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Original Article

Breastfeeding practices in mothers: a qualitative study

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Abstract

Background Despite the WHO and UNICEF recommendations, the well-known breastfeeding benefits, and the efforts to promote and support breastfeeding, exclusive breastfeeding by Indonesian mothers remains low and contributes to high infant mortality rates.

Objective To elucidate the factors that influence mothers' choices for infant feeding

Methods This qualitative study was conducted as part of a nation-wide survey. The study included 36 in-depth interviews of mothers with infants aged 0-11 months, and health care professionals, including general practitioners, pediatricians, and midwives. This study was performed between October – November 2010 in both rural and urban areas of 4 provinces in Indonesia.

Results We found that most mothers intended to breastfeed and had positive perceptions of breastfeeding. However, mothers faced many challenges in the practice of exclusive and proper breastfeeding. Additionally, the perceived definition of exclusive breastfeeding varied among the participants, leading to non-exclusive breastfeeding attitudes. The most frequent reasons for mothers to introduce additional milk formula or food were the perception of an inadequate milk supply, infant dissatisfaction or fussiness after feeding. Different perceptions were also demonstrated in different regions and the varying levels of socioeconomic status. Health care practitioners (HCPs) were the most reliable source for giving adequate information, but unfortunately, they were not easily accessible and provided inconsistent information. Consequently, closely-related family members were the major contributors of information to a mother's choice of infant feeding, because they were easily accessible.

Conclusion Factors influencing mothers in their breastfeeding practices are their basic knowledge, demographic and socio-economic status, as well as the availability of support from closely-related family members, friends, and HCPs. **[Paediatr Indones. 2014;54:35-41.]**

Keywords: *breastfeeding practices, Indonesian mothers, and qualitative study*

Breastfeeding and human milk are the ideal source for infant feeding and nutrition.[1] Therefore, every infant should be exclusively breastfed for the first six months, and thereafter for as long as the mother and child wish, while receiving additional appropriate and sufficient weaning food.[1,2] This practice is also recommended by the WHO and the UNICEF[2] and is based on recently published studies and systematic reviews.[1-3] However, WHO estimated that only 35% of children are breastfed exclusively from birth to their fifth month of age.[2] Similarly, the 2007 Indonesian Demographic and Health Survey documented that only 32% of Indonesian infants aged 0-5 months were exclusively breastfed.[4]

Over the past 14 years Indonesia's infant mortality rate declined significantly from 68 out of every 1,000 births in 1991 to 34 out of every 1,000 births in 2005, yet it remains high among the ASEAN countries.[4,5] Exclusive breastfeeding practices could reduce infant mortality by 13%[2] and is expected to continue contributing to the Millennium Developmental Goal of reducing the Indonesian infant mortality to 23 out

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of 1000 births by 2015.[5] As such, continuous efforts have been made to promote breastfeeding practices in Indonesia. However, despite these efforts, the number of exclusively breastfed infants remains low.

In order to identify the obstacles to attaining this goal, the Indonesian Pediatric Society conducted a nationwide survey to elucidate the factors that influence breastfeeding practices in the society. Using these data, specific and appropriate actions can be implemented to promote exclusive breastfeeding and eventually gain acceptance of breastfeeding as the norm in our society.

Methods

This study was a part of a nationwide survey which included qualitative and quantitative studies. The qualitative study included a total of 36 in-depth interviews with mothers (22 interviews), and local health care staffs (14 interviews). This study was conducted from October to November 2010 in both rural and urban areas of four provinces in Indonesia.

In-depth interviews (IDI) were performed in order to identify individual opinions, behavior, experiences in breastfeeding, and to explore factors influencing mothers in the practice of breastfeeding. Participants were informed about the survey contents with regards to infant nutrition prior to the interview. Although each area of the four provinces covered in this study have their own local language, we applied Bahasa Indonesia for the interviews, since it is the official language of this country. In-depth interviews were conducted using a semi-structured guide by trained interviewers, and were tape recorded for further transcription and analysis.

