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To assess malnutrition in Nutritional Rehabilitation Center Bhopal with the Complementary Feeding Practices

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Abstract

Across sectional study was carried out to evaluate the feeding pattern of malnourished children and to study the association between their demographic and nutritional variables. The study was conducted on 150 children aged 0-60 months attending Nutritional Rehabilitation Center in Bhopal district. Selected demographic variables, feeding pattern, age of administration and type of different complementary foods and frequency of these food items were recorded.

Measurement of weight and height or length by standard procedures was done for all infants and children recruited in the study. Anthropometric data were applied to appropriate charts: weight for length Z score, weight for age Z-score and height for age Z-score which were estimated according to Who charts.

Keywords: Sam (Severe acute malnutrition), Pem (Protein energy malnutrition) Nrc (Nutritional Rehabilitation Centre), F75 (Formula 75 calorie), F100 (Formula 100 calorie), F100D(Diluted Formula 100 calorie) SF (Special Food).

Introduction

The nutrition and health statistics of Madhya Pradesh (M.P.) have not been much encouraging. The infant mortality rate of M.P. is 67 per 1000 live births as per SRS 2009 compared to Kerala, which reports 17 per 1,000 live births. As per Nfhs-3, under 5 mortality rate of M.P. is 94.3 per 1000 live births, 60% of the children are undernourished and 12.6 % are severely wasted.

Figure 01

Inappropriate feeding practices are still believed to account for at least one-third of causes of malnutrition, and contribute significantly to morbidity and mortality, among children under five. The link has been well established. Malnutrition has been responsible, directly or indirectly, for 60% of all deaths among children under five years annually. Over 2/3 of these deaths are often associated with inappropriate feeding practices and occur during the first year of life. Only 35% of infants worldwide are exclusively breastfed during the first four months of life. Exclusive breastfeeding in the early months of life is correlated strongly with increased infant survival and lowered risk of illness, particularly from diarrheal disease. To achieve optimal growth, development and health, Who recommends that infants should be exclusively breastfed for the first six months of life and that breastfed should continue for up to two years of age or beyond. Complementary feeding begins either too early or too late with foods which are often nutritionally inadequate and unsafe. Poor feeding practices in infancy and early childhood, resulting in malnutrition, contribute to impaired cognitive and social development, poor school performance and reduced productivity in later life. Poor feeding practices are, therefore, a major threat to social and economic development as they

are among the most serious obstacles to attaining and carried pattern of feeding practices in malnourished children admitted to nutritional rehabilitation centre and study related demographic characteristic of these children and their mothers.

Objective of the study

The health care practices and awareness towards self as the main aim of study, other objectives are categorized as following-

1. To study the nutritional parameter of selected children.
2. To assess the child feeding pattern in Nrc observed child nutritional status.

Hypothesis

1. Nrc admitted children are nutritionally poor.
2. Nrc provides nutrition care and health care practise.
3. Nrc takes helps with Unicef for malnourished children.

Methodology

Primary outcomes

1. Mortality
2. Morbidity assessed by risk of hospital admission/re-admission and length of hospital stay (This hospitalization is converted in to Nrc for children age from 0 to 5 years).
3. Measures of nutritional status such as change in weight and anthropometric measurement.

Secondary outcomes

1. Nutritional intake before and after the intervention.
2. Measures of clinical function e.g. immune function and other indicates of nutritional status.

Study design

The study was carried out in Bhopal district of Madhya Pradesh. In total four NRCs have been established in Bhopal under the guidelines of growth and developmental assessment of subjects were accomplished by carrying out the following diagnostic investigation:

1. Clinical examination
2. Anthropometric measurements

Purposive sampling technique was for the purpose of data collection.

