

Practices, beliefs and attitudes about complementary feeding among turkish mothers: a qualitative study

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Summary. In this research the experiences, viewpoints and attitudes of mothers who have babies between 6 to 24 months old, related to transition to complementary feeding are explained. A qualitative investigation design was used. Research was carried out in 7 Family Health Centers (FHC) located in town of Ödemiş. Twenty mothers who had babies between 6 to 24-year old agreed to participate in the study. The experiences, viewpoints and attitudes of mothers having babies between 6 to 24-month old related to complementary feeding were analyzed in line with their knowledge, experiences, resources and cultural themes related to complementary feeding. Fourteen of mothers (70%) stated that they did not exactly know the right starting time of complementary feeding. Seven mothers (35%) reported that they had experiences babies' health problems such as constipation, growth-development failure, etc. after starting complementary feeding. Mothers' knowledge level about complementary feeding isn't enough. Primiparous mothers generally are to learn complementary feeding from their environment instead of health worker. Mothers should be encouraged to explain complementary feeding practices. Wrong practices should be corrected by health workers.

Key words. complementary feeding; nursing, qualitative research

Introduction

World Health Organization defines complementary feeding as giving mother's milk together with other foods or fluids from 6th month (1). Starting complementary feeding early before six months causes insufficient energy and food intake; whereas late start leads to ceasing or slowing down on the growth of infant (2,3). Therefore, starting the complementary feeding at the right time and with nutritional elements is highly important (4,5). However, it is well known that mothers do not wait for six months to initiate complementary feeding and generally start earlier (6-8). It was detected in investigations that mothers prefer solid foods (home-made cereals, ready-made cereals, etc.), baby formulas and fluid foods (anise, tea, fruit juice etc) when they

start complementary feeding before six months and these applications varied according to communities and cultures (7-11).

Although children in our country are breastfed for a long time, complementary feeding is being started at the very early ages and 35.3 % of the 2-3 months old babies are fed only with mother's milk (12). It is reported that mothers' cultural beliefs, education levels, socio-economic levels and social support systems affect babies' nourishment status (9) and applications and perceptions related to complementary feeding are extremely important in improving their feeding levels (2,5).

The fundamental strategy in improving the feeding of children is to develop knowledge and practices related to complementary feeding in families with 6-24 months old babies (1). Therefore, to evaluate moth-

ers' complementary feeding-related applications, experiences, viewpoints and attitudes is very important. While many quantitative studies have been carried out related to complementary feeding in Turkey, there are few qualitative studies on this topic. Therefore, the aim of this study is to evaluate mothers' experiences, viewpoints and attitudes related to transition to complementary feeding and the factors affecting them.

Method

A qualitative study design, phenomenological method was used to describe experiences, opinions and attitudes of mothers who have babies between 6 to 24 months old, related to transition to complementary feeding. A total of 20 mothers who are 18 years old and above, do not have verbal communication problem and have babies between 6 to 24 months old comprised the sampling of research. Participants' age varied between 18 and 38 years (mean age is 29.05 ± 5.51 years). Forty five percent of mothers are graduated from university and eighty percent of them are unemployed (Table 1). When their income levels were evaluated it was found that 60 % had income equal to expenses. Babies' age varied between 6 and 18 months (mean age is 10.1 ± 3.44 months).

Table 1. Mothers Demographics (n=20)

Demographics	Mothers N=20
Age	29.05±5.51
Education Status (%)	
Primary education	6 (30)
High School	5 (25)
Collage	9 (45)
Income Situation (%)	
Equal to income	12 (60)
Over income	3 (15)
Less than income	5 (25)
Number of Children (%)	
One	8 (40)
Two	10 (50)
Three or ↑	2 (10)
Working Status (%)	
Yes	4 (20)
No	16 (80)

Data Collection

The study was conducted in 7 Family Health Centers (FHC) located in town of Ödemiş. Before the interviews started, the mothers were informed about the aim of the study and their consent was obtained. In-depth face-to-face interviews were held in a silent environment. The mothers who accepted to participate in the study were interviewed at their homes at pre-determined time. The interviews were held by the one researcher and recorded with a voice recorder. Before the interviews, the participants were informed about the recorder and their permission was obtained. The interviews took 20-40 minutes and the participants were interviewed minimum once and maximum three times. Each participant was interviewed until new information could not be obtained. A semi-structured interview form including open-ended questions and developed by the researcher were used for data collection. The "Complementary Feeding Questionnaire and Semi-Structured Interview Form involves six questions developed to determine mothers' complementary feeding-related experiences, viewpoints and attitudes. Interviews were conducted by the researcher trained on this topic and a voice recorder was used.

Data Analysis

Inductive content analysis was used to analyze obtained data. Recorded data were verbatim transcribed, a categorization matrix was created based and all data were examined and coded according to categories created (Figure 1).