We included mothers of breastfeeding infants who were aged less than 12 months, health care professionals, pediatricians, general practitioners, nurses, or midwives. Mothers were categorized into 3 groups according to infants' age: 0-2 months, 3-5 months, and 6-11 months. Based on their socioeconomic status (SEC), the mothers were also divided into 4 levels as follows: SEC A, with household expenditures of IDR 2,500,000 to 5,000,000 per month; SEC B, IDR 1,750,000-2,500,000 per month; SEC C, IDR 900,000-1,750,000 per month; and SEC D IDR 600,000-900,000 per month (USD 1 is approximately IDR 9,700). This study was approved by the University of Indonesia Research Ethics Committee.

Results

During the study period, 36 subjects from urban and rural areas were interviewed. The distribution of participants is shown in **Table 1**.

Study participants generally considered breast milk to be the best nutrition for infants, because it contains nutrients favorable for brain development, infant growth, and body immunity.

"My first baby was given milk formula and she was frequently sick. I breastfed my second and third children and they were healthy." (SEC B, South Celebes, urban)

Breast milk was also mentioned by participants to be safe food for infants (**Table 2**).

Table 1. Distribution of the in-depth interviews participants in the 4 provinces.

Provinces	Local health care staff mothers (n=14)		Non health care staff mothers (n=22)		
	Pediatrician/ GP	Nurse/ Midwife	Child aged 0-2 months	Child aged 3-5 months	Child aged 6-11 months
DKI Jakarta (urban)	1 (pediatrician)	1	2	1	1
North Sumatra (urban)	1 (pediatrician)	1	1	1	1
North Sumatra (rural)	1 (GP)	1	1	1	1
South Celebes (urban)	1 (pediatrician)	1	1	1	1
South Celebes (rural)	1 (GP)	1	1	1	1
South Kalimantan (urban)	1 (pediatrician)	1	1	1	1
South Kalimantan (rural)	1(GP)	1	1	1	1
Total	7	7	8	7	7

*GP: general practitioner

"Breast milk is produced by my own body, so it does not contain any artificial substances, and preservatives. Therefore, it is safe for my baby." (SEC C, North Sumatra, urban)

The benefits and nutrition of breast milk were the factors most frequently acknowledged. However, most perceptions were normative and superficial, as most mothers could not explain the benefits of breast milk in detail.

Three different breastfeeding practices, *partially exclusive breastfeeding, almost exclusive*, and *exclusive breastfeeding* were, interestingly, all considered to be exclusive breastfeeding. Mothers who practiced *partially exclusive breastfeeding*, practiced breastfeeding with additional food. They believed that breast milk alone was insufficient for their infants. The babies'cues, such as crying and fussiness were considered to be signs of hunger, so additional food was introduced to calm them. Mothers who practiced *almost exclusive breastfeeding*, predominantly gave breast milk, with formula milk administered only once, mostly in the first days of life, or occasionally. They believed that when they were waiting for breast milk production in the first days of life or when they were away from home, administration of formula milk was needed for their infants' survival. The third group was the *exclusively breastfeeding* mothers, who believed that breast milk is the ultimate nutrition for their infants,

Table 2. Mothers' reasons to practice exclusive breastfeeding or combination feeding.

Exclusive breastfeeding	Other infant feeding methods
Nutrition	**Nutrition**
• Provides complete source of nutrition	• Combining food with breast milk gives more complete nutrition
• Has natural ingredients which cannot be produced by a manufacturer	• The infant is full for a longer time
	• Provides specific nutrition not available in breast milk
	• Increases infant's appetite
Availability	**Availability**
• No preparation needed	• Other family members can participate in feeding the infant
• Always available	• Easy to monitor
• Requires a more scheduled life	
Cost	**Cost**
• Saves money	• Affordable
Benefits	**Benefits**
• Improve immune system	• Less embarrassing to feed the baby in public
• Provides better emotional bonding	• Longer times between feedings
• Easy to digest	
• Optimize child's intelligence	
Suitability	
• Safe and always sterile	
• At the correct temperature for infant feeding	

Table 3. Mothers' varying concepts on breastfeeding practices.

