

A Study on the Nutritional Status of Children in Mawlai Iewrynghep, East Khasi Hills District, Meghalaya(India)

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Abstract

Nutrition of under five children is a fundamental pillar for good health and development. It is a necessity for growth and sustenance and is responsible for the total development. Therefore, it important to assess the nutritional status of children under five years of age, to determine the usual dietary intake of the children under five years of age and to make diet suggestion for children under five years of age. It was a micro study conducted for under five children of Mawlai Iewrynghep. The sample of the study included 50 children who are below the age of five and they were selected purposively from the different areas of the locality. An interview schedule was used which was being administered to the respondent mothers. Every child was subjected to Anthropometric measurements. The resultof the study shows that almost half percentof under five children have an arm circumference between 13cm-16 cm and majority of children were underweight. Most of the children in the study area had poor nutritional status, therefore, nutrition education should be provided to the community to increase their level of awareness on nutrition

Keywords: Under five children, Wasting, Stunting, under weight

Introduction

Children are the precious possession of the family, community, and country. They are beautiful source of joy and happiness, and a subject of dreams for the future. Children represent the wealth of the country. At each stage of a child's growth and development, appropriate care is very essential. Children of today are citizens of tomorrow, and hence improving nutritional status of children becomes extremely important. In our country, the young child under five years is most vulnerable to the vicious cycles of malnutrition, disease or infection, and susceptibility to disability. Almost 11 million children die before the age of five. This is primarily due to the result of malnutrition. Malnutrition is seriously damaging. It causes high level of morbidity, mortality and disability apart from poor physical growth and development.

According to WHO and NFHS-3, one in three children in India suffers from stunting and one in every two children from underweight. As per NFHS-3, 48% of children under age five years are stunted (too short for their age) which indicates that half of the country's children are chronically malnourished. Acute malnutrition, as evidenced by wasting, results in a child being too thin for his or her height. 19.8% of children less than five years of age in the country are wasted which indicates that, one out of every five children in India is wasted. In addition, 43% of children under age five years are underweight for their age.

Coming to the state of Meghalaya, National Family Health Survey (NFHS-3) reveals thatBreastfeeding is nearly universal in Meghalaya. However, only 26 percent of children under six months are exclusively breastfed. About nine in ten children (91%) are put to the breast within the first day of life, including 58 percent who were put to the breast within one hour of birth. Malnutrition in the state of Meghalaya is very

rampant. The Social Division Statistics (2012) reveals that the state of Meghalaya has 40-50 % underweight and 55.1% stunted children. The National Family Health Survey (NCHS-3) also reveals that in Meghalaya over half of children (55%) under age five are stunted or too short for their age, which indicates that they have been undernourished for some time. Thirty-one percent are wasted, or too thin for their height, which may result from inadequate recent food intake or a recent illness, and almost half of children (49%) are underweight.

Child malnutrition is a wide spread public health problem having international consequences because good nutrition is an essential determinant for their well-being. The nutrition of infants and young children are causing great concern among social scientists and planners these days since child is the chief victim of interplay of nutritional, socio-economic and health factors that cause malnutrition. Therefore, the prime objective of this research is to investigate into the nutritional status of the children (0-5 years) particularly in Mawlai Iewrynghep.

Objectives

- 1) To assess the nutritional status of children under five years of age.
- 2) To determine the usual dietary intake of the children under five years of age
- 3) To make diet suggestion for children under five years of age.

Area and sample of the study

The present study was conducted in 2013 and included 50(25males and 25 females) children who were below the age of five years from Mawlai Iewrynghep falling under the East Khasi Hills District, Meghalaya. The respondents were selected purposively from different areas located in Mawlai Iewrynghep.

