36. Use of rapid assessment procedures for nutrition programme planning, project reorientation, and training in Malawi

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By Gretchen Berggren and Beatrice Mtimuni

Gretchen Berggren is affiliated with the Harvard School of Public Health and Save the Children. Beatrice Mtimuni is also affiliated with the Harvard School of Public Health.

This paper describes three uses of RAP in Malawi, all related to improving nutrition. The first section stresses the often limited time frame available when RAP is used in planning, and describes how community level behaviors, knowledge and attitudes can be quickly explored with the resulting information feeding into the programme planning process. The second section describes RAP used in gathering data needed to explore potential new directions for a UNICEF-supported project focusing on soybean use to improve nutrition in rural families. RAP generated information suggests significant behavior change would not be simple and recognizes the need for better targeting and more regular interpersonal contact. An analysis of organizational resources needed to assure that such recommendations are feasible, would be a useful complement to RAP in this situation. The third section describes how RAP was used simultaneously to gather data on rural nutrition for a training course and to sensitize trainees on family nutritional issues. The value, and risks, of such an open ended exercise are described. - Eds.

NUTRITION AND AGRICULTURE projects linked to health interventions are a priority for Malawi, where malnutrition is recognized as a serious problem. This paper discusses how rapid assessment procedures were used to advise nutrition projects in four separate "impact areas" in rural Malawi. The first two are Mbalachanda (northern area) and Mkhota (centrally located), where Save the Children Federation USA (SCF) works; the third impact area is the Bolero impact area, north of Rumphi, where Save the Children/Malawi (SCM) hoped to work; the fourth is Ntchisi, where a pilot project of UNICEF and the Government of Malawi is located.

Despite efforts to curtail it, malnutrition in rural Malawian children remains a problem; it has been detected in all social classes. Nearly a quarter of children under five were reported as underweight for age in 1981; wasting (low weight for height) affects to 1% to 2% [1]. Children of farm workers (tenants or daily paid workers) who grow up on estates where cash crops are grown appear to be especially at risk. The largest portion of a family's time (including the mother's) is labour related to cash-cropping (such as tobacco raising). The mother needs to devote additional time to a traditional garden in an attempt to produce sufficient quantities of fresh vegetables and supplementary root crops for the family. During the planting season, many migrant farmers find neither seeds nor cuttings available to plant in the small garden plots made available by the estate owners.

The prevalence of nutritional stunting is not limited to certain rural areas. Malnourished children are detected through growth monitoring and promotion (GMP) activities at hospitals, rural outposts or in some cases by outreach teams.

The home-based "Road-to-Health" growth record, on which weight for age is graphed as recommended by UNICEF, is approved for use and is distributed to mothers who are asked to keep it and to bring it with the child whenever the child is referred for treatment. For several years, mothers have been counseled in the use of "likuni-phala," a weaning food distributed by the World Food Programme. It is a milled product of corn, beans and ground nuts. Because it has not been toasted or pre-cooked it requires 40 minutes of cooking in a separate pot. Compliance has been a problem.

The relationship between nutrition and infection is well recognized by Malawi doctors, who treat children with severe protein-calorie malnutrition in hospitals. Many of these children die.

The authors' task in working with community development organizations was to assess activities that were, or could have been, used to combat malnutrition, and to propose a nutrition intervention approach that would link local institutions, agriculture, health and women's project resources to activities at the grassroots level. In order to accomplish their tasks in the few weeks of time allotted, the authors turned to Rapid Assessment Procedure (RAP) methods [2]. These were: focus groups of mothers in a community setting, interviews with informants and randomly chosen home visits to mothers who could benefit from activities to prevent malnutrition.

Characteristics of the areas to be studied: Malawi's rural areas and needs

Malawi is famous for its scattered but carefully located "rural growth centres," key resources for rural development that are meant to serve their surrounding farm populations. These growth centres have attached government-trained community extension workers. Of those who live in rural areas, 90 per cent live and work on small farms of two acres or less. Corn is the staple crop of the country; tobacco is a main export. Tea is also produced for export. Food crops include sweet potatoes, peanuts, beans, rice, cassava and more recently, soya beans. Traditional vegetables, rich in vitamins and minerals, have been replaced to some extent by vegetables grown from imported seeds, referred to in this paper as "exotic" vegetables.

Women bear much of the agricultural work load, both on shareholder farms and in some activities of estate farming. In the latter case, if the family has a garden at all, it will usually be left to the woman of the house to do whatever gardening she can on small garden plots made available to each family by estate owners. She will be expected to do this after having helped her family meet its obligations to the estate owner. Baseline surveys in the SCF areas revealed average household size to be 5.1, with 42% - 47% of the population under 15 years of age. Seventy-seven percent of the heads of households are small shareholder farmers, with 8% - 10% employed as tobacco estate workers. Average landholdings are 6.5 hectares per family.

