MALNUTRITION IN CHILDREN FROM 6-59 MONTHS AT LGH

KHURRAM KHALIQ BHINDER, AMEENA
AMC/LGH, Lahore

ABSTRACT

Introduction: Malnutrition in children below the age of 5 years is a significant problem and has been identified by the World Health Organization (WHO) as the most lethal form of malnutrition, indirectly or directly causes an annual death of at least 5 million children worldwide.

Study Design A community based cross-sectional study was conducted to assess the prevalence of malnutrition and associated factors among children aged 6- 59 months.

Study Duration The study was conducted from 15th April to 30th May, 2016

Objective: To assess prevalence of malnutrition and associated factors among children aged 6-59 months at Lahore General Hospital, Lahore.

Methods: A community based cross sectional study was conducted on 100 children aged 6-59 months from April 15th to May 30th, 2016 at Lahore General Hospital. Multistage sampling method was used to select the subjects. Anthropometric measurements and structured questioners were used. Bivariate and multivariate logistic regressions were used to identify associated factors of malnutrition.

Results: The analysis this study revealed that 45 (45%) children were malnourished while 55 (55%) were normal. The main associated factors of malnourishment were found to be child age, family monthly income, and children were received butter as pre-lacteal feeding and family planning.

Conclusion: From the findings of this study, it is concluded that malnutrition is still an important problem among children aged 6-59 months. Therefore, especial attention should be given on intervention of malnutrition.

INTRODUCTION

Malnutrition refers to a pathological state resulting from a relative or absolute deficiency or excess of one or more essential nutrients. It is a state of nutrition where the weight for age, height for age and weight for height indices are below -2 Z-score of the NCHS reference. Malnutrition continues to be a major public health problem in developing countries. It is the most important risk factor for the burden of disease causing about 300, 000 deaths per year directly and indirectly responsible for more than half of all deaths in children. Health and physical consequences of prolonged states of malnourishment among children are: delay in their physical growth and motor development; lower intellectual quotient (IQ), greater behavioral problems and deficient social skills; susceptibility to contracting diseases.

Much of the burden of deaths resulting from malnutrition, estimated to be over half of childhood deaths in developing countries, can be attributed to just mild and moderate malnutrition, varying from 45% for deaths due to measles to 61% for deaths due to diarrhea. The majority of studies on child nutritional status have described prevalence of malnutrition among under-five children and analyzed socioeconomic, demographic and cultural factors associated with child malnutrition.

Therefore, this study designed to assess the prevalence of malnutrition and associated factors among children aged 6-59 months.[1]

OPERATIONAL DEFINITIONS

Anthropometry:
Measurement of the variation of physical dimensions and the gross composition of the human body at different age levels and degrees of nutrition by weight-for-age, height-for-age and weight-for-height

Complementary Food:
Foods which are required by the child, after six months of age, in addition to sustained
breastfeeding.
(History of weaning)

Diarrhea:
Diarrhea is defined for a child having three or more loose or watery stools per day.

Family Size:
refers total number of people living in a house during the study period.

Fever
A child with elevated body temperature than usual.

Income:
It is periodical monthly earning from one's business, lands, work, investment etc.

METHODOLOGY

A. **Study Design**
A community based cross-sectional study was conducted to assess the prevalence of malnutrition and associated factors among children aged 6- 59 months.

B. **Study Duration**
The study was conducted from 15th April to 30th May, 2016

C. **Study Settings**
At Lahore General Hospital, Lahore

D. **Sample Size**
No known data existed on the prevalence of acute malnutrition in the district of Kachchh, therefore the size of the sample required for this survey was calculated using the following equation, with an estimated prevalence (p) of malnutrition in the target group of 0.5:

E. **Sample Selection**
Inclusion Criteria:
Those children who didn't turn5 on 15th April 2016 (Age of 6 months to 59 months)

Exclusion Criteria:
Those patients who did not give consent and were seriously ill.

