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The Effect of Breastfeeding Practice and Complementary Feeding on Sudanese Children Nutritional Status

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Abstract: ***Inappropriate complementary feeding is a major cause of child malnutrition and death. this study determined the effect of breastfeeding practice, complementary feeding knowledge, and feeding habits on Sudanese's children nutrition status. Methods: This descriptive cross-sectional study was conducted in Wad Medani great locality, Gezira state in Sudan. 300 children were surveyed. Data was collected using a pre-tested interviewer administered questionnaire. Data was analyzed using SPSS and Epi-Info. Results: (53%) of the children were completed 24 months breast feeding, 28% in 13-18 months,18% in 7-12 months and only 1% were 1-6 months. 58.6 % of children started complementary food at age of four months, 33 % started complementary food at age of six months and 3.4 % at more than six months. 60% of children started with Sudanese tradition food 35% started with mash vegetables and fruits and only 5% started with readymade food. 23% take more than three meals a day, 55% take three meals a day, 22% take two meals. Duration of exclusive breastfeeding has significant effect to the mean weight and height of children with p value (P=0.014) and (0.038). Timing of complementary food has effect on children growth. Early introduce food has a bad effect on children growth. Type of complementary food had no significant effect on mean weight, height and BMI of children. Number of meals significantly affected on child height, weight and BMI with p value (p=0.04) and (p=.001)***

Keywords: Children, breast feeding, complementary food, Nutrition status

1. Background and Introduction

Breastfeeding is the feeding of babies and young children with milk from a woman's breast(A.A.P., 2005). Health professional recommend that breastfeeding begin within the first hour of a baby's life and it be allowed as often and as much as the baby wants, breastfeeding is recommended until at least age two and then for as long as the mother and child wishChung, 2009). Breastfeeding benefits both mother and baby. Is consider as an essential factors for achievement of optimal infant and child health(A.A.P, 2005). World Health Organization, recommends exclusive breastfeeding for the first six months of life, with solids gradually being introduced around this age. Growth during infancy and childhood depends on birth weight, adequacy of infant feeding and absence of infection (WHO, 2011).

Complementary feeding is the transition from exclusive breastfeeding to family foods, typically covers the period from 6 to 18-24 months of age, and is a very vulnerable period. It is the time when malnutrition starts (WHO, 2010).

The food commonly eaten by discussion group participants, were a mixed of traditional Sudanese food and non-traditional food. Majorly consumed tradition food in a form of sorghum porridge(Aceda) and (1Mullahsharmout),Mullah sharmout could be the national sauce of the Sudan, and can be made from fresh minced meat or from dry meat strips with onion, tomatoes sauce and weaka powder. Mullah sharmout is said to be easily digested and this is why given to babies as weaning food. Most Sudanese believe that if enough milk and acedabi mullah sharmout wereavailable, then the weaning stage can be passed successfully.

2. Methods

This was a descriptive and analytical cross-sectional community study conducted in Wad Medani greater locality for 300 sudanese children. Sample size was calculated according to the method described by (Boelaert *et al* 1995), Structured interview were conducted using pre-tested questionnaires administered to the children mothers, information was collected on demographic characteristic of child and background nutrition, the mothers asked about breastfeeding practices (duration of breastfeeding, age of complementary food and type of complementary food). 24-hour diet recall was used to assess dietary diversity. Data was analyzed using SPSS and Epi-Info.

3. Result

Figure (1) show duration of breastfeeding. 53% of the children were completed 24 months breast feeding, 28% in 13-18 months,18% in 7-12 months and only 1% were 1-6 months.

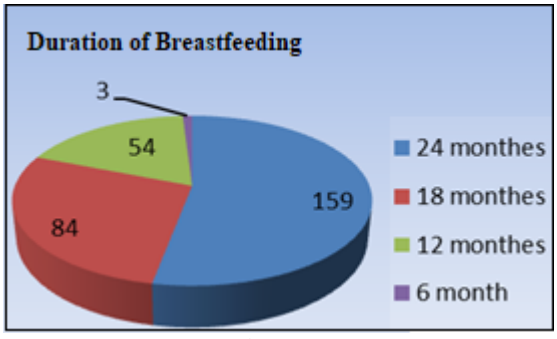

Figure 1

Table 1: Effect of breast feeding duration on children growth

Variables	Mean±SD Height (cm)	P Value	Mean±SD Weight (kg)	P value	Mean±SD BMI	P value
24months	101.61±9.76	0.038	18.84±2.94	0.014	18.25±2.57	0.126
13-18 months	100.21±8.41		17.81±2.63		17.73±2.03	
7-12 months	99.08±8.64		16.44±3.55		16.75±1.60	
1-6 months	94.67±7.50		14.00±2.03		15.625±4.25	

It was found that, duration of exclusive breastfeeding has significant effect to the mean weight and height (P=0.014) and (0.038), respectively. These findings are in agreement with (Clin, 2014) who mentioned that, duration of exclusive breastfeeding had influence on the nutritional status. There was a statistically significant association between duration of exclusive breast feeding and the nutritional status.

