CHAPTER 17

ACHIEVING SUCCESS IN COMMUNITY-BASED NUTRITION PROGRAMMES

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Outline

• Definition of community-based nutrition programmes (CNPs)
• Efficacy, effectiveness, and impact of CNPs
• Success factors in CNPs
• Effective programme design
• CNP case studies

Objectives

By the end of this chapter you should be able to:

• Describe community-based nutrition programmes
• Differentiate between community- and facility-based nutrition programmes
• Understand efficacy and effectiveness of CNPs
• Understand human rights in the context of CNPs
• Compare country experiences in CNPs
• Identify success factors in case studies of successful CNPs
1. INTRODUCTION TO COMMUNITY-BASED NUTRITION PROGRAMMES

Community-based nutrition programmes (CNPs) are vitally important tools for improving the nutrition situation of the world’s population, especially in developing countries. Such programmes may have a broad goal, such as the reduction of malnutrition in children, or their aims may be specific, such as the promotion of exclusive breastfeeding for infants less than 6 months old.

Community health workers play a central role in these programmes. They may develop strategies for the attainment of programme objectives and may influence nutrition policy. A key factor in the success of CNPs is to ensure that the people living in a village have ample contact with trained community health workers. This requires a high ratio of community workers to households.

The majority of community health and nutrition programmes (CHNPs) focus on the prevention and treatment of communicable diseases and the alleviation of poverty, which is the main obstacle to good nutrition. CHNPs are especially important in areas where most people are poor as the combination of unhealthy food and other environmental factors put people at additional risk for developing chronic diseases.

Facility-based health programmes are conducted at a clinic or hospital. In contrast, CNPs generally take place in people’s homes or at some central location in a village. But the two are part of the same enterprise: CNPs are frequently supported by personnel based in health facilities, who may on occasion visit people at home, while community-based health workers may refer people to health facilities. Improving nutrition, especially in poor communities, requires a combination of community- and facility-based activities. These activities may in turn be complemented by certain programmes initiated by the government. For example, food fortification may be accompanied by community- and facility-based initiatives to improve consumption of the fortified foods at the community level.

2. EFFICACY, EFFECTIVENESS, AND IMPACT OF COMMUNITY-BASED NUTRITION PROGRAMMES

Efficacy is “the extent to which a particular intervention, procedure, regimen, or service produces a beneficial result under controlled conditions” (Ekström et al., 2002). One example is the effect of slow potassium supplementation on hypokalaemia in severely malnourished children. Effectiveness, on the other hand, is defined as “the extent to which a specific intervention, procedure, regimen, or service, when deployed in the field, does what it is intended to do for a defined population” (Ekström et al., 2002). Thus, in contrast to efficacy, which is affected only by biology, effectiveness is influenced by both behavioural and biological factors.

Several studies have examined the efficacy and effectiveness of health and nutrition interventions in developing countries (Gwatkin et al., 1980). Prospective studies undertaken in a number of countries have shown that health interventions, with or without supplementary foods, cause children to thrive and survive better. This has been reported in Narangwal, India (Kielmann et al., 1978; Taylor et al., 1978), by the Institute for Nutrition for Central America and Panama (Delgado et al., 1982), in Jamaica (Waterlow, 1992), and in Gambia (Whitehead et al., 1976). These early studies were followed by a number of national or other large-scale programmes in several countries. Some of those were a direct follow-on, such as the World Bank Tamil Nadu Integrated Nutrition Program (TINP) (Balachander, 1993) that followed the Narangwal study (Kielmann et al., 1978) and was supported by the United States Agency for International Development (USAID). A number of overviews and analyses of these programmes have been conducted. For example, studies by Berg (1981, 1987), Shrimpton (1989), Jennings et al. (1991), Sanders (1999), Mason (2000), Allen & Gillespie (2001), and Gillespie et al. (1996) have demonstrated that interventions that are most effective in promoting child survival and growth are those which include both health and nutrition components. Those that include only a health component may be less effective (Measham & Chatterjee, 1999; Pelletier & Frongillo, 2003).

