Pakistan Journal of Social Sciences 5 (6): 587-590, 2008
ISSN: 1683-8831

Effects of Mothers' Type of Feeding During Their Infancy on Their Infants Feeding

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Abstract: A woman's attitude towards breastfeeding and how she chooses to feed her baby are closely linked to the woman's culture. In evaluating the cultural impact on breastfeeding, one can ask the woman about where she grew up and if her mother, aunts or friends have breastfed a baby and what support from family or friends they had. Although, it has been generally accepted that breastfeeding has valuable effects on nutritional, immunological and emotional aspects of infants' health. However, the tendency of some mothers toward bottle-feeding should not be denied, therefore we planned this study to find out how families cultural factors and specially previous feeding of mothers during their infancy can influence their adherence to breastfeeding of their infants. This is a cross-sectional and analytical study on 200 healthy infants at the age of 5 to 6 months who had come in Infants' Growth-Surveillance Clinic of Tabriz Children's Hospital (affiliated to Tabriz University of Medical Sciences) during one year from March 2005 to March 2006. The eligible infants were consecutively enrolled and allocated in two groups upon their type of feeding: breastfed versus bottle-fed, every volunteer mother passed an interview with a trained medical staff that gathered and recorded the needed data by completing a questionnaire. Selection and allocation of participants was terminated for each group when it reached to a total number of 100 infants. Total 72% of mothers in breastfed group themselves had received breastfeeding during infancy, while only 41% of mothers in bottle-fed group had previous history of being breastfed. This difference is statistically significant: $p = 0.0001$, it shows a meaningful correlation between mothers' feeding during their infancy and their decision in choosing the feeding method of their own infants.The most important causative factors for beginning of bottle-feeding in this study was revealed to be lack of maternal motivation for breastfeeding (reported in 69% of mothers of bottle-fed infants) and also physicians' prescription of formula (in 22%). Breastfeeding rates can be increased by appropriate cultural background and skilled lactation support, worksite facilities for breastfeeding mothers, accommodation for human-milk feeding in child care settings and appropriate legislation.

Key words: Breastfeeding culture, nursing mothers, bottle-feeding, maternal history

INTRODUCTION

Culture is defined as practices, beliefs, values and norms which can be learned or shared and which guide the actions and decisions of each person in the group. A woman's attitude towards breastfeeding and how she chooses to feed her baby are closely linked to the woman's culture. Anyone working with pregnant women can assess the culture of each individual woman and how it impacts her decision to breastfeed. In evaluating the cultural impact on breastfeeding, several key questions can be asked. One can ask the woman about where she grew up and if her mother, aunts or friends have breastfed a baby. What kind of family organization (roles, decision making) does she live in? What does she know about infant feeding? Did anyone in the family breastfeed? What support from family or friends does she have? Are there any rituals, special values, or taboos? An effective way to evaluate the cultural values or ritual is to consider if it is beneficial, harmless, or uncertain in outcome.

Breastfeeding is the perfect way to provide the best food for a baby's first 6 months of life, benefiting children the world over. But breastfeeding is so much more than food alone; breastfeeding protects babies from diarrhea and acute respiratory infections, stimulates their immune systems and improves response to vaccinations and contains many hundreds of health-enhancing molecules, enzymes, proteins and hormones (Yahya, 1999).

Attainment of this goal requires, in many countries, the reinforcement of a "breastfeeding culture" and its vigorous defense against incursions of a "bottle-feeding culture." Many mothers neither exclusively breastfeed for the first 6 months of the baby's life nor continue breastfeeding for the recommended two years or more and instead replace breast milk with commercial or

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other substitutes. Formula feeding is expensive and carries risks of additional illness and death, particularly where the levels of infectious diseases are high or preparation and storage of these substitutes are not carried out properly. Many studies indicate that a non-breastfed child living in disease-ridden and unhygienic conditions is between 6 and 25 times more likely to die of diarrhea and four times more likely to die of pneumonia than breastfed infants. A recent study of post neonatal mortality in the United States found a 25% increase in mortality when infant were not breastfed (UNICEF, 2004). Breastfeeding offers advantages for children that cannot be duplicated by any other form of feeding.