Characteristics of the population in the UNICEF/Malawi pilot project in Bawala were similar. Stunted children ranged from 49% - 64% in the villages studies. A survey that revealed high childhood death rates (Infant Mortality Rate of 228/1000) first drew the government's attention to the area.

A Ntchisi baseline survey in 1989 found the following factors associated with the poor nutrition and health status of children:

1. level of maternal education
2. availability and status of sanitation
3. lack of crop diversification
4. frequency of meals
5. availability of health facilities

The survey further revealed that children from single parent families where the mother was alone were more at risk. Such mothers have smaller landholdings and are more labour-constrained.

The three rural community development projects described in this paper shared a common concern with malnutrition. Save the Children/Malawi's community development programme planners hoped to continue funding a nutrition rehabilitation centre at Mitundu, and to consider developing a preventive nutrition programme in Bolero.

Activities initiated in UNICEF/Malawi government Bawala pilot project were designed to remove some of the contributory causes of malnutrition and early childhood deaths through a package of self-help activities, using existing government extension workers. These included: provision of maize, soya bean seed and fertilizers on credit; sanitation activities (construction of pit latrines and protected wells); and income-generating activities.

Until 1987, SCF/USA's activities consisted mainly of responding to needs expressed by rural development committees elected by the populations served. In addition to health and women's programme initiatives, farmers had planted 34,000 trees, worked with agriculturalists on demonstration gardens and initiated animal husbandry and beekeeping activities in concert with the Ministry of Agriculture extension workers.

Save the Children USA had also begun training village health promoters (resident home visitors), who were meant to train families in child protective behaviours and to serve as liaison workers between government-paid health personnel and the community.

The save the children plan: Use of RAP for information gathering as part of needs assessment for programme planning

Strategy

The team was charged with developing a rapid needs assessment, focusing on nutrition and health, in three weeks' time. The recommendations were to be used for a proposal to enhance and expand nutrition activities.

After visiting government authorities, UNICEF headquarters and the Maternal and Health Unit of the Ministry of Health of Malawi, the Save the Children assessment team was charged with the task of investigating geographically defined impact areas where efforts to combat

malnutrition would be focused. The team began with visits to institutions, such as district health offices, hospitals and health posts throughout the rural districts around Mbalachanda and Mkota. In addition, they planned to apply RAP techniques in rural villages, in concert with government rural extension workers who were used to getting groups of mothers together. The key team member for RAP was Dr. Beatrice Mtimuni, lecturer in Nutrition from Bunda College, whose knowledge of the health and nutrition community permitted her, in each area visited, to add appropriate local team members (such as female extension workers). Drs. Warren and Gretchen Berggren, experienced public health physicians from the U.S., and administrative personnel from Save the Children/Malawi completed the team.

Methods

In addition to interviewing appropriate professionals (health workers, agricultural workers, extension workers and their supervisors), and visiting institutions dealing with malnutrition, the team visited outlying villages. There, through the services of extension workers and with the permission of village head-men or estate owners, Drs. Mtimuni and Berggren conducted focus group interviews with mothers. In addition, the team did some "intercept" interviews, intercepting mothers who were coming from, or going to underfive's or nutrition clinics, or attending rehabilitation programmes.

A PLAN FOR FOCUS GROUPS INCLUDED GETTING MOTHERS TO DISCUSS:

- usual age at weaning and weaning practices
- weaning foods
- family support of the mother in her attempts to carry out the behaviours she had learned
- frequency with which children of weaning age are fed
- the "Road-to-health" weight/age graph and whether the mother could interpret it
- mother's perception of growth monitoring and counseling activities
- mother's use of enriching nutrients in a child's diet (such as traditional vegetables or those grown from imported seed, known as "exotic vegetables").
- mother's access to, and utilization of, garden plots

As an "ice-breaker" and based on experience in other countries, the team decided to interview mothers who arrived early at the sessions, procuring live-birth histories, noting length of lactation for each surviving child and cause of death (according to the mother) for children no longer surviving. Since it took time for all the mothers to gather, early arrivals could be interviewed and time would not be wasted. In Malawi, mothers usually like to talk about what happened to each baby. This set the tone of the team's interest in child survival, and gained the sympathy of the mother. Careful notes were kept throughout the sessions, according to RAP procedures.