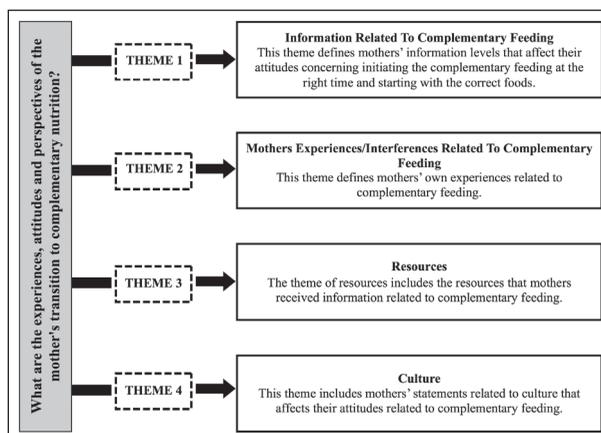


Figure 1. Categorization Matrix

Validity and Reliability

All interviews were recorded with a voice recorder and continued until satisfactory data were elicited and until the same concepts appeared (13). Questions eliciting details were used to collect in-depth data. All steps of the study were explained in detail, data were described in detail, emerging themes were exemplified by direct quotes and what the participants said were exactly described. Analyses of the data were evaluated by more than one researcher, subthemes of the categorization matrix were created by different researchers and a final version of the subthemes was agreed on. In other words, a researcher triangle was used to confirm that descriptions of data exactly reflected obtained data. Data collection tools and crude data are being kept for confirmation of original data.

Results

Four themes emerged following analysis of the interview data: information related to complementary feeding; mothers experiences/interferences related to complementary feeding; resources; culture (Table 2).

Table 2. Characteristics Related to Breastfeeding and Complementary Feeding

Characteristics	n	%
Breastfeeding Status		
Yes	15	75
No	5	25
Time To Start Complementary Feeding		
Before six months	11	55
Six Months	7	35
After six months	2	10
First Given Food		
Tarhana	8	40
Liquid foods (soda, anise, linden vb.)	4	20
Fruit puree (pear, banana, apple etc)	3	15
Formula	3	15
Yoghurt	2	10
Information Resources about Complementary Feeding		
Family members, relatives, neighbors	13	65
Internet and books	3	15
Health Personnel	4	20

Theme 1. Information related to complementary feeding

This theme defines mothers' information levels that affect their attitudes concerning initiating the complementary feeding at the right time and starting with the correct foods. Fourteen of mothers (70%) stated that they did not exactly know the right starting time of complementary feeding. Only six mothers (30%) reported that they know the right starting time of complementary feeding. Mothers reported that they had experienced hard time about with which foods they should start as complementary feedings and what foods should be given on which months, that they used wrong applications and that most often they have felt themselves insufficient and expressed their concerns. Twelve mothers (60%) stated that they completely smoothed the foods. Eight mothers (40%) also reported that they used feeding bottle for liquid foods. Some mothers reported that they experienced perturbation about starting on egg (10% of mothers) and meat (20% of mothers).

"In fact, I did not know when I should start, because everyone was saying different things. Some said [you are too late], others said [it is too early to start]" (Mother 17, 21 years old, baby is 15 months old).

"They start having baby tasted some from everything when the baby completes 40 days. Therefore, I did so, I do not know if I did right" (Mother # 1, 20 years old, baby is 6 months old).

"First I started with yogurt; now I say thanks to god I did. But that time I have really wondered if my baby eats" (Mother # 18, 24 years old, baby is 11 months old).

"I did not know when and how to start on eggs. Therefore, I guess I was little late. I guess it was 9th month when I started; I did not know the boiling time of egg... first I had given the yolk of egg" (Mother # 5, 30 years old, baby is 11 months old).

"I started complementary foods on eight month with baby cookies and then I started adding bananas and other things. I quit cookies when my doctor riled at me, to my surprise it was not correct" (Mother # 13, 26 years old, baby is 14 months old).

Theme 2: Mothers experiences/interferences related to complementary feeding

This theme defines mothers' own experiences related to complementary feeding. Seven mothers (35%) reported that they had experiences babies' health prob-

lems such as constipation, growth-development failure, etc. after starting complementary feeding. Three mothers (15%) experienced constipation in their babies, two mothers (10%) experienced allergy problems, one mother (5%) experienced growth and development delay and one mother (5%) experienced anemia. Forty-two percent of mothers who had two or more child stated that they generally behaved according to the experiences they gained with first child. Seventy five percent of primiparous mothers stated that they generally determined the foods and starting time of complementary feeding by the comments they heard around them.

“I experienced too many problems with my first daughter on complementary foods; she became constipated and experienced bowel problems. When my second daughter was 2 months old, everybody suggested many things for baby but I did not listen to them” (Mother # 16, 28 years old, baby is 7 months old).