The success of a community programme is determined based on its impact on the community. Impact measurements are made by comparing results from baseline estimates with either a mid-term or that from the final assessment. This is possible if the groups are matched. Impact measurements are therefore based...
on available programme information. The most widely available indicators are mortality rates, prevalence of underweight in children, and indicators of immunization coverage rates.

3. **SUCCESS FACTORS IN COMMUNITY-BASED NUTRITION PROGRAMMES**

Success factors are those that help achieve the programme objectives. The concept of success factors has been of much practical value. Focusing on successful programmes helps identify success factors, some of which are programmatic (directly under the influence of the intervention itself), while others are contextual (Sanders, 1999). There are several factors that are related to success in CNPs including socio-political factors, physical factors, technical factors, community participation factors, and financial factors. These are examined below.

3.1 **Socio-political Context**

"Political will" and social attitudes have a major affect on nutrition programmes: both influence decisions to initiate or support particular programmes. Political will is considered to exist when governments respond positively to popular demand. This can lead to the initiation and sustainability of CNPs (Mason et al., 2006). Political support can also ensure large participation of women in the improvement of the nutritional status of their children.

3.2 **Physical Factors and Technical Knowledge**

These are broad components and fall into two groups. One group may be termed *programme hardware*; this includes buildings, equipment, transport, and other physical materials necessary for the programme implementation. The other group is *programme software*, which refers to the technical capacity of the programme personnel to design, initiate, manage, and evaluate the nutrition programme.

3.3 **Community Participation**

Gillespie et al. (1996) identified community involvement as a key feature of successful programmes. It includes full participation of community members in the assessment of community problems, analysis of the causes of the problems, and the taking of appropriate actions to deal with the problems identified. Projects that stress community participation are often those that seem to be more appropriate to community needs (Jennings et al., 1991).

An increase in community participation has been observed to influence the government’s sensitivity and response to the demands of the community. Examples of such popular participation are China’s mass public health campaigns in the 1950s and Nicaragua’s mass immunization campaigns in the 1980s (Sanders, 1999). Gillespie et al. (1996) stated that successful CNPs tend to have had a combination of political will at the central level, middle-level district administrative support, and community-level organizational capacity.

3.4 **Financial Support**

Programmes to improve the nutrition status of a community should be accompanied by financial support; without it, the programmes are unlikely to be effectively implemented. Adequate supplies and human resources are essential to carry out activities of CNPs. Gillespie et al. (1996) found that $5 to $10 per head per year was a manageable amount in most nutrition programmes. The majority of successful programmes are externally funded. Some receive substantial amounts from the government, depending on the political will, which is also significantly shaped by government responsiveness to community demands.

4. **EFFECTIVE PROGRAMME DESIGN**

Sanders (1999) suggested that a prerequisite for any comprehensive programme is that a situational analysis
be carried out in order to identify the prevalence and extent of the nutrition problem as well as its causes. (Note: a situational analysis is essentially the same as a needs assessment which was the term used in Chapter 16.) On this basis, the key programmatic factors can then be identified. This ensures effective programme design.

4.1 Developing a Conceptual Framework

A conceptual framework of the causes of the nutrition problems in a country needs to be used to guide action (see the discussion of models in section 2 of Chapter 16). A comprehensive situational analysis is likely to result in an integrated approach to solving a nutrition problem and assist in identifying sectors that need to be part of the intervention. Jonsson (1997) reported that success in implementing community-based growth monitoring and promotion in Tanzania’s Iringa Nutrition Project (INP) was attributed to participation of each of the involved villages in conducting a quarterly nutrition assessment day.

4.2 Setting Objectives

Objectives may be based on outcome, process, or the programme itself. Processes and outcomes were discussed in section 5 of Chapter 16.

