

Poor Breastfeeding as a Probable Cause of Childhood Malnutrition: Exploring Mothers' and Caregivers' Views on Breastfeeding via a Qualitative Study in Damavand, Iran

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Background: Childhood malnutrition still persists in some parts of Iran. Poor breast feeding is proposed as a probable risk factor for malnutrition.

Objectives: In the present study views, experiences and practices of mothers and caregivers about exclusive breast feeding was explored by a qualitative study in Damavand, Iran, a country with a relatively high prevalence of pediatric malnutrition.

Materials and Methods: Urban and rural mothers who had under-2-year babies attended 11 FGDs. In addition, six FGDs were arranged for caregivers in urban and rural areas. All FGD notes were analyzed and emerging themes were derived and reported.

Results: The findings indicated that although mothers were aware of breastfeeding benefits and regarded it as their responsibility, in few cases, neonates were fed by items other than breast milk. Exclusive breast feeding was not followed precisely. Pregnancy of mothers, lack of knowledge, misinformation and physician instruction were among the reasons why mother may stop breast-feeding. Mothers' and caregivers were aware of the importance of breast feeding in sick children.

Conclusions: Mothers' knowledge of exclusive breast feeding were satisfactory but their practice was not based on recommendations. As physicians play a role in this matter, the need for specific educational modules for them and other health staff is recommended. Meanwhile, parental education and everyone involved in childcare is a priority so that the problem can be overcome.

Keywords: Health; Pediatrics; Breastfeeding

1. Background

Childhood malnutrition still exists as a major health problem in developing countries (1, 2). According to global reports 35%, 41% and 10% of under-5-year-old children in Asia suffer from underweight, stunting and wasting (3). It is well established that protein energy malnutrition (PEM) usually manifests itself under 2 years of age, is associated with early weaning, inappropriate introduction of complementary food, low-protein diets, and infectious diseases (2, 4). Human milk is the only food that meets all of an infants' physiological requirements (5) and increasing research which shows the benefits of breast feeding (6). Therefore, human milk (breast feeding) plays a vital role in infants' well-being and malnutrition prevention. In other words, exclusive breast feeding is known as the ma-

jor determinant of baby health and survival (7).

More recent reports on childhood malnutrition in Iran show that it still exists as a health problem (8-11). The most recent national report shows that 7.7, 15.5 and 4.3% of under 2-year-old children are underweight, stunted and wasted, respectively (12). It has also been reported that the rate of exclusive breast feeding in Iran is not satisfactory (12, 13). Based on the last national report, 75% of nursing mothers do not follow exclusive breast feeding recommendations and at most, 60% of infants are breastfed until 2 years of age, with the breast-feeding index decreasing from 47% to 23% (14). Regarding the relatively high prevalence of malnutrition in Damavand region (12) it was thought this exclusive breast feeding practice among nursing mothers in Damavand may not be satisfactory and that may contribute to the problem. To combat malnutrition effectively, its

Implication for health policy/practice/research/medical education:

The information mentioned in the paper can be generalized to similar settings. The results can help researchers and health practitioners to convince policy makers to design appropriate related policies to promote breast feeding and consequently reduce malnutrition among children.

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causes should be understood.

2. Objectives

As a qualitative approach can give us more comprehensive and in depth information (15-17), we conducted a qualitative study on mothers of under- two- year children to explore their beliefs about breastfeeding and the possible barriers.

3. Materials and Methods

3.1. Setting

Data were collected through focus-group discussions (FGDs) in Damavand, a city near Tehran in 2007. The study protocol was approved by the Ethics Committee of the Research in National Nutrition and Food Technology Research Institute (NNFTRI). The population of Damavand is over 68 428, 70% reside in urban areas and the rest in rural areas. Damavand is located in the North East of Tehran, the capital of Iran, with a surface area of 2,800 km². Eighty percent of the people in Damavand are literate (18). In this study, Damavand was selected because, based on national reports (19) the prevalence of malnutrition (wasting) was similar to the national average.

Eleven FGD sessions were arranged with groups of mothers parenting under 2-year-old children. The mothers were invited by health staff in advance. Most of them (93%) were housewives with a mean age of 28.1 ± 5.8 years. About 8% of them had a university degree, 29% had completed school, 11% were illiterate, and the rest had secondary or high school education. FGDs were held in the health centers or hospitals in the morning (seven FGDs for urban and four for rural mothers). In total, 83 mothers participated in the FGDs. Additionally, six FGD sessions were held for grandmothers and/or caregivers (anybody who babysat the child other than the mother). In this article, by "caregivers" we mean grandmothers and caregivers. Three FGDs were held for urban and three for rural caregivers. Six to ten participants attended each FGD. In total, 17 FGDs were held.