Most readily believed concepts that most mothers are aware of	Less readily believed concepts that most mothers are aware of	Less readily believed concepts that most mothers are not aware of
• Breast milk is the best possible nutrition for children.	• Every mother can breastfeed.	• Even when mothers do not eat well, they will produce good breast milk.
• Breast milk protects infants from infectious and chronic diseases.	• The ability to breastfeed does not depend on mother's breast size.	• Breast milk is naturally clean, and cannot spoil
• Breast milk is the easiest food for infants to absorb.	• Breastfeeding should not be decreased when introducing complementary feeding.	• Breast milk color and composition change during each feeding.
• Breast milk cannot be produced artificially or duplicated.		• Most nipple soreness is caused by improper latching on by the infant
• Breastfeeding brings no harm to mothers, but may benefit mothers		• Breasts will always produce milk if the baby is fed frequently and appropriately.
		• Breastfeeding mothers should eat a balanced diet and avoid certain foods that can stimulate allergic reaction

were always confident in their breast milk production, and ensured that their infants would be breastfed in spite of any inconveniences encountered.

Concerns about exclusive breastfeeding for the first six months of life

There were concerns about feeding infants with only breast milk for a full six months. Most mothers believed that exclusive breastfeeding for six months was only for those lucky enough to have sufficient breast milk production, which they believed was not the case for all mothers. Some mothers also mentioned that their infants were still fussy after being breastfed, and they thought that infants, like other older children and adults, need a balanced diet, including solid and liquid food. Six months was considered to be too long for giving infants breast milk alone and mothers felt that they were depriving their child of needed nutrition.

"Adults need food and drinks to survive, so do the babies." (SEC B, Banjarmasin, urban)

External factor' and sources of information on breastfeeding or infant feeding

External factors that influenced mothers in practicing breastfeeding were their husbands, mothers or mothers-in-law, health care professionals, and society. In some Indonesian societies, breastfeeding is not encouraged. For instance, in Jakarta, most young couples lived separately from their parents, therefore, their neighbors had a greater influence on their daily lives, including on the practice of breastfeeding or infant feeding. Mothers living in Medan had the most pressure against breastfeeding, since members of society tend to look up to mothers who gave breast milk substitutes, believing that giving formula milk is a sign of prosperity. In contrast, a mother in Makassar, stated: "Here, breastfeeding has been practiced since long time ago, so it is the norm for a baby to be breastfed. Breast milk is best for my baby and she is healthy consuming it."

Mothers reported that they obtained information on breastfeeding or infant feeding from different sources, such as parents, parents-in-law, peer groups, media, health care providers, and the community. They actively looked for and compared a wide range of information sources. Health care providers (HCPs), such as doctors and midwives were considered to be the most reliable source, however, their accessibility was limited. On the other hand, parents, parents-in-law or friends were mentioned as secondary reliable sources of information, and the easiest to access.

Although HCPs were expected to be the best source of adequate information on infant feeding, the information they gave was not extensive and not yet standardized. As such, their practices lead to the propagation of improper concepts and myths about breastfeeding. Additionally, several hospitals introduced infant formula in the first days after birth, especially for mothers who were perceived as not having sufficient milk production. Hospitals also lacked support and information for mothers, as well as provided many items with infant formula advertisements.

Information on complementary feeding was received mainly by mothers' self-observation, word of mouth (through family members, parents, parents-in-law, friends, or neighbors), and from the media (television, books, newspapers, or magazines). In deciding when to introduce complementary food, most mothers tended to respond to their infants' feeding cues.

"I started giving banana to my 3-month-old baby when she showed interest in what I ate". (SEC C, Banjarmasin).

Different concepts of breastfeeding practices among Indonesian mothers

In order to assess the mothers' knowledge on the basic concepts of breastfeeding, we ask mothers to define the term, "exclusively breastfeeding". Interestingly, and despite the efforts of breastfeeding campaigns, a variety of definitions were cited, including, "breast milk given without any additional food or drink, not even water for 6 months", "breastfeeding without giving infant formula, but any other food may be administered", "providing the infants breast milk as the main source of their nutrition but other food or drink may be given if the mother is away". Thus, these discrepancies in the definition of exclusive breastfeeding among mothers affected their practice of it.