F. **Data Collection Procedure**
The data was collected by predesigned questionnaire which contained information of age, sex, educational status, past history of illness, present history of illness, followed by anthropometric measurement and systemic examination.

DATA COLLECTION TOOLS

Anthropometric Measurements:
a) Weight
The weight of all children included in the survey's sample, was measured and recorded by data collectors. Weighing scales, capable of measuring weight in kilograms to the nearest 100g, was used.

b) Height/Length
All children included in the sample, under the age of 24 months, had their length measured using a length measuring board. For children over the age of 24 months, height was measured using a standing height measuring board.

c) Nutritional Oedema
The child was determined as having nutritional oedema by shallow print or pit remained when normal thumb pressure applied to the foot or lower leg of the child for three seconds and then the thumb lifted. Any child found to have nutritional oedema was classified as malnourished.

G. **Data Analysis Plan**
First the data were checked for completeness and consistency.

Analysis was carried out at two. Firstly, a bivariate analysis was performed to determine the association of malnutrition and associated factors. Statistical association was checked by 95% confidence interval and crude odd ratio. Secondly, the significant variables (p-value < 0.2) observed in bivariate analysis were subsequently included in multivariate analysis. Finaly, 95% confidence interval and adjusted odd ratio were checked and the significance variables were taken as associated factors of malnutrition. P-value less than 0.05, 95% CI and odd ratio were considered as statistically significant.

H. **Ethical Considerations**:
Given the level of education status of people in our community, people were properly explained the procedure and level of questions and proper consent was taken from the parents/guardians of patients or by the accompanying relative.

RESULTS

The analysis this study revealed that 45 (45%) children were malnourished while 55 (55%) were normal. The main associated factors of malnourishment were found to be child age, family monthly income, and children were received butter as pre-lacteal feeding and family planning. Compared with age groups, the highest prevalence of mal nourishment was children age 24-35 months followed by children aged 12-23 month. However, the lowest prevalence of malnourishment was seen in children aged 6-11 months

Table 1: Duration of Breast and Bottle Feeding

Duration	Breast Fed Children	Bottle Fed Children
Up to 6 months	14	30
Up to 12 months	16	18
Up to 24 months	13	9

Chart 1: Ratio of Subjects Breast fed to age

Chart 2: Ratio of subjects' bottle fed to age

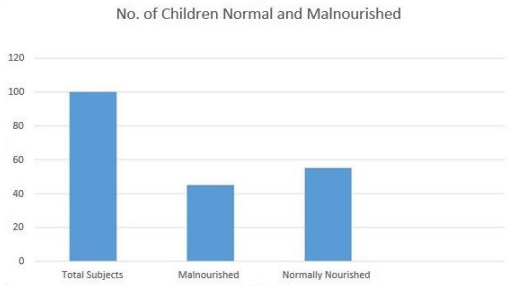

Chart 3: No of Subjects malnourished and normally nourished

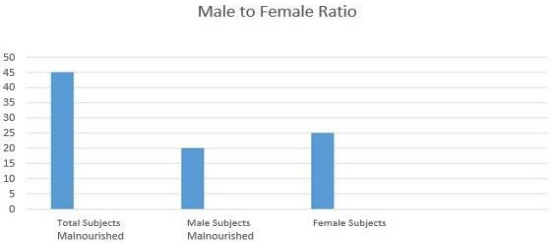

Chart 4: Male to Female Ratio in Malnourished Subjects

Table 2: Age of Weaning

Age of Weaning	No. of Subjects
Before 6 months	31
From 6 months to 1 year	37
Upto 2 years	32

Table 3: Age of Weaning and Malnourished Subjects

Age of Weaning	Malnourished Subjects
Before 6 months	**7**
6 months to 1 year	17
Upto 2 Years	