Tools and techniques of data collection

An interview schedule was used for collection of data and consisted of 27 self-constructed questions, which is administered to 50 of the respected respondents' mother. In order to get information about the nutritional status of the child, the schedule has been divided into four parts: (i) socio-economic status, (ii) Details of the child, (iii) Feeding practices up to 1 year of age and (iv) Dietary pattern of one- five years' age children. The data was collected by interviewing the mothers of the children.

Anthropometric measurements

1. Weight: Weight of under-five children was measured by using a weighing machine with minimum clothing over body and without shoes. But for the younger children weight of the mother was first measured and recorded and then the weight of the mother with the child. The difference in the weight of the mother with the child and that of the mother alone was taken as the weight of the child. The machine was regularly checked and the weights recordings were repeated for accuracy.

2. Height: The height of the children was measured by using a measuring tape of 152 cms. Height was measured by making the child to stand on a flat surface and back of head touching upright the wall. For infants who cannot stand on their own they were made to lie down on a flat surface with head position firmly against a fixed hard board. The height of the child was taken from the head board to the footboard of the child. Again for accuracy the measurements were taken twice.

3. Arm circumference: For measuring the arm circumference an ordinary measuring tape of 152 cms was used. It was being measured by placing the tape around the middle part of the child's left arm and the value was recorded accurately by measuring twice.

4. Diet survey: To know about the dietary pattern of the children diet survey was done. The various food items consumed by the child in the last seven days were recorded. For classifying the children who are wasted and stunted, the Water low's classification was used. For classifying children who are underweight, the Body Mass Index (BMI) was used.

Analysis of the study

The data were analysed and interpreted by using percentage.

Table 1: **Age Distribution of children**

Age	Number	Percentage
0-11 months	11	22
12 months- 2 years	20	40
3-5 years	19	38
Total	50	100

Table 2: **Feeding Practices of children upto 1 year**

Feeding Practices	No of children (out of 50)	Percentage
Breast feed within one hour of birth	49	98%
Pre lacteal feeds	1	2%
Complimentary feeding in the early months of birth	21	42%
Weaning from 5 months above	22	44%

Table 3: Dietary Pattern of One-Five Years Children

Food Items consumed by children in the last seven days	No of days in a week they consumed the food items (out of 7 days)	Percentage
Rice	7	97%
Tubers (Potato, Sweet Potato etc.)	7	72%
Bread,Chapatti, Roti	7	92.31%
Fish	2	49%
Meat	Does not consume meat	36%
Eggs	3-4	43%
Dairy products	7	79%
Pulses	7	64%
Vegetables	7	79%
Fruits	7	95%

Table 4: Height/ Age (Stunting)

Category	No of children	Percentage
Normal	26	52%
Mildly Impaired	22	44%
Moderate Impaired	1	2%
Severely impaired	1	2%
Total	50	100

Table 5: Weight/ Height (Wasting)

Category	No of children	Percentage
Normal	24	48%
Mildly Impaired	16	32%
Moderate Impaired	8	16%
Severely impaired	2	4%
Total	50	100

Table 6: **Underweight**

Category	No of children	Percentage
Normal	10	20%
Under weight	40	80%
Total	50	100

Findings and Discussion

Early childhood is the first five years constitutes the most crucial period in life. At this stage the foundation is laid for physical or motor, cognitive, social and emotional development. Under nutrition jeopardizes children's survival, health, growth and development, and it slows the nation's progress. The present study found that there is the prevalence of stunting, wasting and underweight children in Mawlai Iewrynghep. The findings of the study show that children who are having a severely stunted growth were only 2% as compared to a study by Tamoghna B et al (2011) which was 43.2%. Similarly, study by Otgonjargal D et al (2010) shows that 1.7% children were wasted which is lower as compared to the findings of the present study. With regard to underweight, a study by Dinesh Kumar (2006) revealed that among all under five children surveyed 36.4% were underweight which is very low as compared to the present study.