Results

RESULTS FROM PREGNANCY HISTORIES

Aggregate data from the pregnancy histories were biased by self-selection: the women who first arrived at the fixed assembly points. Nevertheless, they gave the focus group facilitators valuable insights, and gave the respondents a sense of confidence that the reason for the group's discussion had to do with child survival. Thirty-two women aged 20 to 44 gave the following information:

• Mothers had: experienced 136 live births; an average age at first child bearing of 18 years; heard of "child-spacing" methods but did not practice these, apparently relying on breast-feeding to give them an approximate two-year child spacing interval; lost 20 percent of their children, all under age five at the time of death.

• Causes of death in under-fives, according to the mothers, included: "fever and convulsions", sometimes interpreted as 'malaria" (mentioned in half the cases); malnutrition (three deaths from kwashiorkor); immunizable diseases (mothers mentioned tetanus, pertussis, and measles).

• The history taking opened the door for focus group members to discuss causes of child loss and mothers revealed that they recognized "kwashiorkor," equating it with malnutrition. This gave a natural opening for the focus groups.

RESULTS OF THE FOCUS GROUP INTERVIEWS

• *Mothers breast-feed universally*, but supplement early; sometimes within the first month of life.

• *The usual age at complete weaning was about 24 months*, earlier weaning usually occurring only when the mother finds herself pregnant.

• *There was a consistent tendency to introduce a thin starchy gruel by six months of age or earlier*. This is often a corn flour gruel, and is withdrawn from the family cooking pot before enough corn flour is added to make a very thick porridge called "nsima", which is the staple of the family diet.

• *The frequency with which weaned children are fed appeared to be about two meals/day*, with some between-meal snacks. Reason given was because it is costly to light the hearth more often (in terms of mother's time and fuel gathering).

• *The weaning food "likuni phala" (milled ground nuts, beans, and maize) was not mentioned by the mothers* as being a food they cooked especially for their toddlers. Mothers apparently were familiar with it but did not spontaneously report using it. Discussion of its use usually brought out the fact that it must be cooked at least 40 minutes (due to the high bean content) or it is too gaseous. The cost of cooking fuel, both in terms of the energy expended to gather the fuel and in terms of time expenditure appeared to be deterrents to use of "likuni phala".

• *Understanding and utilization of the GMP village level assembly post was problematic to many mothers*. Mothers reported that outreach teams sometimes come to their own or to a nearby village for GMP at times combining this activity with immunization. Mothers appreciated that the teams overcame geographic barriers, however many did not understand the child's weight

graph on the "Road to Health" card. Others did understand but were disgruntled by the fact that the underlying cause of the growth faltering that had occurred (often infection) commonly was not treated "on-the-spot". The others said they were instructed to take their child to the nearest health facility - often miles away, and once there she was often asked to wait. One older mother said,

"Those teams used to come with more than scales to weigh the child. They came with medicines, too, and that helped us a lot. Now if a child is brought to the Under-fives (GMP) clinic, there is no hope for treatment, just a lot of talk".

After the focus group sessions, mothers showed interviewers their small garden plots, and explained the use of the "exotic" vegetables. Often, traditional vegetables were being ignored or treated as weeds, even though mothers appreciated their historic use.

RESULTS IN TERMS OF PROGRAMME PLANNING AND PROPOSAL WRITING

The team concluded that rural Malawian mothers given the fuel shortage, time constraints and their work loads, could not see how to provide caloriedense meals frequently enough to prevent malnutrition.

With the goal of enhancing government programmes in growth monitoring and promotion, the team wrote proposals for Save the Children/Malawi and for Save the Children/USA. Save the Children/USA used the findings as a basis for their own Child Survival Proposal, which was subsequently funded.

The RAP exercise resulted in recommendations that:

• Mothers be recognized as the primary health-givers, in need of training and support by grass-roots community health workers and/or their liaisons.

• Families needed to support mothers in those behaviours that would combat the most frequent preventable diseases, for example, seeing that the mother can get to the GMP session or to the immunization assembly point.

• Community health workers (CHWs) need to have liaisons with the community, perhaps in the form of volunteer mothers or mothers' groups; they would need to see their role as trainers of mothers in protective behaviours.

• Door-to-door contact with women would be essential; a "personal prompt" is necessary for many women. For example, during this exercise no teen-age mothers appeared. It seemed they would have to be searched out, and because they are apt to represent those most in need, they would need follow-up.

• Enabling devices for the above would include a "management information system": mapping and house-numbering of villages, door-to-door family enrollment, and derivation of rosters of mothers in the hands of health workers who could use the roster to keep track of who had/had not

yet been reached with any particular training activity. Such a schema would be necessary to assure that every mother is reached on a regular basis.