Mothers believed that only if they had a good

diet could produce healthy breast milk, while those who did not eat well could not produce good breast milk. Other concepts, which few mothers believed and were least aware of were 'breast milk is naturally clean, and cannot be spoiled or damaged' and 'the breast milk color and its composition or consistency change during feeding' (**Table 3**).

Mothers had their own perceptions on good quantity and quality of breast milk. They believed that for their milk supply to be considered adequate, it should meet the infant's demands so the infant can sleep well and fuss less. Additionally, mothers believed that in order to have good quality breast milk, they should consume nutritious and natural food, so that their breast milk will look white and thick. Transparent and thin breast milk was perceived to be "not good", "not clean", or "not having enough nutritional content".

"I produce less breast milk, my child is not satisfied after feeding." (SEC C, Jakarta)

"I doubt my breast milk is nutritious for my baby; it looks pale and thin." (SEC B, Medan)

Mothers who exclusively breastfed faced more challenges, including nipple soreness, time constraints and trouble maintaining their commitment. They found breastfeeding to be a painful and exhausting process, because they consider the pain to be part of the process. Waking at inconvenient times, especially for working mothers, was a high barrier with regards to time. Hence, breastfeeding was considered to be a difficult, long-term commitment, particularly for those without support from other family members and the community.

"My breast is in pain and I am easily fatigued, but it does not matter. As a mother, it is my fate to strive." (SEC C, Banjarmasin)

"I had almost given up. Fortunately, my husband always encourages me to go on." (SEC B, Banjarmasin)

Opinions on breast milk substitutions or infant formula

Interestingly, all mothers, from both higher and lower social economy status, were not reluctant to use infant formula, though they had different reasons for doing so. The higher SEC mothers considered infant formula to be complementary to breast milk. Despite these mothers' confidence in the nutrition and supply of their breast milk, they were aware of rich ingredients in infant formula.

"Infant formula has many contents, that may not be present in breast milk, so it is necessary to complement the breast milk." (SEC A, Jakarta)

In contrast, lower SEC mothers considered infant formula to be a replacement for breast milk. They felt that their food intake was not nutritious enough to produce good quality breast milk, and believed that infant formula could fulfill the nutritional shortcomings in their breast milk.

"I eat only tofu, fermented soy patties, and vegetables. It must not be enough to produce good breast milk. Infant formula has its ideal standard nutrition, so it must be better." (SEC C, Medan)

Health care practitioners encouraged mothers to breastfeed exclusively, however, they did not refuse infant formula as the second infant feeding choice. Doctors who were included in the study mentioned that infant formula could be given when mothers could not or not yet produce breast milk, especially in the first days after delivery. Furthermore, they said that if a mother had a condition that precluded breastfeeding, infant formula was a temporary solution.

On the other side, midwives believed that infant formula supplies complementary nutrition for infants and has rich ingredients. Hence, they believed infant formula to be beneficial, especially for infants with unhealthy mothers.

"Most mothers in this area breastfeed, but they mostly have malnutrition, so their babies need additional intake." (Midwife, Medan)

Discussion

Indonesia is an archipelago divided into 33 provinces and consisting of more than 300 ethnic groups with different cultural backgrounds. With such population diversity, varying levels of knowledge or perceptions on a topic is a common paradigm.

We documented the various perceptions and levels of knowledge on breastfeeding practices, including the definition of exclusive breastfeeding and other basic concepts. These findings explain the diversity of common practices in the community and the gaps from recommended practices. Furthermore,

our findings indicate that specific and different approaches will be required to improve community education for people of various socioeconomic and cultural backgrounds. Geographic or ethnic background played a role in mothers' levels of knowledge and perceptions, as did closely-related family members, on mothers' choice of infant feeding. A qualitative study from Zambia reported that fathers and grandmothers had authority over mothers and children, and infant feeding decisions.[6] Similarly in Nigeria, lack of support from husbands and pressure from mothers-in-law contributed to dominant constraints in exclusive breastfeeding.[7] Additionally, the rural population was generally less educated and more prone to conventional non-exclusive breastfeeding practices. Sub-optimal breastfeeding and complementary feeding practices were also identified in two slum areas in Kenya.[8]

