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Nutritional status of infants attending infant welfare clinic of Ahmadu Bello University, health service Samaru

T.O ALAMU*[1], S.E. ATAWODI[2] and J.N EDOKPAYI[3]

[1]*University Health Services, ABU, Nigeria*
[2]*Department of Biochemistry, ABU, Nigeria*
[3]*Department of Chemistry, ABU, Nigeria*

ABSTRACT

This study was undertaken at the welfare clinic University Health Service of Ahmadu Bello University, Samaru, Zaria, Nigeria, inorder to establish the nutritional status, feeding practices and rates of exclusive breastfeeding and childhood immunization. Forty questionnaires were administered to mother and anthropometric measurements of the children were taken. It was found that 72% of the mothers practice exclusive breastfeeding while 62% of them introduced complementary feeding at the appropriate age of 6 months. Rates of childhood immunization and vitamin supplementation were 92-97% and analysis of anthropometric data indicates that most of the infants have a moderate weight and height for their age. It is recommended that adequate counselling of mothers could help to further attain and maintain the good nutritional status of children attending infant welfare clinic at UHS ABU.

Key Words: Infants, growth, nutritional status, breastfeeding, immunization.

INTRODUCTION

Adequate nutrition and health care during the first few years of life is fundamental for child survival and prevention of malnutrition [1]. It is important to know that it is during infancy and early childhood that irreversible faltering in linear growth and cognitive deficit occurs [2-3]. Growth during the first year of life is greater than at any other time after birth. An infant's birth weight will usually double by four to six months of age and triple by the first birth day. Good nutrition during the period of rapid growth is vital to ensure that infant develops both physically and mentally to the fullest potential [4].

Inadequate nutrition during the critical formative years has both immediate and long time consequences [3]. During their early months, nutritional needs can be entirely met with breast milk so it is the preferred milk for infants and best in their first year of life. It is perfectly suited to the nutritional needs of the human infants which make it superior to infant formula and cow's milk [5]. The immediate consequences include mobility, mortality and delayed mental and physical development, while the long time consequences include impaired intellectual performance, reproductive performance, work capacity and increased risk of chronic diseases.

According to Lutter [6], the causes of malnutrition in children can be summarised as both behavioural and resource related. Behavioural in the sense that poor breastfeeding and inadequate complimentary feeding coupled with poor environmental sanitation and infectious diseases are the immediate direct causes, while the resource related causes are house hold poverty and inadequate health care. Studies have shown that promotion of exclusive breastfeeding ranked first among the intervention program for reducing under five mortality [7]. Reports show that only about 35% of infants worldwide are exclusively breastfed during the first four first month of life (3). Complementary feeding frequently begins too early or too late and the food given are often nutritionally inadequate and unsafe [8]. In Nigeria, about 40% of infants are exclusively breastfed [9]. There are consequently an increased number of malnourished children. In Nigeria mild and moderate malnutrition contributed to 35% death than severe malnutrition which contributes only 10% [10]. National data from the Nigeria food consumption and nutrition survey, NFCN (2001-2003) on under 5 nutrition showed that 42% of the children are stunted, 25% where under weight and 9% were wasted (7%). These are the indicators that under nutrition of the infants are prevalent in the country. Poor feeding practice of mothers is one of the major treat and among the most serious obstacles in attaining and maintaining health of children of this age group [11].

The major source of nutrition for infants (0-1) year is breast milk and complementary foods. Studies have shown that children exclusively breastfed for the first six month, coupled with appropriate complementary feeding [12] and immunization regime for the first year of life, grow appropriately: mentally, physically and are less sickly [3,13-14]. As from six months, breast milk alone may not be sufficient to meet the energy and nutritional needs of the infant; hence the need to introduce other foods [12]. According to Fronginno [15] appropriate complementary feeding requires not introducing foods, other than breast milk, too early or too late, coupled with feeding infants and young children between 6-24 months foods considered safe and nutritionally adequate without discontinuing breastfeeding. Current data reveals that 55% of Nigerian mothers are ignorant of exclusive breastfeeding [9]. It reported zero awareness of exclusive breastfeeding in rural areas of Nigeria.

This study is carried out in order to establish the state of infant nutrition in an academic environment, thereby providing appropriate information for nutrition counselling and support in the prevention of malnutrition in infants.

Study area

This study was undertaken in the University Health Services of Ahmadu Bello University, Main Campus Samaru.