• Nutrition education needs to emphasize the frequency with which children need to be fed; many families presume that toddlers, once weaned, can get along on two meals per day. Solutions to this problem would need to include the use of appropriate, safe weaning foods (for example a dried, precooked, and therefore easily stored and prepared cereal supplement).

• Nutrition and agriculture programmes need to be closely linked, with emphasis on the use of traditional vegetables as opposed to those grown from imported seeds.

Rapid assessment procedures for reorientation of the Ntchisi child survival and development project

Background of the project

As part of UNICEF's efforts to assist the government to address small farm-holder's food security and nutrition-related issues, a pilot project was launched in the Ntchisi district in collaboration with the Malawi government in the mid-1980s. The pilot area (Bawala) covered 34 villages, with a population of 22,000. The project activity focused on here, is improvement of household food security. Problems arising around this activity lent themselves especially well to RAP assessment techniques.

Household food security activities of the project

Among the activities planned for Bawala "improvement in household food security" was provision of maize and soya bean seeds, and fertilizer on credit. The project management decided to distribute these to female-headed households with small landholdings, based on survey findings that these families were apt to be at risk for having a malnourished child. In addition, a 90 kg sack of maize was provided to such families each month during the "hungry season" (November through February). This would allow the family to work their own gardens during that period instead of having to work in other people's gardens for food.

Preliminary observation of the project and the need for reorientation

Although the households grew soya beans, most of the harvest was sold; mothers did not know how to use this new product. Even the extension workers did not know how to use soya. Furthermore, many families in need were not reached by the project. Some families with heavy commitments to estate owners seemed to have children in worse condition than those belonging to female head-of-household families; yet the female head-ofhousehold families remained the only project focus. The need emerged of determining how to find and target families most at risk for malnutrition.

It had become apparent to project leaders that nutrition parameters for the community as a whole would be unlikely to show measurable positive change as a result of the programme. Both community and project leaders felt a need for training or retraining of extension workers in how to teach mothers to use soya products. issues of equity and surveillance also arose. Should only female heads-of-households be targeted? What about other households whose children were diagnosed as having growth faltering at GMP sessions? Was a simple counseling session going to change the behaviour of a mother? The project might need to be re-oriented if mothers most-in-need were to be reached and taught in such a way as to affect behavioural change.

The Bunda college team and RAP procedures as a tool for reorientation

The Department of Home Economics and Human Nutrition of Bunda College was asked to hold a training workshop for extension workers, preparing them to train mothers in nutrition, and especially in preparation and appropriate utilization of soya products.

Dr. Mtimuni recognized the need to review the project in its entirety with a focus on nutrition-related activities in order for the workshop to be practically directed. The project, originally designed to reach high-risk families and reduce death rates in children, needed to be understood by the training team. Furthermore, it was appropriate to gain a better understanding of the problems of the mothers and of the extension workers in teaching them. Overall, what appeared to be needed was a better understanding of all the families (not just those with female heads) of their ecologic environment. Better documentation of the role of mothers, their current feeding practices, and the constraints they faced in nourishing their families was also needed. With this kind of understanding, much of the nutrition problem could be sorted out and the content of a workshop made appropriate.

DEFINING THE STUDY

Dr. Mtimuni faced the following questions, with only a few weeks to find the answers before the workshop:

• What should the extension workers be trained to teach to mothers? How should they be trained? What teaching methods needed to be adopted?

• What sort of evaluation and follow-up activities could be implemented in order to see if the training of the extension workers did any good, once they were back on their own?

Workshop leaders decided that rather than simply teach extension workers on how to teach mothers in preparation of soya products, participants would be asked to discover the traditions and beliefs around the weaning process and child-feeding practices. From this base of knowledge it could be decided when and how soya and other supplements could practically be used by overburdened and often very poor mothers.

METHODS

1. The workshop plan: During the workshop, five trained student-assistants would each form an interview team. The interview teams would participate in planning the questions, and be trained in how to pose them and to record their observations. Team members (government extension agents) would assist in forming and conducting "mini focus groups".

2. Households visited would have at least one child under-five years old. The mother and/or caretaker would be present at the interview, and willing to discuss the family's way of nourishing children. The focus group interview teams would be supervised by trained students to assure of consistency in observations recorded. The teams would meet with Dr. Mtimuni to aggregate their findings and interpret them into recommended action for the workshop. Workshop participants planned and carried out home visits during which "focus groups" were formed. The workshop participants agreed upon the following questions for the focus groups:

• What is the earliest supplement? Given at what age?