The benefits of breastfeeding begin from the first moments after childbirth and last for many years after breastfeeding ends (USBC, 2002). Those who are breastfed are healthier and have scores higher on cognitive and IQ tests at school age and also on tests of visual activity (Anderson *et al*., 1999; Lykke *et al*., 2002), are less likely to suffer from infectious illnesses and their symptoms (Heining, 2001), have lower risk of 2 most common inflammatory bowel diseases (Heining and Dewey, 1996), suffer less often from some forms of cancer (Davis, 1998), are significantly protected against asthma and eczema (Gdalevich *et al*., 2001) and may have a lower risk of obesity in childhood and adolescence (Butte, 2001). However, the tendency of some mothers towards bottle-feeding cannot be denied; besides, the mothers' cultural factors including their ignorance about advantages of breastfeeding play a significant role in this tendency. Therefore, we planned this study to find out how family's cultural factors and specially previous feeding of a mother during infancy can influence her adherence to breastfeeding of her own infants.

MATERIALS AND METHODS

This is a cross-sectional and analytical study on healthy infants at the age of 5 to 6 months who had come into Infants' Growth-Surveillance Clinic of Tabriz Children's Hospital (affiliated to Tabriz University of Medical Sciences) during one year from March 2005 to March 2006.

Two hundred eligible infants were consecutively enrolled and allocated in two groups upon their type of feeding: breastfed versus bottle-fed, every volunteer mother passed an interview with a trained medical staff that gathered and recorded the needed data by completing a questionnaire. Selection and allocation of participants was terminated for each group when it reached to a total number of 100 infants. Followings are the exclusion criteria:

- Birth weight of less than 2500 g (low birth weight).
- Prematurity (gestational age of less than 37 weeks).
- Products of multifetal pregnancy.
- Presence of cardiac, pulmonary, neurological, metabolic and musculoskeletal anomalies.
- Infants who had been admitted to hospital for more than one week during their neonatal period.
- Mothers who didn't know what type of feeding they had received during their infancy.
- Mothers who had been admitted to hospital for more than one week during their puerperal period.
- Infants of single parent families.
- Working mothers.

Collected data were analyzed by EPI-6 software using Chi-square test for comparison of variables between two groups. Each difference was considered to be statistically meaningful when p value was less than 0.05 .

RESULTS AND DISCUSSION

We found that mothers who had received breastfeeding during their infancy were significantly more frequent in the breastfed group of infants than in bottle-fed group ($p = 0.0001$). Reversely, those mothers who had received bottle-feeding during their infancy were meaningfully more frequent in the bottle-fed group of infants than in breastfed group ($p = 0.0001$) Table 1.

These show that it is more likely for every mother to choose the same type of feeding for her infant as she has herself received during infancy. The frequency of childbirth methods (Cesarean section versus vaginal delivery) showed no significant difference between two groups, as Cesarean section was the dominant method in both the groups ($p = 0.81$).

No mother who had been fed by cow's milk or formula was aware of the reason for being deprived from breastfeeding during her infancy. Table 2 shows all reasons mentioned by mothers for their tendency to bottle feeding or cessation of breastfeeding.

As an answer to the question: "Why do you think that your breast milk is not efficient?" most mothers declared the following misunderstandings:

- Few drops or even no milk ejection while.
- Milking the breast.
- To possess dilute breast milk.
- No breast engorgement or laxity of the breast.

Only 5% of mothers claimed that their physician recommended bottle-feeding with formula despite of their possession of enough breast milk and being trained for

Table 1: Influence of mother's type of feeding during their infancy on their own infant's feeding

Infant's feeding (studied groups)	Mothers' feeding during their infancy		Type of delivery		Total
	Breastfed	Bottle-fed	Cesarean	Vaginal	
Breastfed	72	28	84	16	100
Bottle-fed	41	59	91	9	100
p-value		0.0001		0.81	

Table 2: The reasons declared by mothers for their interest in bottle-feeding

Reason for bottle-feeding	Percent of mothers
Lack of breast milk or just few drops	69
Infant's restlessness and crying interpreted as hunger due to inadequate milk	26
Recommended by physicians((They perceived that mother's milk supply as inadequate)	22
Infant's poor weight-gain	18
Admission of infant to hospital during neonatal period	5
Severely fissured nipples	4
Abnormal nipples	3
Breast abscess	3
Mother's medical conditions that caused drug consumption	2
Postpartum depression	2

proper breastfeeding, just for treatment of their infants' failure to gain weight. Although all mothers in this study believed that breast milk is the most ideal food for infants but with few exceptions, no mother knew its valuable advantages over formula.