Each participant signed a letter of informed consent. The participants were informed on the main aims of the study and knew that their voices were recorded. They were also assured that their names and what they said would not be revealed.

3.2. Data Collection

Questionnaire guides, were designed based on the re-

search objective. There were two research teams, each consisting of one moderator, one observer (who was not present in all sessions), and two note-takers. All team members were nutritionists. The person selected as the moderator was flexible, open-minded, good listener, able to establish a rapport with the participants, persuading them to talk with ease. She had enough experience in facilitating FGDs. The note takers were quick and efficient in writing. The team members had already been trained in techniques of data collection and detailed documentation. Two FGDs were held separately on every working day for two groups of participants. Each FGD was held with six to 10 participants and lasted 45 to 60 minutes. All FGDs were simultaneously transcribed and taped by a digital recorder. The team members attempted to ensure that they understood ideas and opinions of the participants. Immediately after each session, the team members (note takers and moderators) completed their transcriptions by rereading and filling the blanks according to tape recorder and transcribed discussions. At the end of each FGD, some gifts (towels for the mothers and scarves for the grandmothers/caregivers) were given to the participants. Data collection continued until reaching saturation, which means no new idea or comments from FGDs.

3.3. Data Trustworthiness

To ensure that the moderators understood participants' responses, ideas expressed were checked during and at the end of each session. The study process and analysis were recorded completely. Therefore other investigators can determine transferability of the results to their settings. It was tried to keep all sessions private and in absence of health staff. The analysis process was checked by BE (the third author).

3.4. Analysis and Interpretation

Field notes were analyzed by hand. To develop categories and themes all notes were read and re-read word by word. On the basis of the study objectives the notes were organized (coded). Finally, the main themes emerged and reported in categories.

4. Results

The key findings are summarized in Table 1. One heading and one subheading were related to healthy child and one heading and 10 subheadings were related to breast feeding topics.

Table 1. Key Findings From Mothers and Caregivers Focus Group Discussions

Category	Themes	
	Mothers	Caregivers
Healthy child, Health of a child was found by these clues	Physical and behavioral developments of the child such as intelligence and curiosity, having correct reactions, playfulness, not crying a lot, happy appearance were mentioned as signs of a health child.	Physical and behavioral developments of the child such as on time walking, sitting and tooth eruption, being happy and having enough energy, normal cry and sleep.
What was eaten at birth time by the infants	The infants were breast fed immediately at birth.	The infants were breast fed immediately at birth.
Using colostrum as the first food in the area and the reasons	Children initially were fed by colostrum because it was nutritionally complete, nutritious and also appropriate for health and growth of the child.	Children initially were fed by colostrum because it was nutritious and good for health and bone modeling of children.
Substitute milk, in case mother is not able to breast feed her child	In case a mother was not able to breast feed her child, formula powder was the first option.	In case a mother was not able to breast feed her child, formula powder was the first option.
Circumstances in which the mother is forced to cease breast feeding	In case there were mother's problems such as diseases, drug(s) intake, neurologic and mental difficulties, death of relatives, breast problems and further pregnancy, mothers had to cease breast feeding.	In case mother's milk was not adequate to satiate the child and because of physician's advice, mothers had to cease breast feeding.
Continuing of breast feeding in case of child morbidity	In time of child morbidity, because human milk was better, healthy, germ-free and contained vitamins, breast feeding was continued.	In time of child morbidity, to prevent child dehydration, breast feeding was continued
Accordance with exclusive breast feeding, verifying foods which are tried in first 6 months of breast feeding	In addition to human milk, children were fed by hot water, sweetened water and tea in first 6 months of breast feeding.	In addition to human milk, children were fed by sweetened water, hot sweetened water, and herbal remedies in first 6 months of breast feeding.

