

Impact of amylase diets on the nutritional levels of preschool children

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ABSTRACT

A study was undertaken to create awareness among the preschool children mothers about the importance of ragi based amylase diets to the children who were in the III grade malnutrition and were fed with the amylase diets supplementation for a period of four months. The pre and post test weights of the both experimental and control group children were recorded and it was found that experimental group children who were fed with the amylase diets had increased their weights and reached to normal level than their counterparts.

Key words : Amylase diets, Preschool children, Malnutrition

Preschool age is a period of rapid growth and development. Pre school children require nutritious diet for their optimum growth and development. Children in rural areas do not consume required quantities of nutrients and suffer from under nutrition problem. To combat this problem, children need to be given foods that are rich in amylase protein (Khader *et al.*, 2005). Amylase rich foods which are low cost using ragi and green gram should be given to the child as a supplementary food as per the requirement. Ragi based amylase foods are rich in calcium and other major nutrients. Wheat/ragi and green gram/ bengalgram/soya can be used based on the availability and cost.

METHODOLOGY

Amylase food:

- Sprouted ragi/ wheat/jowar/bajra/maize = 50%
- Green gram/ soya /cowpea = 25%
- Sugar/ jaggary = 20%
- Milk powder/milk = 10%

Process of preparation :

The cereals and pulses were cleaned and soaked for 8 hours and allowed to sprout. The sprouted cereals and pulses were shade dried, and the sprouts were removed. They are roasted on low flame and in powder form. Sugar and milk powder were mixed and stored in air tight containers.

Requirement:

- For pre school children = 75 g/day
 - For pregnant women = 160 g/day
 - For lactating mothers = 190 g/day
- Experimental design was selected to study the impact

Table : Nutrient composition of 100 g of amylase food

Sr. No.	Nutrients	Amylase food content
1.	Protein	11.5 g
2.	Carbohydrates	76.7 g
3.	Fat	1.5 g
4.	Fibre	2.0 g
5.	Calcium	440 mg
6.	Iron	5 mg
7.	Vit.C	25 mg
8.	Thiamin	0.5mg
9.	Riboflavin	0.6mg
10.	Vit.D	350-800 IU
11.	Vit.A	350 IU
12.	K.cals	396

of these ragi based amylase diets as supplementary food to the experimental group of children.

Twenty four children (3-4 yrs) who were in Grade II and III malnutrition level were selected from the Anganwadi teacher of Ambam village located in Nizamabad district of Andhra Pradesh state. Out of this twenty four children, twelve children were given ragi based amylase diets as a supplementary food (75 g/day) for four months period. The control group children were fed with normal family diet without any supplementary food.

Pre test and post test weights were recorded for both experimental and control group children as presented in the figures (Fig. 1 and 2).

RESULTS AND DISCUSSION

The mothers of these children were given orientation on preparation and importance of amylase diets and the experimental children were fed with this diet for four months with the help of Anganwadi teacher. These

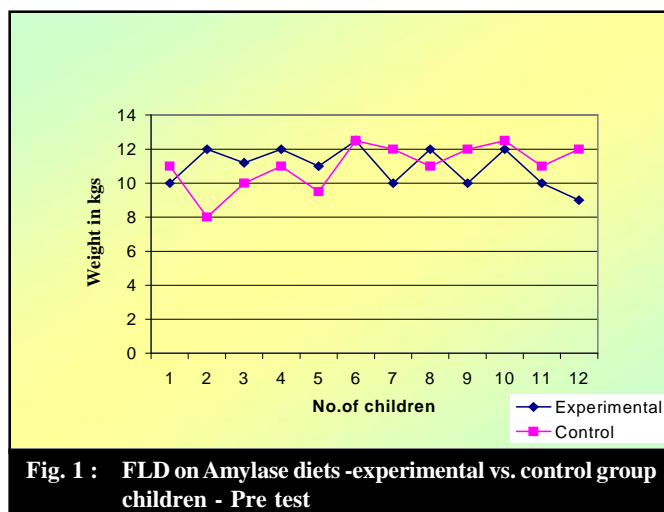


Fig. 1 : FLD on Amylase diets -experimental vs. control group children - Pre test

