

Child Feeding Patterns and Diarrhea

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Objective: To identify the type of feeding patterns and the occurrence of diarrhea among children less than two years old.

Design: Descriptive survey.

Setting: Maternal Child Health Centers, Al-Karak Governorate, Jordan.

Method: Data were collected by using questionnaire; the participants were 523 mothers attending maternal child health centers from 1 June to 13 September 2009.

Result: Two hundred seventy children (52%) were males. One hundred eighty-six (36%) children were exclusively breastfed. Four hundred seventy mothers (90%) were between 20-39 years. Four hundred twenty-four (81%) mothers had high school and BA degree. One hundred fifty-two (29) mothers were unemployed. One hundred forty-one (27%) had a monthly income less than two hundred JD, more than half of those families practiced breastfeeding. The most common causes of stopping breast-feeding were child's refusal, insufficient milk and mothers' work. Two hundred eighty-six (55%) children had no diarrhea; the majority were among exclusively breast-fed children.

Conclusion: The study revealed that practicing exclusive breastfeeding was low among mothers, and the occurrence of diarrhea was low among breastfed children.

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Exclusive breast-feeding for the first 6 months of infant's life was recommended by WHO and American Academy of pediatrics^{1,2}. In Africa, Asia, Latin America and the Caribbean, only 47-57% of infants less than two months, and 25-31% of infants 2-5 months were exclusively breastfed³. WHO indicated that although the national rate of ever breastfed children in Jordan was 93%, only 28% were exclusively breastfed under the age of four months⁴.

Few researchers found that breastfeeding among Jordanian women was fifty percent and mixed-fed was one-third⁵⁻⁷. Death and diarrhea are global problems, four billions of acute cases of diarrhea occurs annually in children aged less than five years, resulting in 2 million deaths, 15% of these deaths occurred in Eastern Mediterranean Region. WHO stated that eleven percent of Jordanian children below 2 years old died from diarrhea⁴.

Other studies reported that diarrhea was less common among breastfed children and more than 50% of monthly diarrhea hospitalization could be prevented by exclusive breast feeding⁸⁻¹¹.

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The risk of diarrhea decreased as the amount of breastfed increased¹². One hundred forty-eight children aged less than 5 years with diarrhea were admitted to Al-Karak hospital¹³. A study revealed that mothers' education had a positive impact on breastfeeding practices⁵. Illiterate women equally practiced either breastfeeding or bottle-feeding, while university mothers practiced mixed feeding. The two main causes for stopping breast-feeding were insufficient milk and child's refusal^{14,15}.

The aim of this study is to identify the type of feeding patterns and the occurrence of diarrhea among children less than two years.

METHOD

Six hundred questionnaires were distributed, five hundred twenty-three mothers participated in the study in 2009; all children were free from developmental and chromosomal problems. The questionnaire consisted of two parts; the first part is about the child's background, and the second part about the mother's personal characteristics. A written consent for participation was obtained from each mother. Data were analyzed using (SPSS) Descriptive statistics.

RESULT

Two hundred seventy children (52%) were males and 253 (48%) were females. Child's birth weights were as follows: 418 (80%) were 2.5-4.999 kg, 68 (13%) less than 2.5kg and 37 (7%) weighed more than 5kg. Table 1 shows the characteristics of participants and the feeding patterns, only 186 (36%) of the children were exclusively breastfed.

Table 1: Feeding Patterns According to Participants' Characteristics (n=523)

Participants' Characteristics	Exclusive Breast Feeding	Bottle Feeding	Mixed Feeding
	Number (%)		
Child's Gender			
Male	270 (52%)	80 (30%)	87 (32%)
Female	253 (48%)	106 (42%)	38 (15%)
Total	523 (100%)	186 (36%)	125 (24%)
Mothers' Education			
Illiterate	42 (8%)	37 (88%)	3 (7%)
Primary	57 (11%)	40 (70%)	7 (12%)
High school	224 (43%)	67 (30%)	73 (32%)
University	200 (38%)	42 (21%)	42 (21%)
Total	523 (100%)	186 (36%)	125 (24%)
Families' Income Jordanian Dinar/Month			
Below 200	141 (27%)	75 (53%)	30 (21%)
200 - 500	327 (63%)	101 (31%)	74 (23%)
Above 500	55 (10%)	10 (18%)	21 (38%)
Total	523 (100%)	186 (36%)	125 (24%)

Four hundred seventy (90%) mothers aged 20-39 years, 21 (4%) were less than 20 years and 32 (6%) were 40 years and more. Four hundred twenty-four (81%) had high school and BA degree. One hundred forty-one (27%) families had a monthly income less than two hundred Jordanian Dinar (JD), more than half of those mothers had practiced breastfeeding. The most common causes of stopping breast feeding were child's refusal were 91 (27%), insufficient milk were 67 (20%) and mothers' work were 51 (15%), see table 2. Table 3 shows that 286 (55%) children had no diarrhea, the majority were among exclusively breast-fed children, 123 (43%).

Table 2: Causes of Stopping Breastfeeding among Bottle and Mixed Feeding Mothers (n=337)

Causes	Number (%)
Child's refusal	91 (27%)
Insufficient milk	67 (20%)
Mothers' work	51 (15%)
Normal time for weaning	41 (12%)
Pregnancy	33 (10%)
Husband dislike	22 (7%)
Diseased mother	21 (6%)
Nipple problems	11 (3%)
Total	337 (100%)

Table 3: Diarrhea among Children According to Types of Feeding (n=523)

Diarrhea	Breast Feeding	Bottle Feeding	Mixed Feeding	Total
	Number (%)			
Yes	63 (27%)	64 (27%)	110 (46%)	237 (45%)
No	123 (43%)	61 (21%)	102 (36%)	286 (55%)
Total	186 (36%)	125 (24%)	212 (40%)	523 (100%)

DISCUSSION

Although the percentage of ever breastfed children was approximately four hundred (76%), only one hundred sixty-eight (36%) were exclusively breastfed. That percentage was low compared to other studies⁴⁻⁷.

The result showed that mothers aged less than 20 years practiced breast-feeding; that finding was not comparable to other studies^{14,15}.

In the current study, highly educated mothers practiced breast-feeding less compared to illiterates and primary educated mothers. Breast-feeding was more among mothers of low income.

The most common causes of introducing bottle-feeding were child's refusal and insufficient milk, similar findings with other studies^{5-7,14}. Mother's employment contributes to increasing bottle-feeding. The occurrence of diarrhea among breastfed children in this study was low compared to other feeding types; this may be due to the antibacterial properties of human milk in reducing the rate of diarrhea¹⁶.

CONCLUSION

The study revealed that practicing exclusive breastfeeding was low among mothers and the occurrence of diarrhea was low among breastfed children.

Potential conflicts of interest: No

Competing interest: None **Sponsorship:** None

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Ethical approval: Approved by Jordanian Ministry of Health Research Ethical Committee.

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