Population

All children in the age group described who were attending the clinic during the study period were eligible for participation in the study (n = 40). Communications with the mothers of the children were carried out by local staffs of the study team, who were fluent in the local language. Mothers were asked to give their informed consent for participation of the child in the study.

DATA COLLECTION

Questionnaire

A structural questionnaire was validated and used for the study. It was administered on mothers of 0-6 month's old infants. It sought background information of the children and their parents which include: age, sex, religion, educational status, immunization, information on child feeding and child care practice, was obtained.

Anthropometry

Anthropometric measurements were performed by the study team according to standard procedures [16]. Members of the study team were trained intensively in order to minimize inter observer variation in measurements. The weight of each child, without clothing, was measured to the nearest 0.1 kg using a portable infant weighing scale (Salter England, West Bromwich, England, model 235 6S, 0–25 kg). The scale was calibrated daily with standard weights. Recumbent length of the children was measured to the nearest 0.1 cm, using a horizontal measuring board with a sliding foot piece. Dates of birth of the children were either copied from the clinic card (after verbal verification), or, in the case of unknown dates of birth, ages were estimated by comparison with age mates with known date of birth.

RESULTS AND DISCUSSION

Collection of related information about the nutritional status of infant from age 0 – 6 months attending child welfare clinic A.B.U., (Sick-Bay) led to a number of findings. According to Olukosi and Alamu [17] 10% of a total population should be used as a sample. The total population that attended child welfare clinic in 2008 were a total of one thousand one hundred and one children, but as of August when the questionnaire was administered 770 had attended the clinic, so forty questionnaires was prepared to represent the population; this is because the actual number is not known. Forty children attending child welfare clinic were used in carrying out this research work.

The result suggested that 72.5% of the infants attending child welfare clinic were exclusively breastfed for six months (Fig.2), 94.5% were given colostrums which is the first milk produced rich in antibodies. This is not surprising as most of the women had some level of education and 49% of them attended tertiary institution (Fig.1). Breast milk is the recommended and preferred first infant food for all babies and is encouraged by paediatricians, the American Academy of Paediatrics and the American Dietetic Association, as well as most of other professional health organizations [5]. Majority of the respondents indicated that complementary feeding was introduced to the infants at 6 – 7 months. Sixty-two percent (62.5%) mothers had timely introduction of complementary foods. Introducing solid food too early can trigger allergies and many of the enzymes needed to digest solids are not yet available in sufficient amounts to allow the food to be properly metabolized [5].