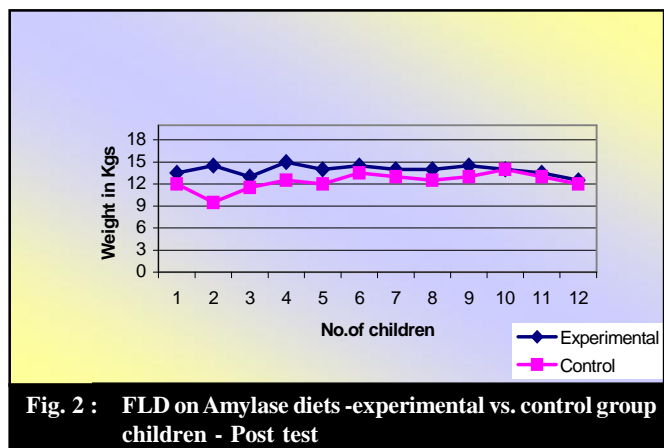


Fig. 2 : FLD on Amylase diets -experimental vs. control group children - Post test

children were not given ICDS food during this period. The control group children were fed only normal family diet. The control children were not given ICDS food.

The weights of both experimental and control group children were taken at pre test and post test stages. It was found that, the experimental children who were fed with the amylase food had shown better weight gains *i.e.* 2- 4 kg than the control group children who were fed with only normal family diet (Fig. 3 and 4). This indicates that amylase plays an important role in the growth of preschool children. The acceptance levels of the food by the children were also good. The teacher and the mothers told that children relished the food and ate without any fuss. The children also responded that the taste was good and they liked it.

Conclusion:

From the study it can be concluded that amylase food supplementation is required for the optimum growth and development of children besides normal family diet. Children who are undernourished should be given extra nutrients to combat malnutrition. Amylase food which is

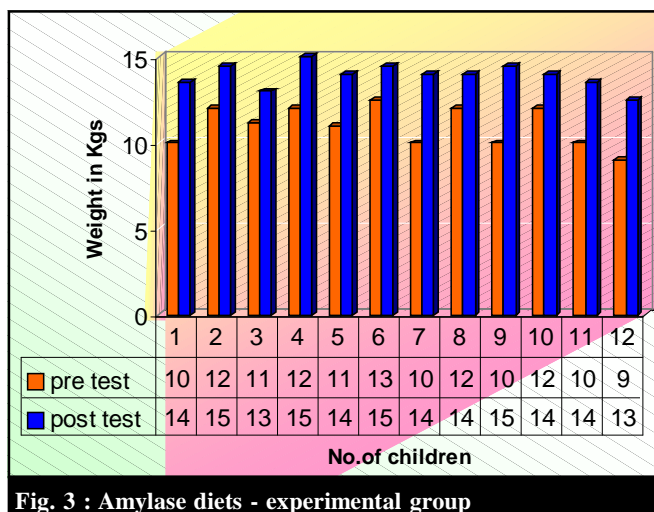


Fig. 3 : Amylase diets - experimental group

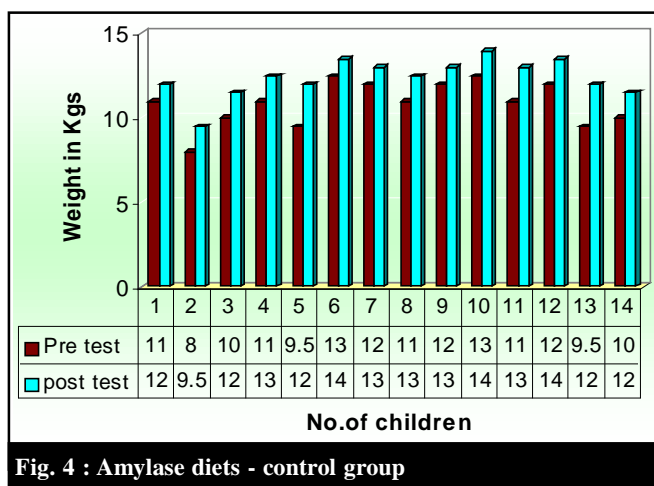


Fig. 4 : Amylase diets - control group

a combination of cereal and pulse becomes the best low cost alternative food for preschool children, pregnant and lactating mothers.

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