

Report

Complementary feeding and weaning practices in four governorates in Egypt

Salwa Alsaied M. Hassany¹

Introduction

Malnutrition among infants and young children has been and will continue to be of great concern to all nutritionists and health workers in Egypt. Malnutrition contributes to child mortality, morbidity and the poor intellectual and physical development of children.

This study was undertaken as part of a comprehensive study on beliefs and practices related to lactation and breast-feeding, and maternal practices regarding complementary feeding and weaning, and should provide some insight into the beliefs and practices affecting the nutritional status of infants and young children. We investigated the age of the baby when first introduced to complementary foods and at the time of weaning (stopping breast-feeding) and the process of separating the child from the breast.

Ninety-three (93) women of childbearing age from the same low socioeconomic levels who had at least two preschool children were randomly selected from villages in the governorates of Aswan, Assiut, Dakahlia and North Sinai. Informal interviews and conversations in small groups were held to collect the data. A structured open-ended questionnaire was used to obtain de-

tailed information on the mother's beliefs and practices regarding the introduction of complementary foods, the kinds of foods used, the age of the baby at the time of stopping breast-feeding and the weaning method used. The 93 mothers included 22 from Aswan, 32 from Assiut, 15 from Dakahlia and 24 from North Sinai.

Complementary feeding

The distribution of infants and young children according to the age at starting complementary foods in the four governorates is shown in Table 1.

Early introduction (<3 months) of complementary foods to babies was practised by very few mothers (10.8%). Fresh milk as a complementary food in this age group was used by mothers from North Sinai, who considered fresh milk much more nutritious than decoctions of anise and caraway seeds which were described by the mothers as only water. The mothers fed their babies (<3 months) using a bottle with a teat. All mothers who gave food items other than breast milk to the baby before 3 months of age believed that their breast milk was not enough for the baby; they said they knew this from previous experience.

¹Chairman, Department of Field Studies, Research and Surveys, Nutrition Institute, Cairo, Egypt.

Received: 09/11/95; accepted: 11/02/97

Table 1 Distribution of infants and young children according to age at starting complementary feeding

Age at starting (months)	Aswan		Assiut		Dakahlia		North Sinai	
	No.	%	No.	%	No.	%	No.	%
<3	3	13.6	3	9.4	0	0	4	16.7
3 to <6	0	0	5	15.6	4	26.7	6	25.0
6 to <9	6	27.3	10	31.3	7	46.7	13	54.2
9 to <12	3	13.6	0	0	2	13.3	1	4.2
12 to <18	9	40.9	13	40.6	2	13.3	0	0
18 to <24	0	0	0	0	0	0	0	0
24+	1	4.5	1	3.1	0	0	0	0
Total	22	100	32	100	15	100	24	100

It was found that 15.6%, 26.7% and 25.0% of mothers in Assiut, Dakahlia and North Sinai respectively introduced foods other than breast milk to their babies between 3 months and <6 months of age. Cereal-based foods were used by mothers from Dakahlia and North Sinai but their use was rare and usually prescribed by paediatricians. All babies of this age at first received a little sugary and starchy food (fruit juices and mashed potatoes); the amount increased gradually and protein foods, like skimmed cheese, yoghurt and boiled eggs, were added before the age of 6 months. All mothers who gave complementary foods between the ages of 3 and <6 months believed that breast milk was not enough for the baby as they had been told this by health workers.

A large proportion of mothers (46.7% and 54.2% respectively) from Dakahlia and North Sinai introduced the baby to complementary foods between the ages of 6 and <9 months. Mothers from Aswan offered starchy foods to the baby from the sixth month. Rice, biscuits softened in tea and mashed potatoes were the most common foods offered. Later the mothers gradually

increased the quantity and added protein foods (skimmed cheese, yoghurt and boiled eggs) before the baby reached 9 months of age. Mothers in Assiut, Dakahlia and North Sinai gave the baby starchy and protein foods mixed together from the age of 6 months. Babies at that age were also given fruits in season, such as black dates, water melon, guava and bananas, and orange or tomato juice when available.

The introduction of complementary foods between 9 and <12 months of age was done by very few mothers (6.9%). Meat was not given to babies at that age. All mothers in North Sinai introduced solid foods to the baby before 12 months of age.