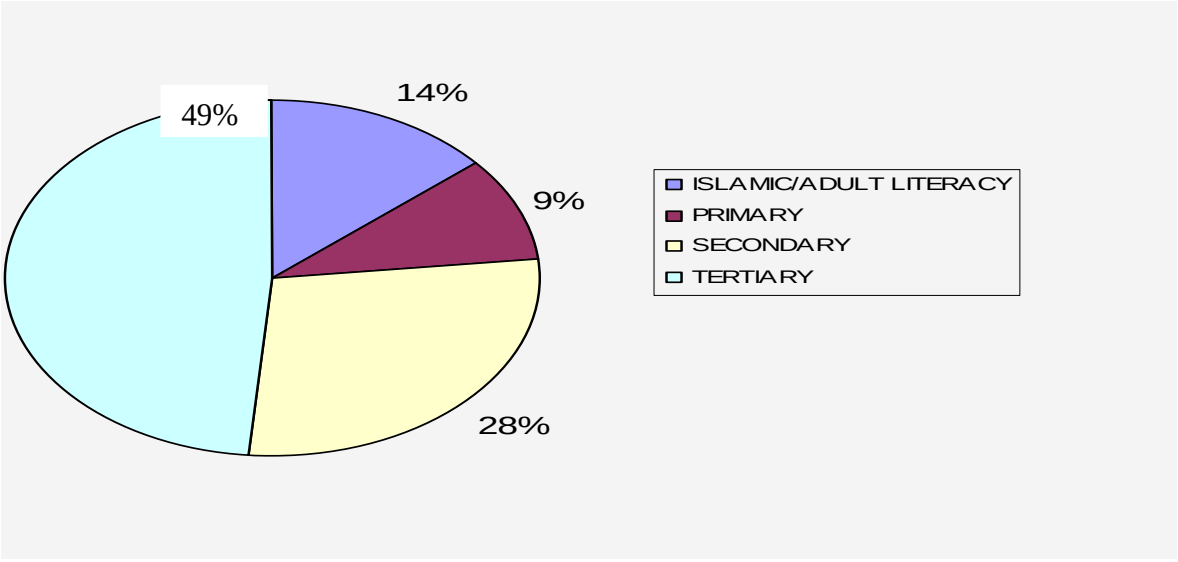

Fig. 1: Educational Status of Caregivers of Infants Attending UHS, Samaru

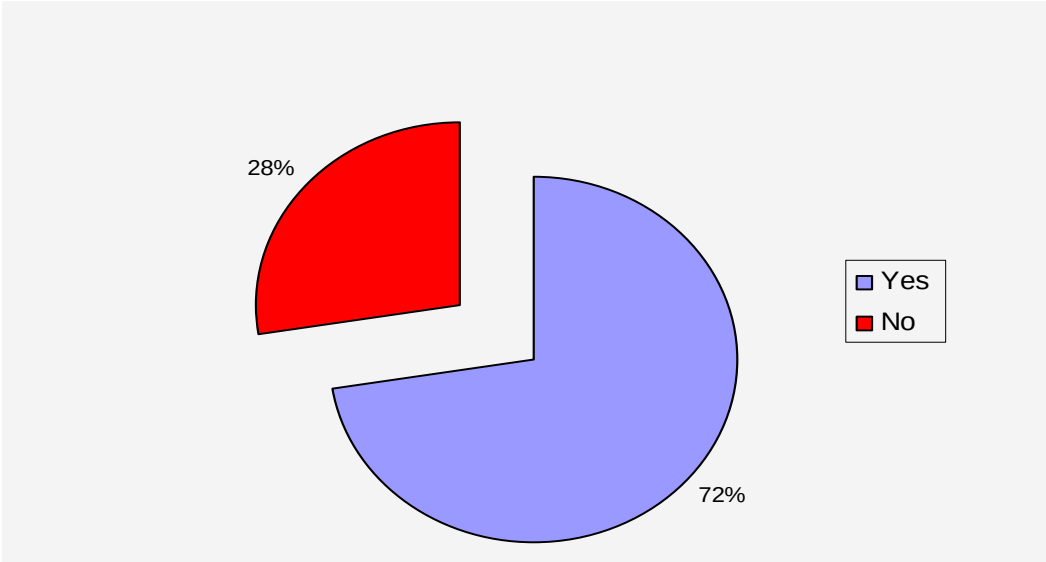

Fig. 2: Rate of Exclusive Breast feeding of mothers attending Infants Clinic at UHS, A.B.U. Samaru

Immunization is the elimination of vaccine preventable diseases. Eradication of small pox has been achieved currently; global efforts are directed at the eradication of polio and the elimination of measles [18]. From the findings, the children were adequately immunized against many vaccine preventable diseases (92-97%). According to GMF [19] infants need a healthy supply of macronutrient. In the findings 95% of the infants have been given vitamin A and the care givers know the consequences of lack of vitamin A which mean there is adequate intake of micronutrient.

Anthropometric data is used for the assessment of nutritional status of children below five years. In this finding, the anthropometric data shows that the male infant status has a normal weight of 52.10% (Fig.3) and normal length 43.50% (Fig.4). The female nutritional status has a normal weight of 64.70% (Fig.3) and normal length of 47.00% (Fig.4).