4.3 Programme Management

According to Sanders (1999) the key to successful implementation and management of a nutrition programme is having capable personnel. Successful programme management includes appropriate selection, training, support, and supervision of personnel during the implementation of the programme. Often workers are selected by community structures and are primarily responsible for the implementation of the programmes. This was the case with Tanzania’s INP, Indonesia’s UPGK (Mason et al., 2006), and Zimbabwe’s CSFP (Sanders, 1993). In Tamil Nadu, selection criteria included residence in the village, as well as age and educational qualifications (Balachander, 1993). In all four of the above-mentioned programmes, selected participants were trained. Some programmes had more elaborate and longer training, including annual refresher training and orientation programmes.

In all of the above-mentioned programmes, two very important success factors were present that were related to coverage of the target populations. First, achieving high coverage of populations, which means reaching all or most of those who will benefit, is obviously crucial since much of the impact depends on individual contact. Second, reaching sufficient programme intensity, meaning resources per household, is also essential. This may be measured as households per village workers, supervision ratios, expenditure per head, and so on. It is likely that a minimum level of intensity is needed before any detectable impacts occur; resources need to be concentrated until intensity is reached such that improvement becomes significant.

Improved technology is helping programmes to become more efficient. Examples include the use of computers for calculating nutritional status and mobile phones to relay information on health and nutrition.

4.4 Programme Monitoring and Evaluation

All successful programmes have a built-in monitoring and evaluation system. A budget should be allocated for this component of the programme. Selected indicators should relate to the programme objectives so that the programme evaluation can determine if the programme is achieving its objectives. For example, in the Tamil Nadu and Iringa programmes (discussed in detail in section 5 below), monitoring activities were built in. For both programmes, management and information systems based on growth monitoring data were used to monitor project progress, and in the case of Iringa’s INP, the data were used to inform and stimulate village-level discussion and dialogue with the government departments about progress. Another example is the Usaha Perbaikan Gizi Keluarga (UPKG) Family Business Nutrition Improvement in Indonesia (see section 5), for which a simple and standardized village-level monitoring system was developed that documented activities and progress on a monthly basis. A graphic display was utilized to encourage inter-village competition.

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4.5  **Intersectoral Collaboration**
Since multiple factors contribute to nutrition problems, several sectors need to be involved in dealing with the identified problems. Multisectoral collaboration works best when it builds on existing structures in sectors that are already implementing programmes at the community level. For example, community-level committees may work together with different sectors to solve multiple community problems. Intersectoral collaboration should ideally also include linkages to organizations and other programmes and projects which have nutrition or nutrition-related objectives. These linkages may provide useful technical support and a sharing of resources. For example, in Thailand, the health services and the religious organization at the village level were important. Effective, respected, and socially inclusive organization at the community level is a key feature for success in launching, expanding, and sustaining community health and nutrition programmes (CHNPs). Most of the successful CHNPs drew and built on established community procedures.

4.6  **Capacity Building**
To ensure the provision of quality services, capacity building should be part of the programme implementation. Capacity building needs to take place at all levels. Although most programmes provide training for programme implementers, few programmes go beyond the training received at universities and colleges. However, countries need senior nutritionists to take responsibility for leading such programmes.

4.7  **The Human Right to Participation**
Finally, a community-based nutrition programme should adopt a rights-based approach. From this perspective, community participation is not merely a tactic designed to encourage people to accept programmes that are “brought” to them by various authorities or outside experts. Rather, community members have a right, as human beings, to be active participants in programmes that affect their lives. Since community participation is often the key to successful programmes, community members should be directly involved in their planning, processes, and evaluation (Ham, 2001; Khoza, 2004). Participation of the people concerned requires the decentralization of programming from the national or provincial level to the local level. The United Kingdom Overseas Development Institute policy paper (ODI, 1999) states that a rights-based approach requires performance standards that are best negotiated locally.

