

“Improvement of Nutrition and Health Status of Children with Body Weight Deficiency”

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Abstract

The phenomenon of poverty affecting Armenia is a consequence of many problems that emerged following the independence of the country in 1991. The government of Armenia faced the aftereffects of the 1988 earthquake, the existence of hundreds of thousands of homeless refugees from Azerbaijan, transportation blockade, etc.

Poverty has a profound impact on the health and welfare of children. Poverty robs children of the right to grow to their full potential, exposing children to terrible environmental risks to their health and development.

Poverty is underlying cause of both the ill-health and under-nourishment of children. Insufficient nutrition has a negative effect on the human immune system, and particularly on developing fetus and child’s immune system. The decreased immunity of children causes severe diarrhea, which promotes the deterioration of the children’s health.

Malnutrition of population, in spite of its declining pattern still is a major concern for Armenia and currently one family out eight can not fully sustain even the minimum nutrition. If poverty reduction does not accelerate, human capital will further deteriorate and persistent human poverty can emerge. As a response to these challenges, PRSP was adopted as the main strategic program of the Government with targets consistent with MDGs. The indicator of underweight children in Armenia (under the age of five), which is included in MDG1, is 8.2 percent. However, it significantly differs by regions, fluctuating between 0.7 percent in capital and 9.3 percent in the region with highest ratio of underweight children. An estimated 11 percent of Armenian children suffer from malnutrition. The most suffering children are those whose mothers have median or low levels of education.

Malnutrition is the single most important factor for disease. Limited access to a range of fresh, whole some foods after weaning means that many children are undernourished. Malnutrition reduces immunity, so children are more likely to catch infections. Infections place further nutritional demands on the body, creating a vicious circle.

Objectives of the research:

- To improve general health and nutrition status, in particular during early childhood
- To raise awareness in families and professionals (e.g. medical staff, nutritionists) about the healthy diet and nutritional value of amaranth grain
- To introduce amaranth in the diet of the children with malnutrition

Starting from 1990 Armenia has encountered a problem of starving children. Till the last decade there was no problem of toxic dystrophy among the infants. This appeared as a consequence of malnutrition due to worsening of socio-economic conditions. The starvation and malnutrition has mainly affected the children from vulnerable families, whose parents are unemployed for a prolonged period of time. According to some mothers, they fed their children who had diarrhea only with tea and rice for weeks and as a consequence the children developed edemas and drew back in weight by more than 50% percent and sometimes more.

Photo images of such children suffering from malnutrition in Armenia



Armenian child suffering from Malnutrition

The same child after being treated with a protein



On average, annually in latest 90-ties till 2003 there were 70-90 patients from the age of 0-2, accepted to the hospital with the above –mentioned diagnosis. This shocking statistic does not reflect the reality; it only shows the existence of the problem. This is the tip of the iceberg. The main problem and the real number of children in need is hidden, as so many of them do not have the access to doctors, health facilities, financial resources, transportation, and finally necessary information on opportunities to be treated. The problem of being underweight is severe for children of mothers with low levels of education.

In the frame of carried out project totally 50 children with more then 30% of body weight deficiency were fed with amaranth flour products during 6 months after discharge from the hospital. The reasons why this product was chosen for feeding children with malnutrition were:

- High levels of proteins and amino acids in amaranth (especially amino acids lysine and metionine)
- Higher than other plants levels of carbohydrates, calcium, iron, dietary fibers and vitamins.
- Approximately 48 % of very valuable starch.

The continuous assessment of children's health status showed that their general condition became satisfactory, protein-free edemas disappeared and all children permanently gained weight.

Conclusions:

- Worsening of socio-economic conditions and insufficient nutrition bring to increase of morbidity rates of various diseases such as severe diarrhea with toxic dystrophy due to malnutrition;
- Malnutrition is stipulated by the lack of knowledge of parents on healthy diet especially on the background of protein containing food dearth;
- The health status of children with malnutrition after using the amaranth products during 6 months had been improved;
- Amaranth flour is strongly recommended for introducing in the diet for children with malnutrition.

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