

Operation malnutrition

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OPERATION MALNUTRITION

The term 'social marketing' is heard most often in connection with family planning. Increasingly, however, this concept is also finding expression in other programs designed to increase man's quality of life. But there's one area of human need that has still to win the same degree of marketing priority that is being accorded to family planning. I am speaking of world malnutrition.

Malnutrition can be defined as the result of a diet inadequate to maintain satisfactory physical and mental development. It is more than simply a humanitarian problem. It is a very serious drain for developing countries to bear - both economically and socially.

Before I get into a close-up of what can and is being done to fight world malnutrition let me put some perspective into the size and nature of the problem.

The problem of malnutrition

Many economic strategists tend to place malnutrition in the same drawer as agriculture. They assume that programs to boost a country's food output would automatically eliminate malnutrition. While this may theoretically be so, in practice the goal is far from being achieved. In fact, it appears to be receding with every step that agricultural advances make.

It is estimated that over 500 million children on this earth go to bed malnourished every night. And the numbers are escalating at an alarming rate, as the fruits of development continue to evade the poorest 30% of the world's population.

Nearly 75% of LDC children are expected to "encounter sickness or debilitating diseases either brought on or aggravated by protein-calories malnutrition."

The most immediate fall-out from this is inordinate child mortality. In Brazil under-fives represent 20% of the population but 80% of the deaths. In India corresponding figures are 22% and 65%. All this compared to the United States where the comparable figures are 9% and 5% deaths.

The child deaths are largely caused by malnutrition which lowers body resistance and permits minor childhood diseases to become killers. In parts of Latin America, 57% of all deaths are linked to malnutrition as a primary or associated cause.

Nutrition and population

A cynic may take the view that high child mortality is Nature's safety valve to an even greater population explosion. This view does not stand close scrutiny.

One of the reasons that parents desire more children is precisely because of the high risk of child death. It is estimated that a couple in India must have 6.3 children to be 95% certain that one son will survive to look after the father at the age of 65. Better nutrition however has brought about a reduction in infant deaths and fostered a new psychology in favour of family planning.

There is no denying of course that the immediate effect of improved nutrition will be a rise in population. But not for long. Soon the graphs will drop as demographic trends have shown in Taiwan, Korea, Mauritius, Sri Lanka and British Guiana. How long will it take?

It took 20 years in Puerto Rico and Chile -- not a long time in the life of a nation. In Sweden it took 15 years and the U.K. ten. *

* M. VE Rubinson "Report on Topical Investigation and Analysis of Nutrition Supplements in Family Planning Programs in India and Pakistan" (Research Triangle Institute 1970).

There is another way in which better nutrition is linked with population control. All nutrition programmes emphasize prolonged breast feeding of babies. This has a direct impact on fecundity.

Pregnancy in the first 9 months among non-nursing mothers is twice that of breast-feeding mothers. Taiwan estimates that lactation prevents 20% of births that would have occurred otherwise. The reason for this medical experts tell us is that the baby's sucking stimulus appears to inhibit ovulation.

Indeed, improved child nutrition is recognized as a pre-condition to the slackening of population growth.

Mn and Mental Development

Malnutrition during the fetal period and infancy is associated with intellectual impairment. It is a medical fact that 80% of the brain's weight is achieved by the age of two. Malnourishment during this time can result in fewer brain cells by as much as 40% in severe cases. This damage is irreversible. The afflicted child will perform below par in mental tests for the rest of his life.

There is also a high degree of malnutrition caused in absenteeism from school. In Latin America the average student loses 50 school days a year, compared to 8 in the U.S. And even when the malnourished child does come to school he is listless, lacking in curiosity and concentration. The child falls behind. When a number of children in a class cannot keep up, as is often the case, the standard of instruction is lowered. Thus a nation's investment in education is not being maximally utilized.

That's not all. Children by the thousands fail their exam. In Central America, Brazil and India 26-30% repeat their first school year at least once.

The waste of public expenditure does not stop there. There is the drop-out phenomenon. Less than 40% of pupils entering Indian primary

schools reach 4th grade, a level regarded as necessary to achieve lasting literacy.

LDC's devote as much as 5% of their national budgets to education. This could be halved by reducing drop-out and repeater rates caused by malnutrition. Or the quality of education can be raised by an upgrading in child nutrition.

Malnutrition and productivity

Poor diet in adults affects their work output. A badly nourished man cannot give of his best. Men on 1800 calories a day lose 30% muscle strength and 15% movement precision. A study among road workers in Africa showed that when provided only 2000 calories they were able to complete 120 yards a day. When the calories intake was raised to 3,000, the daily coverage went up to 200 yards. A malnourished work force is a colossal drain on the nation's wealth potential. Yet it is a liability that has the potential to be converted into a positive asset.

Malnutrition and medical costs

Poor nutrition also takes a toll on a country's medical care system. In the Caribbean, 20-45% of pediatric beds are filled by preventable malnutrition cases. In Guatemala it's 80%. The cost of treating malnutrition in 37 LDC's is \$ 10,000 million.