“I had hard time on feeding my daughter and still having hard time; therefore, when I start complementary foods on my son I have never insisted. The more he ate, the more I gave. I mean I did not run after him with spoon” (Mother # 11, 37 years old, baby is 12 months old).

“Everybody says your baby is too weak, you do not take care of your baby good, your milk is not enough. They said this too much that I convinced finally and started giving baby some things” (Mother # 14, 32 years old, baby is 11 months old).

Two mothers stated that they started complementary feeding early due to the health problems experienced by their children.

“I think my baby was 2.5 or 2 months old. He got sick so many times that I thought my milk was not enough. I have started giving formula at the hospital and I continued when we came home, he got used to it and never sucked” (Mother # 2, 32 years old, baby is 7 months old).

“My baby was affected by jaundice; therefore we stayed at the hospital. I started formula when we were at the hospital and continued subsequently. He quit sucking completely” (Mother # 3, 30 years old, baby is 15 months old). Mothers also mentioned about the methods they used when preparing foods for their babies. Sixty percent of mothers stated that they completely smoothed the foods they have given their babies.

“I gave soups after I blended them in a food processor. Even I chopped fruits in the food processor but now my baby does not eat anything with grains. I add rice and noodles into soup, he does not even want. I do not know what to do. I wonder if he eats when starts teething?” (Mother # 4, 28 years old, baby is 10 months old).

Theme 3: Resources

The theme of resources includes the resources that mothers received information related to complementary feeding. Thirteen mothers (65%) stated that they received information related to complementary feeding from their own mothers, mothers in law and neighbors. Three mothers (15%) reported that they benefited from about books and internet. Four mothers (20%) stated that they received help from Family Health Centers.

“Nobody help me when I started complementary foods. Sometimes I review internet and seek for what to give and what to do” (Mother #9, 27 years old, baby is 9 months old).

“I have neighbors who have babies at the same age or older than mine. I talk and consult with them; I do similar things to what they have said and done. Of course all the babies are not same; for instance, my baby does not eat most of things they said but I am still trying” (Mother # 2, 32 years old, baby is 7 months old).

“I consulted with my nurse. I wish I had asked at the beginning, I think I am little late” (Mother # 10, 34 years old, baby is 8 months old).

Theme 4: Culture

This theme includes mothers' statements related to culture that affects their attitudes related to complementary feeding. There are many cultural applications that affect starting of complementary feeding and what foods will be provided on which months. Eight mothers (40%) said that they started complementary feeding with “Tarhana”. Other cultural practices expressed by mothers include: making sweet custard before baby sleep at night (seven mothers), inserting

1 Tarhana which consists of onion, tomato, pepper, yogurt, yeast, flour and spices, is traditional soup

into the baby's mouth after dipping his finger in the liquid food (five mothers), giving liquid foods such as soda, linden, anise before the sixth month (four mothers), giving solid food into the mouth of the baby after chewing in the mouth (three mothers).

"Because it was said that custard keeps baby satiated, I make custard by fixing rice flour, sugar and milk and give it at nights before bed time." (Mother # 14, 32 years old, baby is 7 months old).

"First I started with Tarhana. I asked my mother, she said they did the same thing. It is both nutritious and healthy." (Mother # 19, 32 years old, baby is 10 months old).

"In this area people dip a finger into the food on the table and give it to baby or they chew food in their mouths and give it to baby so that baby can eat little bit of everything" (Mother # 7, 34 years old, baby is 7 months old).

Discussion

In this study the experiences, viewpoints and attitudes of mothers having babies between 6 to 24-month old related to complementary feeding were analyzed in line with their knowledge, experiences, resources and cultural themes related to complementary feeding.

World Health Organization and United Nations Children's Fund recommend feeding babies only with mother's milk for first six months after birth and starting complementary feeding after then (15,16). In a study by Wasser et al. (2011) where feeding patterns of mothers who had low income and 3 to 18-month old babies were evaluated, it was discovered that mothers started solid foods and fruit juices after first month and the most widespread feeding behavior was formulas, solid foods and fruit juices (8). In a study by Wardle, De Domenico & Wenin (2014) Only 32% of the mothers were found to have begun solid foods after 6 months (14). In a study by Farhangi (2016) found that ratio of starting proper complementary feeding were 57.83. A study carried out in United Arab Emirates by Radwan (2013) it was established that 83.5 % of babies were given first solid foods before six months (7). In that study also mothers stated that they did not have sufficient information about the timing of complementary feeding.

Fifty five percent of mothers stated that they initiated complementary feeding before six months and this situation has resulted from insufficient milk, babies getting sick and the directions of surrounding people.