5.  **CASE STUDIES**

5.1  **Tanzania: The Iringa Nutrition Programme**
The Iringa Nutrition Programme was an integrated project implemented during the 1980s in the Iringa region of Tanzania. The objective of the project was to improve nutrition and health status, which included enhancing the socio-economic situation of women. One of the important factors behind the improvement in the nutrition situation (apart from general political and economic stability) was the involvement of the Tanzanian Food and Nutrition Centre (TFNC), which comprised an interdisciplinary team consisting of economists, statisticians, agriculturalists, food technologists, chemists, doctors, nurses, nutritionists, dietitians, and health promoters. The team was involved in nutrition surveys, mother and child health, school feeding, food production, and nutrition education. These duties were carried out by the appropriate personnel. The community was strongly involved. Advocacy, information, and communication were the primary tools used for community mobilization. Management and implementation of the programme was done in such a way as to enable the expansion and strengthening of national capacity to address issues bearing on nutritional improvement at central, intermediate, and local levels.

The Triple-A Cycle approach of Assessment, Analysis, and Action is a framework that enables the analysis of the causes of malnutrition and death in any community. It also indicates the interrelationship between the various contributory factors and clarifies the objectives of actions selected for implementation. In a given context, the framework changes and become more focussed as the assessment and further analysis take place. This approach provided programme flexibility for the Iringa Nutrition Programme, and was used to explicitly express an objective for programme management and implementation.
Responsibilities of the TFNC with respect to the Iringa programme included co-ordination of the following activities:

- Surveys or fact-finding by the Nutrition Unit
- Mother and child health with emphasis on nutrition by the Ministry of Health
- School feeding by the Department of Education
- Food production by the Department of Agriculture
- Nutrition education by the Ministries of Health and Social Welfare

An analysis of this programme revealed the following characteristics (Kavishe & Mushi, 1993):

- It was community-based, with strong community participation and management through the government and party administrative structures.
- A strong component of social mobilization through advocacy, information, and communication was present. This created widespread community concern with regard to the problem of child deaths and malnutrition.
- Active participation was sustained through good programme management.
- Management was strengthened through personnel training at all levels and through the discussion of results from the information system in the health and nutrition committees. Training was mainly in-service and was augmented by frequent supervision.
- The programme used an integrated multisectoral and multidisciplinary approach. Actions on improvement of household food security, caring capacity, health services, education, and water were carried out simultaneously by relevant sectors and non-governmental organizations (NGOs).

**Experience:** The programme was implemented in three regions and involved a multidisciplinary team from the TNFC.

**Outcome:** Programme impact was indicated mainly by the community-based ongoing nutritional status monitoring systems, and also by the results of various studies done as part of the programme activities or for the purposes of evaluation. The results show that the programme was highly successful in reducing underweight (from a prevalence of 56% at the start down to 38%; 1984–88) and increasing immunization coverage from 35% to 93% (Kavishe & Mushi, 1993).

### 5.2 Tanzania: The Child Survival and Development Programme

Based on the Iringa experience, the Child Survival and Development Programme (CSDP) was carried out in different parts of Tanzania in the late 1980s and into the 1990s. It began with an orientation for the various groups involved in the programme, such as administrative and technical staff and data-processing clerks in the districts and regions. This orientation was followed by promotion of the programme activities in the villages and social mobilization. Election of a health committee, particularly male and female village health workers, was also part of the programme. The practical activities were inaugurated by the showing of a documentary film. All children were weighed and, when necessary, immunized. Subsequently, a health day was held once a month or once a quarter for child weighing, immunizations, and so on. Other activities included setting up feeding posts, informal day care for children of mothers working in the fields, vegetable gardens, and the introduction of improved technology, such as grain mills and more fuel-efficient stoves (Kavishe & Mushi, 1993).

**Experience:** 1985–95, World Bank support. Results similar to Iringa.

**Outcome:** Underweight reduction rates similar to Iringa.

### 5.3 Bangladesh: The Bangladesh Integrated Nutrition Programme

Under the Bangladesh Integrated Nutrition Programme (BINP), the government worked hand-in-hand with
NGOs organizations and communities to tackle malnutrition, which was affecting about 90% of children. The programme, which started in 1995, aimed at reducing the high levels of anaemia in pregnant and lactating women. The programme also involved community-based initiatives, such as family planning, improvements to the water supply, and better sanitation. The programme had both a national and a community component:

The national component included (a) national-scale nutrition activities, such as vitamin A supplementation, salt iodization, food fortification, promotion of breast-feeding, and information, education, and communication [IEC] activities for behaviour change, and (b) national-level capacity development for training, monitoring, and evaluation, and operation research.