Figure (2) shows age of complementary food. It was found that 58.6 % of children started complementary food at age of four months, 33 % six months and 3.4 % at more than six months.

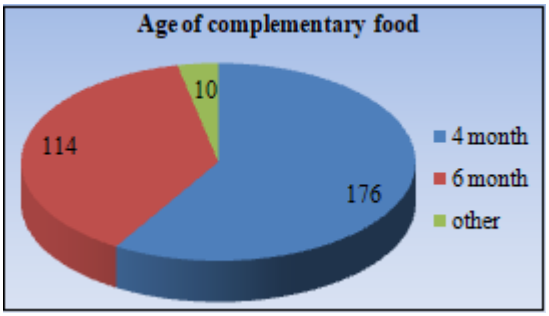

Figure 2: Age of complementary food

Table 2: Effect of age of complementary food on children growth

Variables	Mean±SD Height(cm)	P Value	Mean±SD Weight(kg)	P Value	Mean±SD BMI	P value
4 months	101.27±9.16	0.694	16.06±2.88	0.041	15.74±2.33	0.07
6 months	100.89±8.98		17.83±2.70		16.65±2.29	

It was found that the mean weight of children who stared complementary food at the age of six months was greater than children who started complementary food at four months and the difference was not significant. (8)Abdalla*et al* (2009) found that, the early introduction of complementary foods in the developing countries is associated with an increased risk of diarrhea. This issue may not achieve the optimal infant and child growth.

Figure (3) shows type of complementary food. (60%) of children started with Sudanese tradition food 35% started with mash vegetables and fruits and only 5% started with ready made food.

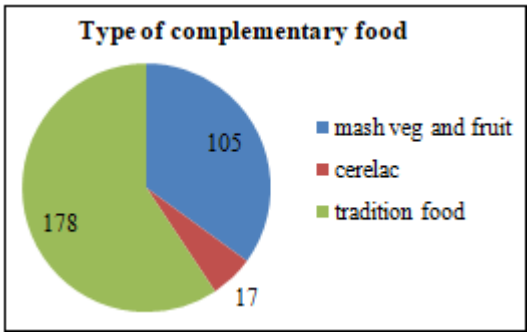

Figure 3: Types of complementary food

Table 3: Effect of type of complementary food on children growth

Variables	Mean±SD Height	P Value	Mean±SD Weight	P Value	Mean±SD BMI	P value
Tradition Sudanese food	100.45±9.24	0.522	16.72±2.24	0.700	16.58±2.11	0.319
Ready made food	100.59±6.42		16.93±2.37		16.74±2.43	
Mash vegi and fruits	102.00±8.59		17.59±3.70		16.91±2.91	

Concern type of complementary food, table (3) shows that, the majority of the children were given traditional Sudanese food. However type of complementary food had no significant effect on mean weight, height and BMI. This results supported by (WHO, 2002) which stated that, postnatal growth appears not to be sensitive to the different types of complementary foods.

Figure (4.) shows the number of meals consumed by the children per day 23% take more than three meals a day, 55% take three meals a day, 22% take two meals

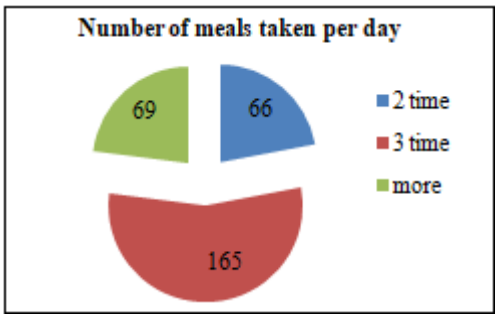

Figure 4: Number of meals taken a day

Table 4: Effect of number of meals on the children growth

Variables	Mean±SD Height	P Value	Mean±SD Weight	P Value	Mean±SD BMI	P Value
More than three	101.99±8.91		18.78±2.31		18.07±2.71	
Three meals	100.90±8.88		16.18±2.50		16.01±2.44	
two meals	98.00±7.80	.04	14.11±1.69	.005	14.69±2.30	.001

Table (4.) shows the effect of number of meals on the children growth. The growth variables of children taking more than three meals were higher than those who take 3-2 meals per day, the number of meals significantly affected child height, weight and BMI. These results are in accordance with (Saglam and Tarum, 2008) they reported that, obesity is associated with number of meals consumed per day. In contract (Umairah *et al*2012) stated that number of meals per day did not show any association with children's BMI.

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