The greatest proportion of mothers from Aswan and Assiut (40.9% and 40.6% respectively) introduced complementary foods to their infants between 12 and <18 months of age, compared with only 13.3% of mothers in Dakahlia. Mothers in Aswan let the infant have all available family foods except meat and eggs, while infants from Assiut were given family foods, including beef, chicken, chicken liver and eggs whenever available. Meat, chicken liver, cheese

and eggs were introduced after 18 months of age in Dakahlia.

None of the mothers in the four studied areas first introduced the child to solid foods between 18 and <24 months of age. Only one mother each in Aswan and Assiut introduced complementary foods after 24 months of age. The children at that age received all family foods, including beef, chicken, chicken liver and eggs.

Weaning practices

Age at weaning

As shown in Table 2, none of the mothers in the four governorates stopped breast-feeding before the baby reached 6 months of age. Only one mother each in Assiut and North Sinai weaned the baby between 6 and <12 months of age. They believed that their breast milk was thin (low in nutrient density) and not enough for the baby's needs. They replaced breast milk with a commercial weaning formula according to the advice of health personnel at the maternal and child health centres. Mothers (7.5%) who stopped breast-feeding the child between 12 and <18 months of age believed that once the child was able to eat

family food, there was no need for breast milk.

The majority of mothers in Dakahlia and North Sinai (53.3% and 58.3% respectively) weaned the child between 18 and <24 months of age. A considerable percentage of mothers (46.9%) in Assiut also stopped breast-feeding between these ages. About 91% of mothers in Aswan and 46.9% in Assiut weaned the child between the ages of 24 and <36 months, while about 20% of mothers from Dakahlia and North Sinai said that they never weaned the child before 24 months unless they became pregnant. These mothers believed that the milk of a pregnant mother is harmful to the baby and that, consequently, breast-feeding must be stopped during pregnancy.

Mothers who breast-fed for between 18 and <24 months and 24 and <36 months claimed that prolonged breast-feeding is a gift given to the child and makes him/her grow up kind to the mother and a loving person, devoid of envy.

Three respondents only claimed that they weaned the child after 36 months of age. They believed that they had enough milk to feed the child for 3 years and that breast-feeding for that length of time makes the child grow up clever and bright-eyed.

Table 2 Distribution of infants and young children according to age at weaning

Age (months)	Aswan		Assiut		Dakahlia		North Sinai	
	No.	%	No.	%	No.	%	No.	%
<6	0	0	0	0	0	0	0	0
6 to <12	0	0	1	3.1	0	0	1	4.2
12 to <18	0	0	1	3.1	3	20.0	3	12.5
18 to <24	1	4.5	15	46.9	8	53.3	14	58.3
24 to <36	20	90.9	15	46.9	3	20.0	5	20.8
36+	1	4.5	0	0	1	6.7	1	4.2
Total	22	100	32	100	15	100	24	100

Weaning process

In general, all mothers in the four governorates weaned their infants abruptly by world norms. In order to wean, all mothers from Aswan and most of those in Assiut painted the nipples with an unpleasant-tasting material of plant origin, aloe juice (*sabar*). The rest of the mothers in Assiut painted the nipples with hot pepper. In Dakahlia, 73.3% used aloe juice to paint the nipples, while 6.7% used castor oil. The mothers who did not use a weaning device sent the child away to a relative (grandmother) for a few days until he/she forgot about the breast. In North Sinai, almost all mothers (91.7%) dabbed aloe juice on the nipples. Only one respondent painted the nipples with a coloured substance (Mercurochrome) to frighten the child. Another respondent closed the slit in her dress (*galabia*) through which the child reached the breast.

In North Sinai, the majority of mothers (66.7%) said that throughout the first day of weaning they fed the child boiled pigeon, chicken or rabbit. They believed that this would prevent the child growing up greedy. One mother fed the child only fresh milk for the whole day as a replacement for breast milk. Another one gave the child *hal-awa tahinia*, biscuits and fresh milk during the first day of weaning. Another fed the child beef and lemon juice throughout the day and a boiled egg before going to bed. She did the same on the second day. On the third day the same food was given, but tap water replaced the lemon juice.