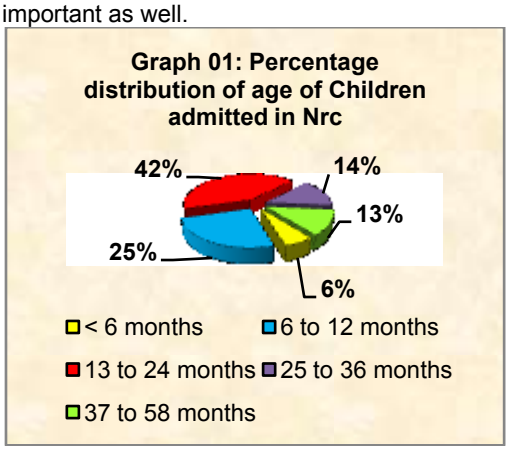
Sampling & enrolment of study participants

Purposive sampling technique was used for data collection. In total 150 samples were collected from four different Nrcs established in four different hospitals of Bhopal district namely, Bhopal district hospital (n=40), Bairagarh hospital (n=40), Bairasiya hospital (n=40) and People's Medical hospital (n=30). Hospitalized children from various Nrcs were enrolled for the purpose of the present study till the 150th sample aged between 0-5 years and were followed up till their discharge from hospital.

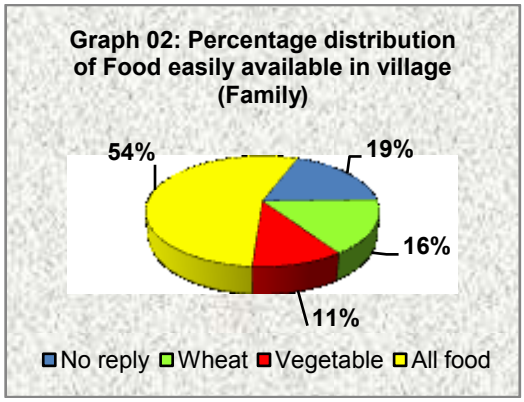
Findings/Result

Who recommendations Infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health. Thereafter, to meet their evolving nutritional requirements, infants should receive nutritionally maintaining health of this important age group. The present study was carried out to identify adequate and safe complementary foods, while continuing to breastfeed for up to two years or beyond. Complementary feeding practices must be improved. Too often, complementary foods are introduced too soon or too late. The frequency and amounts of food that is offered may be less than required for normal child growth, or their consistency or energy density may by inappropriate in relation to the child's needs. Conversely, too much of a poor complementary food could displace the more nutritive breast milk in the child's diet. Other factors, such as the pattern of feeding may affect breast milk intake. In addition, the nutrient content of these foods may be inadequate or the absorption could be impaired by other components in these foods. Storage safety is important as well.

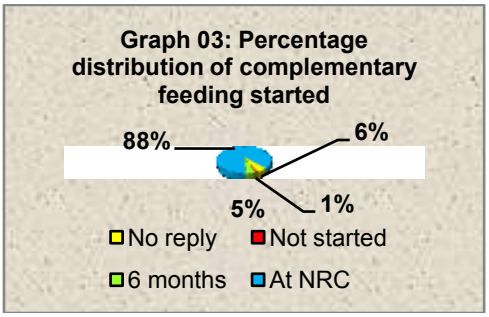
Graph 01: Percentage distribution of age of Children admitted in Nrc



Graph 02: Percentage distribution of Food easily available in village (Family)



Graph 03: Percentage distribution of complementary feeding started



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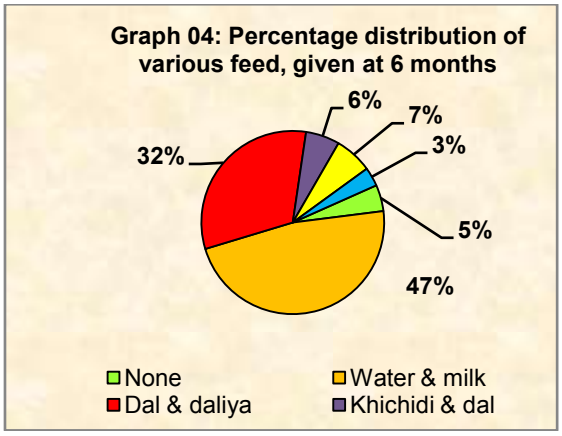

