLUSION

This study has shown that although most mothers know about the practice of breastfeeding, only 40% chose to exclusively breastfeed. Another study should be conducted as to the reasons why mothers choose to mix feed or formula feed. Not enough breast-milk can be avoided with correct positioning and attachment. More effort should be geared to equip antenatal, maternity ward and postnatal nurses with adequate knowledge to help mothers to breastfeed. This is because nurses are in contact with the patient more often than the doctor. Since this study shows that doctors have minimal influence on feeding choice, time should not be wasted in trying to gain their support on the 'baby-friendly' issue. That effort is best left to medical schools to incorporate lactation management as one of the subjects taught in the medical curriculum.

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