Yet the annual cost of preventing malnutrition is the same as the daily cost to treat it. For as little as \$ 8 a year a child between 6 months and 3 years can be protected from the ravages of 'hidden hunger'.

Steps to improve nutrition

Many Governments around the developing world are beginning to recognize the enormity of the malnutrition problem and its resultant effect in their economies. A few of them have set in motion programmes to improve health and nutrition standards. These interventions comprise two broad categories of action - physical and social.

The physical components would include improved food-generating technologies, better rural health systems, nutritious food supplements for those at risk, particularly children and mothers (pregnant or nursing), clean water supply, etc.

The social area is of relevance to this conference. It concerns the area of "education". This implies imparting information that will motivate the malnourished to adopt new practices that can permanently upgrade their standard of health.

This new information would help the undernourished to derive more nutrition at little or no extra cost. Mothers would, for instance, be taught correct infant and child feeding methods; shown how to prepare cheap, locally available foods; taught prevention and home treatment of debilitating infections such as diarrhoea, etc.

An example of the successful application of social marketing principles is the action being taken to tackle gastro-intestinal disease in many countries around the world. Communication has played a key role in promoting correct "diarrhoea" management in the home.

Diarrhoea management

Gastro-intestinal infections are endemic among communities deficient in fresh water supply. Repeated attacks of diarrhoea greatly reduce the beneficial effects of any mass nutrition program. It is as futile as trying to fill a leaky bucket.

Of every 100 deaths in developing countries among children under five, 25-30 result from diarrhoea. Diarrhoea is one of the major killers in Indonesia accounting for up to half million child fatalities a year.

The treatment and prevention of diarrhoea is very poorly understood by uneducated mothers. In a typical episode the child contracts water-borne diarrhoea. The mother, observing tradition, immediately restricts his intake of food and fluids. Ineffective home-made medicines, and even purges, are administered. This severely weakens and dehydrates the child. Even if the first incident is not fatal, the child emerges from the attack

with lowered resistance to disease. He soon gets another attack of diarrhoea and is now on the vicious downward cycle of dehydration and malnutrition which often ends in secondary diseases like measles, pneumonia or malaria - which often prove fatal.

Any action that can correct the mother's knowledge of diarrhoea will significantly upgrade the child's on-going health. She must be taught the simple lesson of continuing to feed the child and replenish its body fluids by drinking a simple home-made brew of salt, sugar and water. This solution will replace the fluid, energy and salts lost by the body.

Oral rehydration technique or O. R. T. as it is called, is relatively easy to learn even by the most illiterate mother. Widespread experience has established that O. R. T. is superior in effect even to antibiotics. The diarrhoea episode gets shorter in duration, milder in intensity and occurs less frequently. As many as 1/3 of all child deaths in Indonesia could be prevented with effective use of rehydration techniques alone. And this at practically no cost to the beneficiary.

The marketing strategies to encourage acceptance of the O. R. T. solution varies from country to country. In Indonesia a mass media campaign using radio, TV and cinema was recently organized to show mothers how to prepare the drink - (a pinch of salt, a teaspoon of sugar mixed in a glass of water.) The home beverage was titled 'Oralit' and suitably packaged.

The proper and timely control of diarrhoea can have a far-reaching impact on the health and nutritional picture of a country as a whole. In Central America, a 7-year study showed that successful home management of child diarrhoea markedly improved the health of the population even though actual food intake decreased due to price inflation during that period. It is interesting to note that communications is a very critical feature in the campaign to promote O. R. T. It can modify erroneous beliefs and practices to greatly improve the health of the nutritionally vulnerable.

In Nicaragua, marketing and communication skills were used to tackle the diarrhoea problem. The campaign promoted the preparing and drinking of 'Super Limonada', a standard OR mixture flavoured with lime. This was an astute recipe for a country where home-made lemonade is a very popular beverage.

Radio was used as the main communication medium. Short and compelling messages encouraged the drinking of Super Limonada during diarrhoea; advised rural mothers not to stop feeding milk; to continue the child on soft foods; to avoid purges; to give a glass of 'Super Lemonada' after every motion.

After just 10 months of broadcasting, substantial progress was recorded in converting rural mothers to new habits of caring for children with diarrhoea. A 23% increase was reported of mothers giving 'Super Limonada' since the start of the radio campaign, along with 15% increase in continuation of breast-feeding during diarrhoea. This was a substantial gain when measured across most of the countries. The other objectives of the campaign were impressively secured.

The employment of marketing techniques in the battle against malnutrition is but one example of a new awareness. The sharpening of professional skills to apply these techniques must be matched by governmental disposition to accept new marketing approaches to social problem-solving.

(Many of the ideas presented in this paper are drawn from the writings of Dr. Alan Berg (World Bank), a leading advocate of the application of marketing techniques to areas of social concern.)