The community component involved efforts to reduce the prevalence of anaemia and child underweight seen in most communities since 1995.

**Experience:** Governmental and NGOs managed malnutrition through already existing community-based programmes.

**Outcome:** Severe malnutrition (based on mid-upper-arm circumference) fell from over 20% to around 3% in just two years (Ismail et al., 2003).

### 5.4 Bangladesh: The Bangladesh Rural Advancement Committee

The Bangladesh Rural Advancement Committee (BRAC) has been working with rural poor people since 1972. In 1979, the BRAC began to provide credit via its 81 branches through the Rural Development Programme (RDP) (BRAC, 2004). Some of the components in which the BRAC worked include the following:

- **Orientation.** The operation started with an orientation programme through BRAC’s functional education curriculum.
- **Institution building.** The functional education classes normally led to the formation of separate village organizations for men and women.
- **Training.** Different types of training were organized for the members of newly formed groups. Some of the training activities were carried out at BRAC’s own training centres, while others were held in the RDP’s local offices. The programme also included a paralegal aid programme to provide legal awareness to group members.
- **Credit support.** For the above activities, group members became eligible to receive credit from the RDP after approximately six months.
- **Technical and logistical support.**

**Experience:** Community-based health services with village health workers; the programme has had wide coverage since the 1980s, with particular focus on diarrhoea.

**Outcome:** No programme-specific data are available.

### 5.5 India: The Tamil Nadu Integrated Nutrition Programme

The integrated nutrition programme in the southern Indian province of Tamil Nadu provided an integrated approach for delivering basic services for improved child care, early stimulation and learning, health and nutrition, and water and environmental sanitation. This was targeted at young children, expectant and nursing mothers, and women’s groups. The personnel consisted of nearly 300,000 trained community-based Anganwadi (health/nutrition) workers and an equal number of helpers and supporting community women groups. The programme was organized by the Anganwadi Centre, the health system, and the community. The services included: health services (immunization and referral services for health check-ups); nutrition supplementary feeding; child growth monitoring and promotion; nutrition and health education (NHE); treatment of minor illnesses; and early childhood care and pre-school education for children aged 3 to 6 years. Other support services were also integrated, such as providing safe drinking water, ensuring environmental sanitation, creating women’s empowerment programmes, supporting non-formal education, and increasing adult literacy (Mason et al., 1999).
Experience: Implemented from 1980 to the mid-1990s. Village programme in Tamil Nadu with World Bank support, growth monitoring, supplementary feeding programmes, and so on.

Outcomes: From 1979 to 1990, -1.4 percentage points per year (ppts/year) in Tamil Nadu Integrated Nutrition Project (TINP) districts, and -0.7 ppts/year in non-TINP districts. This indicates an improvement of approximately -0.7 ppts/year in underweight status as a result of the programme (Reddy et al., 1992).

5.6 Thailand

In the 1970s, the alleviation of nutritional problems in Thailand was embedded in a service-driven approach. This not only consumed a disproportionate share of the government budget but also restricted participation by the people and depended heavily on centralized planning. The approach failed, resulting in a paradigm shift to community-driven programmes, which were seen as investments for the health of the Thai population; nutrition was framed as part of the National Economic and Social Development Plan. The village programmes were part of the “basic minimum needs” approach, which includes consideration of housing and environment, family planning, community participation, and spiritual and ethical development (Tontisirin & Gillespie, 1999). Figure 17.1 shows the relationships between services that provide supervision and contact, with the health-care workers, referred to as “facilitators,” and health/nutrition workers from the community, referred to as “mobilizers.” The programme successfully linked community-based programmes and service delivery for improving maternal and child nutrition.