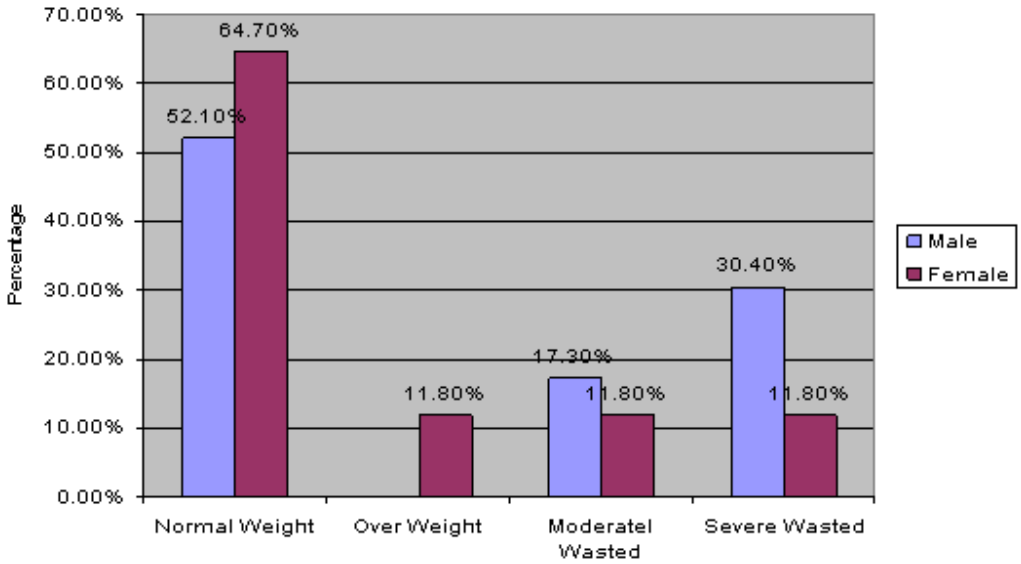

Fig. 3: Nutritional Status with respect to weight the of Infant attending Clinic at UHS ABU, Samaru

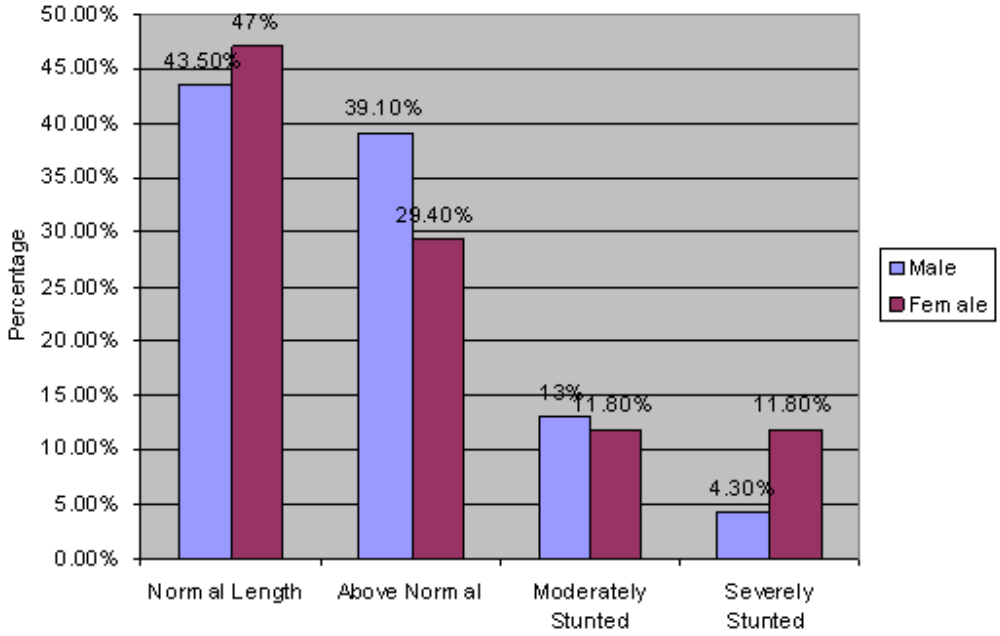

Fig. 4.: Nutritional Status with respect to the length of Infant attending Clinic at UHS ABU, Samaru

13.0% and 4.30% of the boys were moderately and severely stunted respectively while 11.80% and 11.8% of the girls were moderately and severely stunted respectively. Children who are stunted are at risk of concurrent and later delay in psychomotor development and at risk of reduced working capacity during adulthood; women face increased obstetric risks [20]. Applying the breastfed data set for these children will diagnose stunting at an early age, and therefore give

more timely possibilities for interventions. The functional outcome of these children when they reach adulthood will be the ultimate test of the adequacy of applying a breastfed data set.

CONCLUSION

The nutritional status of infants attending Ahmadu Bello University Health Services is moderately adequate. The data indicates that most of the infants have a moderate weight and height for their age. The result also this shows adequate level of exclusive breast feeding 72%. Good immunization rate 92-95% and Adequate rate of vitamin A supplementation.

Recommendations

This study recommends the need for further investigation into infant feeding and care practice in other area of Zaria metropolis and the rural areas. Also adequate counselling will help to further attain and maintain the good nutritional status of children attending infant welfare clinic at UHS ABU.

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