Mothers' unsuccessful lactation after being discharged from hospital, that now takes place earlier than ever in the past (12-24 h post-delivery), is associated with following causes (Wagner, 2006):

- Shortage of mothers' knowledge about.
- Advantages of breastfeeding.
- Ignorance of mothers about correct breastfeeding techniques.
- Inadequate resources for assessment of breastfeeding performance and discovering its problems.
- Easy and broad availability of infant's formula in community.

Our study showed that in comparison with bottle-fed mothers, those mothers who had previously received breastfeeding during their infancy are more successful in breastfeeding of their own infants. One of the most important biological tasks of mothers is to breastfeed their own baby; the health services of any country should not be to blame if a mother does not want to accomplish this valuable biological task (Lawrence and Lawrence, 2005). Unfortunately, 22% of bottle-fed cases in our study are the result of physicians' recommendation often without a thorough investigation in order to prove its necessity.

Although, the important advantages of breast milk (as the ideal source of infant nutrition) has been emphasized in medical education since many years ago and our national health services have done too much efforts to support breastfeeding in our country and therefore physicians are expected to transfer this insight to mothers; however, our study cleared that we can not be hopeful about any mother to be effectively supported for breastfeeding by a physician who does not believe in it. Although, in recent decades more women are choosing to breastfeed; however, they are now supported by a generation of health professionals who are experts about formula feeding. Indeed, A lack of community knowledge about breastfeeding and shorter hospital stays will lead to more breastfeeding failures (Wagner, 2006; Lawrence and Lawrence, 2005).

Almost, all of the reasons for breastfeeding failure declared by mothers in our study (leading them to bottle-feeding) are the results of misperception and/or misinterpretation of facts about breastfeeding performance including milk synthesis and ejection and the baby's latching on and suckling.

Oxytocin level in mother's blood is significantly elevated during 15, 30 and 45 min after delivery, coinciding with the detachment and expulsion of the placenta; concomitantly the mother and her baby can enjoy the first experience of successful and very pleasant episode of breastfeeding. The infant is alert soon after delivery and has not entered the deep sleep period that ensues approximately 6-12 h after birth. Besides, personnel are more available to encourage and assist the mother in initiating breastfeeding during this immediate postpartum period. Successful latch-on of the infant during this period enhances a mother's confidence that she can breastfeed. This early breastfeeding session typically helps instill confidence in the mother. Early problems can be identified and the mother can be offered assistance to facilitate the lactation process (Wagner, 2006; Neifert, 1999). Hence, most newborn infants in our area are delivered by cesarean section, causing administration of anesthetics or narcotic analgesics during delivery that induces sleepiness in both

mother and her infant immediately after child birth; it is very likely for them to miss the first and best time for beginning of breastfeeding (Wagner, 2006; Neville, 1999).

Although, we didn't find any meaningful difference in rate of successful breastfeeding between mothers with these 2 different methods of delivery, however, those drugs and techniques of anesthesia should be recommended for cesarean sections that do not impose sleepiness on mother or her baby.

The father's assistance and supportive environment are strongly associated with the success of breastfeeding. In a study of 224 mothers in 1999 who were interviewed regarding their feeding choice, the father had a key role in the initiation of breastfeeding. When the father supported breastfeeding, more than 75% of the mothers chose to breastfeed; in contrast, when the father did not support breastfeeding, only 2% of the mothers chose to breastfeed (Wagner, 2006). Therefore, the better supportive environment around the mother and her newborn the more success in breastfeeding will be gained.

CONCLUSION

In general, breastfeeding provides ideal nutrition despite of any other social or economic disadvantages that may exist around the child. Greater numbers of women are now choosing to initiate breastfeeding, but ethnic and social disparities persist. Breastfeeding rates can be increased by appropriate cultural background and skilled lactation support, worksite facilities for breastfeeding mothers, accommodation for human-milk feeding in child care settings and appropriate legislation.

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