Breastfeeding especially just after delivery provides effective anti-bodies and essential nutrients to new-borns. The present study indicates that 98% of the children were breast fed within one hour of birth which is very high as compared to a study by Gupta A and Gupta, Y.P. (2003) which is only 28%. Moreover, the present study also shows that 98% of the children were fed with nothing else but breast milk within one hour of birth, but in a study by Kanwar and Jatinder Kishatwaria (1997) it was found out that majority of the children were given pre-lacteal foods like cow's milk and honey.

As per this present study the result reveals that most of the respondents (40%) were given supplementary food between 5 to 7 months and only 4% were given between 9-11 months. This shows that most of the children receive timely supplementary feeding. But as per the study conducted by Tamoghna B et al (2011) it shows that 80.3% children in the study area did not receive timely complementary feeding. As seen in the findings of the study, children intake of the different food items are on a regular basis but still large proportions of children are underweight, wasted or stunted. Therefore, this shows that the food items consume by them are not balanced.

Suggestions

Based on the findings of the study, some of the dietary suggestions have been made for children under five years of ages follow.

- Most of the children in the study were born with very low birth weight than the actual normal weight. Therefore, nutrition education needs to be given to the expectant mothers so that they will be able to have a good nutritious food themselves so as to enable the child to be born be of the normal body weight.

- The liquid supplements given to the child comprises mostly only of milk and milk products. Therefore, in the diet of children other liquid supplements can be included like juice of fresh fruits and soup from green leafy vegetables.
- When it comes to mashed solid supplements mostly all the children are given only rice with vegetables. Therefore, their diet can also include fruits which must be mashed, stewed and sieved. A small amount of hard yolk can be given which must be gradually increased to a complete yolk of an egg. As far as egg white is concern it can be introduced till the infant is 8-10 months.
- Well-cooked pulses along with cereals in the form of kichidi can be given or made into porridge. In the study that has been conducted it shows that most of the children age one year and above consume the different food items all most every day the whole week. But the study shows that most of the children are underweight. This shows that the diet that they take is not enough to meet their needs. Therefore, their diet should be modified. When the children start cutting their teeth, it is time to start chopped and lumpy food. Cooked cereals and pulses can be given to the children. When the children get used to semi-solid foods bread, chapatti and rice can be given. Vegetables chopped into small pieces and boiled and can be given. A slice of raw carrots or fruits with its skin peeled can be a good exercise for the gums.

Recommendations

The current nutritional status situation that the state and the country as a whole and in particular the Khasi society are facing today is a serious matter of concern. Despite the fact that a lot of achievements has been made in the different areas of development but the nutritional status of under five children still remains the same. The government of India has launched many nutrition programmes but how far these programmes has benefited the people and in improving the nutritional status of the under five children is still at stake. Therefore, to improve the nutritional status of children it can be suggested that:

I) **Nutrition education** should be given which includes knowledge about breast feeding practices especially exclusive breast feeding to 6 months and proper weaning.

II) Nutrition programmes

i. The different nutrition programmes of the government should also include many awareness programmes to educate the masses on how to improve the nutritional status and not simply focusing on providing food items to the masses.

ii. By launching more and more nutrition programmes which will improve the nutritional status of the children.

III) Awareness

i. There is a need to make the parents and in particular mothers aware on how to provide the children with adequate quality and quantity of the different nutrients in the diet.

ii. Awareness should be given on the advantages of feeding small quantities of fresh fruit juice like oranges, tomatoes, sweet limes etc. which can supplement the protective nutrients not present in breast milk.

IV) Dietary guidelines to be adopted by parents to improve the nutritional status

i. Parents should also see to it that they do not feed children with bulky staple food which fill the child's stomach and assuage its hunger without meeting the energy needs.

ii. Different cooking methods and new attractive combinations encourage the child to eat more.

iii. While feeding the child with the food parents should not show any dislike on the food given as this may lead to rejection of food by the child.

V) **Community workers** can also play a very important role in improving the nutritional status by disseminating information to the people in the community.

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