The mothers stated that they had insufficient information related to with which foods they will start on complementary feeding and what foods will be given on which months and experienced perturbation about this topic. In a study by Garg & Chadha (2009), it was suggested that egg and meat consumption was considerably low in six 8-month old babies and this situation has originated from mothers considering that babies would not digest these foods (18). In a study carried out by Friel et al. (2010) with mothers having babies between 3 to 12 months old, meat was found to be the least consumed nutrition source, except for 12th month (6). On complementary feeding, solid foods, especially foods with animal-origin, should be given at appropriate amount and diversity (6). In a study by Rasheed et al. (2011), household stated that many animal-originated foods are rich in terms of nutrition, but they do not give children since they consider them inappropriate (5). In this study, 20% of mothers experienced problems during using animal products although they use broth.

Seventy five percent of the primiparous mothers stated they acted according to the information they obtained surroundings and mothers with two children stated that they behaved according to the experiences they gained with first child. Besides, mothers stated that initiating complementary feeding early has influenced by their sick children. In a study, Garg & Chadha (2009) discovered that the time saved by mother for child's care and complementary feeding practices decreases as the number of children increases and this situation affects children's feeding negatively (18). In a study carried out in India by Sinhababu et al. (2010) it was detected that the complementary feeding applications most often used by mothers were initiating complementary feeding late and infrequent and giving solid-semisolid goods insufficient (10).

In study carried out by Lindsay et al (2008) in Brazil, the most widespread problems were entrance of solid foods into feeding early and use of baby formulas (9). In studies the feeding style and the consistency of foods were found to be a great problem (19,20). In this study also mothers stated that they used bottle during

feeding (40%) their babies and preferred smooth and grainless foods (60%). As a complementary feeding, giving babies semisolid foods when they are six months old, rough foods smashed by the fork when they are seven months old and finger-foods when they are eight months old during are very important for improvement of the chewing skills. Therefore, foods should be given babies at the right time and consistency.

In the present study 65% of mothers stated that they received information related to complementary feeding from the senior members of the family and surrounding. In a compilation by Imdad et al. (2011) it was detected that approaches toward complementary feeding (feeding training) had a significant effect on weight gain (95 % CI 0.11-0.56) and increase in tallness (95 % CI 0.08-0.43) in 6-12 months old children (21). Cultural applications are used widespread in complementary feeding. Each country and culture has their own applications. In a study carried out in United Arab Emirates by Radwan (2013) it was found that 30 % of babies were given fluids other than milk, such as anise and tea before 3 months (7). In a study carried out in India by Sinhababu et al. (2010) it was observed that mothers have used inappropriate complementary feeding and giving water and other milks in the first six months where only mother's milk should be given, was widespread (10). In Rasheed et al.'s (2011) study, mothers stated that they tried to give babies the foods on the table in order to introduce them (5). In the same study, it was observed that information, skill, perception and social norms have played important roles in determination of complementary feeding applications (5). This situation has led shifting directly to adult foods after utilization of starchy custards or fluids at the early term (5). In this study also 20% of mothers used practices such as giving babies linden tea or soda before six months and traditionally forty percent of mothers initiated complementary feeding at the early period with Tarhana.

Conclusions

In this study 70% of the mothers stated that they did not completely know the correct timing of complementary feeding; they experienced hard time which

food should be given first as complementary foods and what foods should be given on which months and they felt themselves inadequate on this subject. Forty-two percent of mothers who had two or more children stated that they generally behaved according to the experiences they gained with first child. Seventy-five percent of primiparous mothers stated that they generally determined the foods and starting time of complementary feeding by the comments they heard around them. Sixty five percent of the mothers stated that they have received information related to complementary feeding from their own mothers, mothers in law and neighbors. Fifteen percent of mothers obtained data related to complementary feeding from books and internet. In this case, utilization of health personnel as information resource seems insufficient. Mothers stated that their attitudes toward complementary feeding were influenced by cultural applications. This leads to the transmission of incorrect complementary feeding practices from generation to generation with cultural practices.

Consequently, mothers' knowledge level about complementary feeding isn't enough. Primiparous mothers generally are to learn complementary feeding from their environment instead of health worker. Specially, the first foods given to babies are affected by traditional practices. For this reason, it is very important for health worker to be knowledgeable and conscious, and to raise awareness of mother, as well as family members about complementary feeding and practices. Mothers should be encouraged to explain complementary feeding practices. Wrong practices should be corrected by health workers. Health workers should be aware of mothers' fear and anxiety for complementary feeding.

The most appropriate complementary nutrition is not only related to what a child is fed but also psychosocial care practices (mothers' feeding times are periods of learning and love, etc.) and sensitive nutrition (when, where and by whom a child is fed, etc.). These are important factors and positively affect the child's growth and psychological development. Health workers can be help mothers' by applying the principles of psychosocial care, proper and hygienic nutrition and develop sensitive nutrition practices.

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