Most of the mothers in our study were aware of the importance and benefits of breastfeeding, however, they did not refuse the idea of complementing breast milk with infant formula or solid food. The most common reasons for commencing additional food had to do with uncertainty about the sufficiency of their milk supply and the infant's satisfaction after feeding. Interestingly, they had the perception that not all mothers are fortunate to have adequate milk production and the ability to breastfeed exclusively for six months. Six months was considered to be a long time to give breast milk alone. Also, breastfeeding was thought to be a difficult and idealistic pursuit, rather than a realistic option.

Being aware of the benefits of breastfeeding, yet not confident in their milk supply and quality, mothers choose to add solid food or infant formula earlier than six months. Similar findings were also reported from other developing and developed countries.[7-14] Complementary feeding was introduced too early, the main reason being the mothers' perception of not having sufficient breast milk, as indicated by a fussy infant.[15]

The HCPs were also not reluctant to condone infant formula. Breast milk substitutes or infant formula was introduced as an alternate solution to complement the nutritious ingredients of breast milk, to ensure babies received the best nutrition, and to assist mothers' feeding at times when she could not give breast milk, especially for mothers with malnutrition or poor health. The inconsistent nature of HCPs was also reported in other countries.[16-17]

Some participants mentioned the occasional violation of the international code for marketing infant formula and subsequently related World Health Assembly (WHA) resolutions. Mothers and the community received many kinds of advertisements, which idealize the use of infant formula. As such, these efforts might contribute to mothers' and HCPs' perceptions of infant formula. Since HCPs were the most reliable source of infant feeding information, their permissive attitude towards infant formula led mothers to non-exclusive breastfeeding behaviors, not only in developing countries, but even in developed countries.[10,11]

Although the HCPs were the most trusted source to explore more about breastfeeding, they were less accessible. Therefore, closely-related family members, such as mothers-in-law, parents, husbands, as well as friends were the persons targeted for breastfeeding educational purposes. The HCPs need to be more accessible for breastfeeding education and should give adequate and proper information about breastfeeding.

Future education on breastfeeding practices should be structured according to the following findings of this study: reinforcement of the positive perceptions on breastfeeding, revising the understanding about exclusive breastfeeding, physiology of milk supply, and building confidence of breastfeeding mothers. The variety of perceptions on exclusive breastfeeding contributed to inadequate breastfeeding practices. Additionally, easily available guidance on exclusive breastfeeding in daily practice should be provided, in order to have a standardized knowledge and practice for the breastfeeding mothers. The guidance should include detailed information about the physiology of milk supply, handling crying or fussy infants, properly assessing the quantity and quality of breast milk, and timely introduction of complementary feeding.

Furthermore, public campaigns, such as brochures, free books, TV talk shows, radio programs, magazines, seminars, or workshops on breastfeeding, should also be promoted to communicate guidelines on exclusive breastfeeding to the community. There should be focus group meetings made up of breastfeeding or expectant mothers, as well as close relatives, such as husbands, mothers, mothers-in-law, or

friends and neighbors. Also, more trained HCPs with sufficient knowledge on breastfeeding should be available to build mothers' confidence and to give them breastfeeding support.

In conclusion, breastfeeding is perceived to be essential for infants. Most mothers actually intend to breastfeed exclusively and properly. However, exclusive breastfeeding is considered to be too demanding and unrealistic. Mothers face many challenges, and lack appropriate solutions and support. Factors that influence mothers to not follow the recommended breastfeeding practices are primarily the misinterpretation of some basic concepts of breastfeeding and infant feeding, including the definition of exclusive breastfeeding, confidence in adequate milk supply, response to infant feeding cues, and introduction of infant formula or solid food. The HCPs, who are expected to support and give adequate and comprehensive information to mothers, are not easily accessible.

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