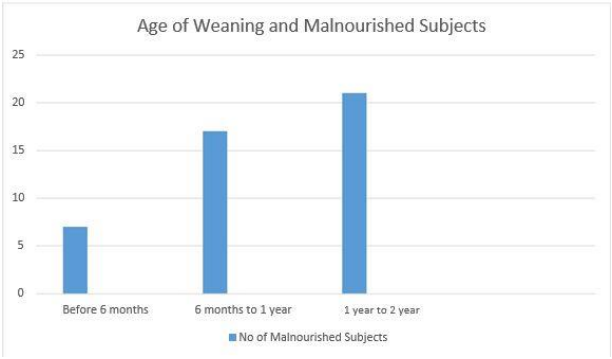

Chart 6: Age of Weaning and malnutrition

DISCUSSION

Malnutrition results from various factors and is present in all developing countries. We made an effort to assess the prevalence of malnutrition in children younger than 5 years of age and the associated demographic and social factors in this study. In our study, 55 (55%) of children were normally nourished while 45 (45%) were malnourished. These findings are similar with overall estimates of national prevalence of malnutrition in Pakistan.

Education level of mothers has significant effect on the nutritional status of their children. In Pakistan, 52% of the mothers without a formal education have malnourished children, while mothers with formal education have a better understanding of the benefits of a small family, breast feeding and the weaning process, and hence have less malnourished children (23 to 24%). In our study, 29% of mothers and 19% of fathers were without formal education while 61% of the mothers and 62% of the fathers had less than grade 10 education and only 10% of mothers and 18% of fathers had graduate or higher level education.

Gender disparities in health and education provision are higher in South Asia. In one study, a girl in India was 30-50% more likely to die under five year

of age than her counterpart boy. There was no gender difference in seeking medical advice but girls were about 2.5 times more malnourished than boys

In our study, under the age of six months, only 14% of children were exclusively breast-fed, while 20% of the children were not breast-fed at all. Children who received no breast feeding have a high frequency of malnutrition, which according to one study is estimated to be almost 39%. Similarly, delayed weaning, after one year of age, was associated with malnutrition in 53.4% of children in another

In our study, 43% families had income less than Rs.10, 000 per month. In earlier studies, families with low socio-economic status, where monthly income was Rs.8000 or less, had 52.2% malnourished children, while the families with an income of Rs.10000 and more, had 24.7% malnourished children. Economic development also brings down malnutrition and vice versa[3]

CONCLUSIONS & RECOMMENDATIONS

This study revealed that, prevalence of malnutrition was high and it was the top list among the health problems in children below age of 5 years.

RECOMMENDATIONS

- Community based nutrition program should be established to tackle the problem of malnutrition at community level
- Nutrition education by health extension works should be strengthening to improving the feeding practice of parents on appropriate children feeding.
- Continued attention should mandatory to infant exclusive breast feeding practices till 6 months is important to avoid traditionally giving butter as pre-lacteal feeding by rural community.
- Health office should be collaborated with others sectors and stake holders to improve access of water supply.
- Households should be treat drinking water which obtained from unprotected water supply and, bleaching and strained through cloth
- Use of family planning should be encourage at community level
- Further study should be done to see other an explored associated factors that were not included in the present study.
- Nutrition surveillance needs to be done continuously and special attention should be given to vulnerable groups such as poorest and the most severely malnourished children.

REFERENCES

1. Prevalence of Malnutrition and Associated Factors Among Children Aged 6-59 Months at Hidabu Abote District, North Shewa, Oromia Regional State(http://www.omicsonline.org/prevalence-of-malnutrition-and-associated-factors-among-children-aged-months-at-hidabu-abote-district-north-shewa-oromia-regional-state-2161-0509-3-T1-001.php?aid=16270)
2. Prevalence of Malnutrition and Associated Factors Among Children Aged 6-59 Months at Hidabu Abote District, North Shewa, Oromia Regional State(http://www.omicsonline.org/prevalence-of-malnutrition-and-associated-factors-among-children-aged-months-at-hidabu-abote-district-north-shewa-oromia-regional-state-2161-0509-3-T1-001.php?aid=16270)
3. Nutritional Assessment of Children under the Age of Sixty Months in District Sialkot, Pakistan (http://www.jpmsonline.com/jpms-vol1-issue1-pages7-12-oa.html)