Mobilizers and facilitators were actively involved. A cluster of 10 to 20 households essentially depended on one or two well-respected individuals for guidance or assistance where technical support was required. Community members selected the community health nutrition volunteers or mobilizers, who were then given appropriate training. An initial training for these mobilizers focused mainly on basic theoretical and practical aspects of nutrition and health, including the importance of antenatal and post-natal care, maternal and child-care practices, birth spacing, breast-feeding, immunization, complementary feeding, and growth monitoring. Enhancing communication skills and on-the-spot refresher training and monitoring of specific activities for mobilizers were also pivotal elements of the programme’s success. The major task for mobilizers was to link service delivery with communities and foster local community nutrition initiatives.

Mobilizers were mostly women equipped with leadership qualities and capable of instilling confidence in community members and encouraging them to become actively involved in the programme. In Thailand the mobilizers were part-time volunteers, whereas in other countries similar workers are paid for their services. Facilitators were paid frontline primary health-care workers, employees of NGOs, or staff from universities who provided support for and supervised and trained mobilizers. Facilitators made regular visits to the communities. The relationship between facilitators and community mobilizers determines sustainability, that is, the extent to which outside support can become catalytic and empowering rather than creating a new dependency (Tontisirin & Gillespie, 1999).

The success of the mobilizer system was accredited largely to supervision provided at all levels, especially at the community level. Supervision emphasized the need for support rather than policing, and it included on-the-spot training, problem solving, motivation, legitimation, and sharing of technical and managerial information between facilitators and mobilizers (Tontisirin & Gillespie, 1999).

Experience: National programme during the late 1970s; 600,000 village health volunteers were trained (1% of the population). Change made to National Economic and Social Development Plan during 1980s and 1990s, involving programme using facilitators and mobilizers to work at community level.

Outcome: Rapid improvement in the nutritional situation from 1980 to 1990. For example, the prevalence of underweight in children was reduced from 36% to 13%. Infant mortality rates in 1970, 1980, and 1990 were 73, 55, and 27, respectively.
6. SUMMARY OF KEY SUCCESS FACTORS

It is clear that nutritional programme success has been attained by a combination of contextual factors – notably active community involvement and sustained political support – and programmatic factors. In both Tanzania and Zimbabwe a conducive political environment, a well-developed culture of community participation, strong intersectoral collaboration, and good programme design and management ensured successful nutrition interventions.

The key programmatic factors included the appropriate selection and training of personnel from the implementation level to the management level. At the implementation level, and especially at community and household levels, a high ratio of workers to beneficiaries is required to ensure frequent contact. Support and supervision of implementers and continuous monitoring of programme processes is mandatory. The initial design of the programme is a key step, but is often neglected; neglecting this step makes it difficult to ensure that the programme is responsive to and correctly impacts the underlying causes of the identified nutrition problems – which inevitably require, in the longer term, intersectoral action. Finally, financial support is necessary to ensure programme sustainability.

DISCUSSION QUESTIONS AND EXERCISES

1. Note the four main success factors in community-based nutrition programmes that have been identified in this chapter. Visit a community-based nutrition programme in the community where you do your practical work, then do the following.
   a. Identify success factors that have been incorporated into this programme.
   b. Summarize the sectors involved in the community-based programme you have identified.
   c. Describe the role of each sector.
2. Imagine you are a newly employed nutrition worker who is expected to develop a community- and facility-based nutrition programme to eradicate undernutrition.
   a. Describe and illustrate each step you plan to take.
   b. Discuss the value of community participation and intersectoral involvement in community-based nutrition programmes.

3. Prepare for a role-play to sell a successful programme of your choice. Pretend you are in a market shouting for people to buy your programme because of its track record of success. Give recommendations to programme managers on how they could improve their growth monitoring and promotion activities in order to achieve the intended objectives.

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REFERENCES

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**ADDITIONAL RESOURCES**
