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WEANING NUTRITION PROJECT IN PAKISTAN

by

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I. INTRODUCTION

A. NUTRITION PROBLEMS AMONG CHILDREN POPULATION IN PAKISTAN

As a result of the National Nutrition Surveys conducted in East Pakistan (1962-64) and West Pakistan (1964-66), the following facts have been disclosed (1, 2, 3):

1. General Malnutrition:

General malnutrition was found to be widespread in both wings, forming a major health problem, especially among mothers and children below 5 years of age. It was recorded that 23.6% of total deaths in West Pakistan and 25.8% in East Pakistan occur in children below 5 years. In East Pakistan the average weight of a child 2 years old is 6.8 kg in girls and 7.0 kg in boys; the expected weight being 12.4 kg.

2. Protein - Calorie Malnutrition:

This is the most serious nutrition problem in Pakistan. Stunted growth has been found universal among pre-school children in both wings; low plasma protein levels were found in 50-60% of families, suggestive of latent PCM; 70% of protein intake of children came from cereals, 11-14% from animal sources.

3. Vitamin A deficiency:

Vitamin A deficiency is a more serious problem in East Pakistan; combined with PCM it increases the death rate of young children; 40% of the population have deficient plasma concentrations of vitamin A and carotenes.

4. Anemia:

Over one third of the population suffer from anemia; 45-50% of children had haemoglobin concentration below 12 gm/100 ml blood.

5. Riboflavin deficiency:

Riboflavin deficiency was found prevalent in both wings, especially in early childhood; 70-75% of children had low riboflavin excretions in urine.

WHO is presently assisting Pakistan to develop the Directorate of Nutrition Survey and Research, originally established to carry out the National Nutrition Surveys, into a National Nutrition Institute. One of the main objectives of the Institute is "To develop Pilot Programmes for the control of malnutrition among mothers and children, and to use the experience gained from such Pilot Programmes for the dual purpose of demonstration and training" (4).

Accordingly three Pilot Nutrition Programmes projected towards mothers and children have been started in Islamabad (since February 1968)(5) Dacca and Karachi (since June 1968) (6).

B. OBJECTIVES OF THE PILOT PROJECTS.

The main objectives of these projects are:

1. To conduct epidemiological studies to define the aetiological factors and local characteristics of malnutrition among the vulnerable groups of the population.

2. To develop effective measures and techniques for the control and prevention of malnutrition, especially among children and mothers, depending upon the local resources and services.

3. To discover and mobilise the economic and food potentialities of the population - rural and urban - for the improvement of their health through better nutrition, within their social and economic limits.

4. To develop Pilot Applied Nutrition Programmes to be used for field demonstration and training, aiming at future development and extension of comprehensive nutrition activities in the country.

C. PLAN OF ACTION:

1. Collection of base-line data:

Basic data were collected from Union Council and health services; and other sources; but specific data were collected through

organized surveys including:

a) A census survey; an income survey.

b) A maternity survey recording the history of marriage, pregnancies, births, deaths and MCH care.

c) A survey of dietary habits, dietary intake and food resources of the family.

d) A survey of the weaning techniques and feeding habits for children upto 5 years and for mothers during pregnancy and lactation.

e) A nutritional health survey including examination of stools and urines for parasites and biochemical examination of urine and blood.

II. CONTROL OF MALNUTRITION:

In the Islamabad Pilot Survey 57% of the population have shown clinical signs of malnutrition, mostly stunted growth, anemia, riboflavin deficiency, dental caries and endemic goitre; 2.3% of the population have shown xerophthalmia, mostly children below 3 years of age; 27.1% have parasitic infection, mostly hookworm infection (17.5%).

With this load of malnutrition and parasitisation, treatment and control measures become a primary priority.

III. PREVENTIVE MEASURES:

Nutrition education activities are the most effective approach for the prevention of malnutrition. The Pilot Project in Islamabad was introduced through meetings at the Union Council with the village leaders, at the school with fathers and teachers, at the mosque after prayers, and through home visits by the institute dietitians. Educational activities cover the MCH centre, the agricultural and veterinary units and the schools.

The parents and teachers have been motivated to start a self dependent school feeding programme, run by the fathers and teachers and financially

supported by the community, using food supplements from the World Food Programme. UNICEF is helping with the provision of 50% of the cost of cooking and eating utensils and the establishment of a suitable kitchen. The parents will supply the vegetables, the pulses, the fuel and labour.

Education activities are to include food demonstrations at the MCH centre and at central homes in the different village sectors, to introduce the improved weaning foods and techniques, using the local home utensils and the available food resources.

IV. DEVELOPMENT OF WEANING AND SUPPLEMENTARY FOODS:

From the dietary survey, the feeding practices for the children from birth to 5 years have been recorded. In order to develop indigenous weaning mixtures, it is necessary to conduct a thorough study of the weaning techniques, food habits for adults and the available food resources at the family and community levels.

In the Islamabad Pilot Project, the following facts were disclosed:

1. 72% of mothers give ghuti (a mixture of sugar, ghee and little milk) during the first days of life, which is a dangerous technique.
2. 15% of mothers do not boil the milk efficiently.
3. Supplementary foods given after the six months of age are: animal milk, rice and milk gruel, flour and milk pudding and biscuits. Bread and curry are delayed till the third year.
4. 50% of children are fed the ordinary family diet during the third year; 25% during the fourth year of life.
5. 99% of mothers lactate till the end of the first year, 35% till the end of the second year and 20% till the end of the third year.
6. 75% of mothers stop lactation because of a second pregnancy.
7. 83% of families have milk animals; 86% keep poultry and 66% have kitchen gardens; in spite of such prevalence, eggs and chicken appear very rarely in the food of young children.

8. Almost all families produce their own high extraction flour; grams and pulses are available in the village market at reasonable prices.

With this basic information at hand, it was decided to develop weaning formulae, at home levels, composed of balanced mixtures of cereals, pulses with little milk, introduced in the form of gruel in increasing amounts starting from the age of 6 months. After biochemical and biological testing of these recipes they are to be introduced back to the family for testing their acceptability and tolerance, and training each family to prepare its own weaning recipes. Taking the ingredients from the ordinary family food makes their introduction less difficult with the least educational effort.

A study of the seasonal availability of vegetables and fruits helps the introduction of vegetables and fruits into the weaning recipes.

DEMONSTRATION AND TRAINING:

The Pilot Project at Islamabad has been used for the training of 84 senior MCH Officials from West Pakistan, in 6 batches, each for two weeks' duration. These batches are especially composed of assistant Directors of Health of the different regions, Directors of L.H.V. Schools, MCH inspectresses and assistant inspectresses, and Public Health Nurse-tutors in the L.H.V. Schools. Special emphasis in the training is given to the nutrition of the pre-school child, malnutrition available in this age, development of weaning foods, role of MCH centres in the control of malnutrition, applied nutrition programmes, nutrition education, and safe and clean foods.

It is planned to establish regional nutrition training fields at Lahore and Karachi - using the Pilot Project already started there - to train the MCH field workers all over West Pakistan in maternal and child nutrition. It has been agreed with the Health Department of West Pakistan to improve the services of their MCH centres to include more effective nutrition services and education.

COORDINATION OF THE PILOT NUTRITION PROJECTS:

The three Pilot Projects at Islamabad, Dacca and Karachi are fully coordinated; the principles, procedures and approaches have been standardised, taking geographical and social differences into consideration. The Survey proforma have been matched; the experiences and resulting data are being interchanged.

EVALUATION:

Regular periodical assessment of the progress and achievements of the programme are being periodically attempted, taking the basic data and the survey records as the bench mark for evaluation.

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