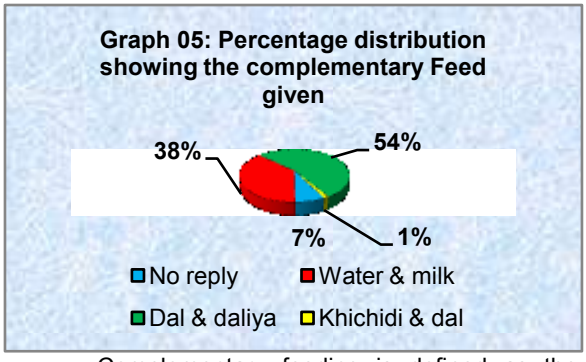

Complementary feeding is defined as the process starting when breast milk alone is no longer sufficient to meet the nutritional requirements of infants, and therefore other foods and liquids are needed, along with breast milk. The transition from exclusive breastfeeding to family foods – referred to as complementary feeding – typically covers the period from 6 - 24 months of age, even though breastfeeding may continue to two years of age and beyond. This is a critical period of growth during which nutrient deficiencies and illnesses contribute globally to higher rates of under nutrition among children less than five years of age.

Percentage of Feed Prescribed

Table01- F75/F100/F100D

Options	Percentage
Only mother milk	8.0
F100	92.0

Table02- No of meals per day

Options	Percentage
Only mother milk	8.0
Four meals	92.0

Table03-Solid food consumed per day per meal

Options	Percentage
Only milk	8.0
Sf	92.0

Table04-Solid food consumed per feed in grams

Solid food consumed per feed	Percentage
No reply	8.0
>25 grams per feed	80.7
25 & more grams per feed	11.3

Table05.Total Grams (Solid food) consumed per day

Solid food consumed per day	Percentage
No reply	8.0
up to 80 grams	59.3
81 & above grams	32.7

F75 (Formula 75 calorie), F100 (Formula 100 calorie), F100D(Diluted Formula 100 calorie) Sf (Special Food). All above food are therapeutic foods. The study observed that the 8 % children on mother milk and 92 % child based on prescribed food.

Conclusions

The study indicates poor adherence to Who recommendations for breastfeeding and infant feeding practices. Interventions and further research should pay attention to factors such as cultural practices, access to and utilization of health care facilities, child feeding education, and family planning.

Suggestion

1. The model of daily supplementation of milk fortified micronutrients and deworming and nutritional consultation at households should be developed in order to prevent malnutrition in children in the future.
2. There is a need to continue the research for food supplement fortified micronutrients with long term interventions to demonstrate the effectiveness of nutrition and health improvement for children as well as the sustainability of the intervention.

Questionnaire /Survey

Sample Questionnaire

Nutritional Rehabilitation Centre:.....

Personal History Form for Severely Malnourish Child

Name.....Father/Mother……

Age (date of birth).....Boy/Girl

Family History

Father's Occupation Farmer/Labour/Other.....
Mother'sOccupation Housewife/Labour.....
BPL/APL Income.....Adult.....
OtherFamily (Mohter/Father/Other).....
Members Children.....
(Brother/Sister/Other).....

Toiled Habits ……
Drinking water facility : .....
Food easily available in village (Family) : .....

Mother's Status

Age of Mother :
Mother's age at the time of marriage :
Mother's Education :
No. of live children : Male ..... Female .....
No. of Children deceased/Aborted : Male .. Female …
Total No. of ANC……..
No. of TT Vaccine .... Total No. of IFA table consumed ……
Delivery Status : Institutional ……
At Home .....
By trained birth attendant .....
Breast feeding status : Started after ..... hours of birth ……
No. of children who received colostrum feeding ……..
Duration of Breast Feeding .....

Health Status of Severely Malnourished Child

Initiation of breast feeding within 1/2 hour/1 hour/ 2 hour/ Other

Prelactical feed given Water/ Honey/ Ghutti/ Other

Exclusive breast feeding upto age 3M/ 4M/ 5M/ 6M/ Other

What feed was given at 6 months .....

Complementary feeding started at .....and feed given.....

Breast feed upto age.....

Do they clean their hands before feeding Yes ..... No.....

What feed is given generally .....

How many times in a year the child get ill .....

What treatment is given.....

Immunization Status :

Immunization during pregnancy TT I.....II.....

Child Immunization

BCG.....OPV.....

DPT.....Measles.....

Vit.A.....Booster OPV/DPT .....

Health Facilities :

AWC : .....

Does the AWW visits : .....

Supplementary Nutrition received from the AWC : .....

Does the ANM Visits : .....

Other Information :

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