Data which were not frequent enough to be presented as a theme but give a good understanding of the participants' ideas about the topic are as follows:

Food items with which most of the babies were fed during the exclusive breast feeding period and reasons for them (mentioned by mothers and caregivers): "Animal fat, animal butter, vegetable oil", "water, hot water, cold water, sweetened water", "Mohr" (a piece of holy earth that Muslims prostrate at when they say their daily prayers), "Torbat" (a piece of holy earth which comes from Karbala, a religious town in Iraq, that Muslims prostrate at when they say their daily prayers), "herbal extract", "herbal drugs", "dates", "fruit juice", "starch", "tea", "a sample of any household food", "biscuits", "bread", "formulas", "pasteurized milk", "a piece of bone" and "meat or liver extract".

Reasons for using the items mentioned by mothers and caregivers included:

Health effects: To eliminate flatulence, jaundice, pain of belly, to act as a laxative, to cure common cold, to prevent aphtha, to empty the baby's stomach, to be generally suitable for the child health, to prevent dehydration, to balance hot and cold temperaments (in Iranian traditional medicine, there are two main temperaments including

cold and hot any imbalance of which would cause sickness).

Spiritual effects: To make the baby silent and patient, to be holy. As mentioned before, based on a belief in the area some items which are thought to be holy, either food or non-food, have spiritual effects on the baby. These items help baby to be more patient and, as a result, silent.

Cultural effects: To respect the elders' experiences.

Other effects: To saturate the baby, to quench thirst, to satisfy the baby, to put the baby to sleep, to follow doctors' advice, to make moisten the baby's mouth, to get familiar with different tastes.

A few of caregivers said "mothers do not feed their babies with their milk because they are lazy, want to keep fit, and their babies do not get satisfied fully".

A mother said: "my neighbor's baby had jaundice, the doctor advised her to cease breastfeeding for two days because her milk was not suitable, the milk of some mothers is heavy and contains too much fat and mothers have to stop it otherwise the baby will get bellyache".

5. Discussion

Breast-feeding is the most suitable method of feeding for all infants (20). It is strongly recommended by medical

and governmental authorities. Exclusive breast feeding is suggested for the first six months of life and nonexclusive breast feeding (i.e. mother's milk plus complementary feeding) is for at least 12 months and up to two years (21). One goal of Healthy Community 2010 (22) was to increase the proportion of women who initiate breastfeeding to 50%. As indicated by findings of the present study, babies in Damavand were initially fed with their mothers' milk. Mothers and/or caregivers believed that mother's milk, and especially colostrums, is a unique food for babies. In their opinion, it was such a precious food for the child that should be continued even if the child was sick, and mothers should not cease breastfeeding unless a serious problem exists. In other similar studies, mother's milk was mentioned as the best food for infants (23-27).

In contrast to common belief, a few of mothers in our study thought that either food items (e.g. sweetened water, butter, dates) or nonfood items (herbal drugs or extracts, holy earth) given to the babies may somehow explain the reasons for not practicing breastfeeding and the consequent malnutrition in the area (14). They believed that the above mentioned items had some benefits, either physical or spiritual, for the child. In the other words, despite their knowledge of breast feeding, their practice was not in accordance with the health staff recommendations (28), a fact well documented in other studies (24, 29, 30). The participants in our study mentioned some reasons for this fact. The most important aspect was the superiority of their experience to health recommendations. In other words, they found their personal experiences, based on either the elders' advice or their own experience more trustworthy than the health staff recommendations. It can be concluded that the health staff education, at least on this topic, has not been sufficiently effective to change the participants' knowledge and practice.

Before the study commenced, some causes of poor breast feeding practices such as taboos, erroneous beliefs, etc. had been predicted, which the result of the present study confirmed. An interesting finding which was somehow surprising to the authors was the role of some physicians, especially pediatricians, who directly or indirectly persuaded mothers to cease breast feeding and start formula feeding. This fact may explain that their knowledge is not up-to-date. The people consider physicians as representatives of community health-providers. Therefore, physicians must be kept up-to-date based on the last scientific findings and their advice to the public must be in agreement with the health care system.

Implication: Although knowledge and information of mothers and caregivers on exclusive breast feeding was satisfactory, their practice was not in accordance with the acceptable recommendations. It seems that main reason for this poor practice originates from lack of full awareness, which should be promoted through effective educational programs.

As the advice by some pediatricians was misleading and persuaded mothers to stop breastfeeding, the need for specific educational programs to keep them up-to-date is strongly recommended.

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Authors' Contribution

MA and NS contributed to conception and design, acquisition of data, analysis and interpretation of data, drafting and revising the manuscript. BE contributed to conception and design, analysis and interpretation of data, drafting and revising the manuscript. All authors read and approved the final manuscript.

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