The mothers from North Sinai who fed their children from family food from the first day of weaning were from lower Egypt and had moved to live in North Sinai with their husbands.

All mothers from Aswan, Assiut and Dakahlia introduced the child to family food just after stopping breast-feeding.

Discussion and conclusion

The importance of introducing a baby to foods other than milk at the proper time is well recognized as a direct cause of promoting child growth and well-being. The reasons for growth failure in developing countries vary, but it is usually explained by childhood infectious diseases and/or an inadequate quantity or quality of complementary foods [1].

There were wide variations in baby feeding practices between the four governorates and within each governorate. This finding is in accordance with other studies in developing countries which also show cross-cultural diversity in the types of food items used and the beliefs held [2-4].

Complementary feeding is generally delayed in Arab countries [5], but it is introduced early in some societies [6]. For poor families, the choice of complementary foods is limited. The baby is usually given a suboptimal nutrient intake, apart from breast-feeding; as a result, the nutrition of the child suffers and optimal growth cannot be ensured. An important aspect of poverty is monotony, particularly in children's diets [7]. In developing countries, a significant number of complementary foods are introduced to the baby from the sixth month onwards together with breast milk. During the second half of infancy, there is a great risk of nutritional deficiencies and secondary functional disturbances which occur in infants and young children who subsist on starch and cereal-based foods that do not provide sufficient calories.

The national survey for the assessment of vitamin A status in Egypt, which was conducted by the Nutrition Institute in 1995, showed that 16.8% of preschool children are underweight [8]. The highest percentage of underweight is in Upper Egypt, the Suez Canal Zone and Lower Egypt.

Stunting (< -2 SD) is prevalent among preschool children (21.6%) and about 9.7% of young children are wasted (< -2 SD). The highest prevalence of wasting is in Upper Egypt. It was reported in the same survey that the prevalence of anaemia is 25.2% among preschool children. This may be because tradition still forbids the feeding of many foods to infants and young children, which exacerbates malnutrition but is not considered harmful when superficially perceived.

The majority of mothers in our study started weaning at the proper time. "Not enough milk" was the reason for early weaning (6 months to < 12 months) among 3.1% and 4.2% of mothers in Assiut and North Sinai respectively. The Koranic prescription to breast-feed for two years was greatly honoured by the majority of moth-

ers. The abrupt weaning methods used by all the mothers in the four governorates are severe, causing psychological trauma to the child. When a child is sent away to his/her grandmother until he/she forgets about the breast, the child is deprived of the mother's love and tender care as well as breast milk.

To improve the health and nutritional status of infants and young children, mothers should be encouraged to breast-feed their children for not less than 24 months and to correct and improve their knowledge and practices of complementary feeding. The time of introducing solid foods and the quality and quantity needed should be explained to the mother in detail. Mothers should also be taught the effects of malnutrition on the child's growth and development.

References

1. Rivera J, Martoroll R. Nutrition, infection and growth. Part I. Effects of infection on growth. *Clinical nutrition*, 1988, 7:156-62
2. Akin J et al. Breast-feeding patterns and determinants in the Near East: an analysis of four countries. *Population studies*, 1986, 40:247-62.
3. Ritenbough C, Smith C, Harrison G. *Mexican-American and Anglo Infant feeding patterns*. Paper presented at the annual meeting of the American Anthropological Association, Washington DC, 1980.
4. Cerqueira M. Effect of urbanization and acculturation on food habits: studies in Mexico. In: White P, Selvey N, eds. *Malnutrition: determinants and consequences*. New York, Alan Liss, 1984:189-96.
5. Harfouche JK. *Breast-feeding patterns: a review of studies in the Eastern Mediterranean Region*. 2nd ed. Alexandria, World Health Organization Regional Office for the Eastern Mediterranean, 1993 (EMRO Technical Publications, No. 4).
6. *Epidemiological report, 1976: possible hazards of artificial feeding*. Kuwait, Monthly Epidemiological Report No. 478, 1978.
7. Jelliffe DB. *Infant nutrition in the subtropics and tropics*. Geneva, World Health Organization, 1968, (WHO Monograph Series, No. 29).
8. *National survey for the assessment of vitamin A deficiency in Egypt. Final report*. Cairo, Egypt, Nutrition Institute, 1995.