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Complementary Feeding Practices and Nutrient Intake of Children Aged 6–18 Month in Ebonyi State, South East Nigeria

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Abstract

Ebonyi State is one of the states in Nigeria. It is largely an agrarian State with less than 50% literacy level. The nutritional status of the indigenes especially the women are attracted by their low income levels, cultural beliefs and food habits. Complementary feeding is the process of introducing other foods in addition to breast milk Timely introduction of appropriate complementary foods have been found to promote good health, nutritional status and growth of infants and young children during a period of rapid growth. Low quality complementary foods combined with inappropriate feeding practices put under-twos in developing countries like Nigeria at high risk of malnutrition and it's associated out-comes. A descriptive and exploratory study was hereby carried out to investigate the complementary feeding practices used on infants of between the ages of 6–18 months in Ebonyi State Nigeria. Three hundred mothers (300) with infants attending immunization centre in hospitals and health centre were used in the study. Validated questionnaires were used to collect data. Dietary home observations of some selected infants were carried out. It was observed from the study that 97.4% of the mothers breast fed their children while 2.7% never breastfed their children. 25% mothers started solid foods before 4 months, 49.7% between the ages of 4–6 months, 19.3% at the age of 7–9, 2% 10–12 months and 1% after 12 months. Most mothers breastfed their children at will or when the baby signaled. Only 34.3% practiced exclusive breast feeding. Fermented corn (pap) was the most popular complementary food used. It was also discovered that although mothers had a wide knowledge of optimal infant feeding, actual practices were constrained by cost of food, maternal HIV status and availability. The average nutrient intake of infants were 626.1±196.6 Kcal, 19.9±7.6 g, 8.2±5.9mg, 25.9±13.4mg, 442.5±164.5mg for energy, protein, iron, ascorbic acid and calcium respectively. The energy values were lower than the recommended daily allowances while protein and iron intakes were generally adequate. Grassroots nutritional campaign that will educate the women on strategies to improve the traditional complementary practices is therefore recommended.

Keywords: Breast feeding, Nutrient intake, Children, Complementary feeding practices, Ebonyi-state
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INTRODUCTION

Breast milk is an ideal food for the healthy growth and development of all normal infant. It is safe, uncontaminated and digestible. Colostrums; the milk that comes at the fourth or fifth day of life contains a high concentration of anti bodies that protects babies from infection before the child's immune system matures. Exclusive breastfeeding have been recommended for the first 6month of life with continued breast feeding up to 24 months of age.However, complementary foods are required to fill the gap between the nutritional needs of the child and the nutrient content of the breast milk [Nout, 1993; WHO, 2000]. This gap increases with age, demanding an increasing contribution of energy and nutrient especially iron, from foods other than breast milk [Lutter, 1992.]. It is therefore imperative that complementary feeding should be timely, adequately prepared and given in a safe and appropriate manner. Poor quality complementary feed with low nutrient density and feeding practice had been identified as among the major causes of malnutrition and diseases in children (WHO, 2003) .Complementary feeding is poorly practiced in many developed countries like Nigeria particularly Ebonyi state. This is due to the literacy level; lack of information about what foods are appropriate, the quantity to feed and their inadequacy in quality among others [ACC/SCN, 2000]. Complementary foods are introduced too early or too late and the quantity and quality of foods are insufficient, leading to a great risk of nutritional deficiencies during the second half of infancy . Most of the habitually used complementary foods in developing countries are unfortified cereal based gruels characterized by low energy and nutrient density and are often inadequate in iron, zinc and pyridoxine and in some population may be deficient in riboflavin, niacin, ascorbic acid and vitamin A (Brown et al.,1998). The thrust of this study is therefore to investigate the complementary feeding practices by Ebonyi mothers and the nutrient intake of infants and children aged 6- 18 months.

Table 2: Types of complementary foods fed to children in Ebonyi state

Types of complementary foods	Frequency	%
Porridge from maize	80	26.7
Cerelac	55	18.3
Nutriend	38	12.7
Sorghum	3	1
Millet	8	2.7
Custard	12	4
Farlex	2	0.7
Porridge from maize	54	18
Nutriend/millet	4	1.3
Cerelac/pap	4	2.3
Porridge from maize/others	2	1.3
Porridge from maize/millet/fufu + soup	2	0.7
Nutrend/cerelac	2	0.7
Nutrend/pap	7	2.3
Pap/baby rice	2	0.7
Custard/pap	7	2.3
Pap/fufu + soup	5	1.7
Others	8	2.7

Akinrele and Edwards (1971), concluded that the protein content of porridge from maize was too low to support the growth of rats. A baby aged 4-6 months would need 920g of pap to meet daily needs of energy (740 Kcal) and 13g protein (Eka and Edijah, 1972). This is an impossible task considering the size of an infant's stomach. The use of Nutrend and Cerelac were more in the category of commercial foods. About 1.7% of the mothers gave "fufu" and soup with a combination of pap. About 30% of infants fed adult foods have been observed to be malnourished. (Amar- Klmesu and Wheeler ,1991).Nwaegbute and Nnanyelugo, (1989) recommended that locally available foods that complement each other should be combined in such a way that the new pattern of amino acid created by this combination will be similar to that recommended for infants.

HOME OBSERVATION

The result of the 24 hour food recall of infants between the ages of 6-18 months in Ebonyi State is presented in Table 3

Table 3: Nutrient content of diets fed to selected infants

	Energy [kcal]	Protein [g]	Iron [mg]	Ascorbic acid [mg]	Calcium [mg]
RDAs	800-1200	14-15	10	35-45	600-800
Infants	626.1 + 196.6	19.9 + 7.6	8.2 + 5.9	25.9 + 13.4	442.5 + 164.5

The results show that the infants' energy intake is lower than the recommended energy requirement. This could be due to the ignorance of meal planning by the mothers. Most of the mothers constantly serve pap to their infants. Pap is not adequate as a complementary food.

The protein intakes of infants are generally adequate. However, for protein to be adequate, the amino acids being supplied must provide for the cellular synthesis of both protein and non-protein nitrogenous compounds. Dietary amino acids are needed for synthesizing the proteins needed for maintenance, repairs and growth of tissues (Akinrele and Omotola ,1986). Children are very vulnerable to malnutrition and one of the major factors that cause stunting is inadequate food intake .Calcium is abundantly found in milk, milk products, some legumes and leafy vegetables. The findings support that young women do not always apply their knowledge of nutrition in the choice of food. Infants should be fed with food rich in calcium, for formation and development of healthy bones and teeth.The Iron intake and the ascorbic acid content are lower than the recommended allowances for the children.

CONCLUSION AND RECOMMENDATIONS

Mothers in Abakaliki city of Ebonyi state breast feed their children.Most of the mothers introduce solids by six (6) months. The frequency of feeding of the complementary foods was appropriate. However, the complementary foods were not adequate although timely introduced, properly given and fairly safe .It could be observed that mothers though had knowledge of optimal infant feeding, actual practices were constrained by food cost, maternal HIV status and availability.It could be recommended that the traditional complementary food should be improved nutritionally by combining locally available foods that complement each other, Other simple traditional food processing technologies that can improve the nutritional quality, taste and extend shelf-life of foods should be adopted and grass root nutritional advocacy that will educate the mothers on strategies of improving the traditional complementary foods should be adopted.

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