• What type of "porridge" (supplementary gruel) is given to the child during the weaning process? How is it prepared? How is it enriched and with what food(s)?

• What is the frequency with which the just-weaned child is fed? Is he/she expected to adapt to the "two-meals-a-day" reality of the average Malawian family?

• If the family had grown soya beans, how were they used in food preparation, if at all?

• What foods were observed being fed to children?

• What was the family's consumption pattern over the previous 24 hours?

3. Sampling method. UNICEF Nutrition Survey results provided criteria for selecting four villages out of more than 30. Two "better off', villages and two "poorest,' (in terms of malnutrition) were chosen because of their accessibility and willingness to cooperate. Headmen and their deputies agreed to cooperate.

Households were chosen through a modified cluster sampling technique. Beginning from a central point in each village, teams went north, south, east, and west, approaching each family in their path until their total assigned "focus group" visits were achieved.

Each focus group consisted of the student assistant, three or four extension workers, the mothers, caretakers, grandmothers, and others who gathered to discuss the questions. Fifteen or more people gathered for the interview.

RESULTS

Students and extension workers met with Dr. Mtimuni and aggregated their results of the focus group observations as follows:

1. The infant's first solid food is likely to be a maize porridge that takes the mother only about five minutes to cook. Some mothers made this by removing it from the family cooking pot early in the process of making "nsima" (very thick corn porridge), before they had added the entire amount of corn flour. Extension workers had not been aware of this "method" of preparing a weaning food, which conserved time and cooking fuel. Mothers were not used to cooking food in a separate pot for the baby.

2. I he introduction of soya beans as a crop to provide a family nutrition supplement had not been successful because soya was considered purely a "cash crop" from the time of planting. Mothers had not understood how to use it. Most of it had been sold by the time of the workshop; therefore educating mothers on how to use it at this time could not be expected to bring immediate compliance. A better approach to promoting soya was required.

3. Except for breast-fed children, the frequency with which children were fed was about two meals/day, according to the consensus that emerged from the focus groups. This limited the options for nutritional improvement.

4. The toasted soya bean snack introduced by the extension workers was a failure. Some mothers had tried toasting raw soya beans but did not like the taste or strong smell; they did not wish to try feeding the product to their toddlers. Extension workers admitted the same personal reaction, but without the RAP approach they would not have admitted it. This is why RAF is useful.

5. A number of mothers and extension workers observed that the "target group" (households with single female heads) were not the only homes with malnourished children. The project functioned in such a way as to reach mostly single female heads-of-households. Children growing up on the estates were often the most malnourished, yet their mothers were not targeted as being in need.

Implications for the workshop

Using the above findings, Dr. Mtimuni and her students developed the workshop around themes suggested by the findings of the RAP assessment. One could respect the mothers' traditional way of preparing a weaning food by teaching them how to add a precooked, powdered supplement. A toddler's need to eat six times/day could be partially met if the mothers knew how to prepare snacks that could be prepared ahead and stored safely. The following exercises were then devised for the workshop, using soya beans:

1. A dried, precooked, "instant" soya bean supplement: Workers were taught how to demonstrate overnight soaking of soya beans, followed by about 90 minutes of boiling. The cooked soya beans were dried and pounded into flour. This precooked, instant "enricher" could be added to the traditional gruel in the same way that crushed toasted groundnuts might be added (a traditionally accepted "enricher"). The plan to demonstrate this method was a direct result of the findings above. Such a dried, pre-cooked, easily storable supplement could be made up ahead of time and used instantly, when needed. It could be added to other foods, such as cooked sweet potatoes or cassava. The taste was excellent; mothers and babies liked it.

2. A precooked, toasted, dried soya bean snack: Workers were taught to carry out a demonstration to show that boiled, dried soya beans, when toasted, taste excellent and make a good substitute for the traditional snack of ground-nuts (expensive and scarce at times in the project area).

3. Demonstration of the use and acceptability of soya milk: Extension workers learned simple methods to demonstrate preparation of soya milk.

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COMMENT:

It is difficult to understand what is new about RAP. As part of all major sample surveys based on questionnaires and interviews, a quick qualitative pilot survey is done first in order to verify and check the questionnaire and to prepare for interviewer training. In many cases a qualitative study moves parallel to the survey as a sub component of it in order to check on various issues and to add to the interpretation.

COMMENT:

Save the Children often starts with a baseline survey. But before a proposal is written, there is often a need to better interpret the findings, to carry these results to the community for discussion and to provide additional data for programme planning.

COMMENT:

The big difference is that in good universities and institutes these methods have been used in connection with major quantitative surveys. But now these techniques are being used by service delivery personnel to improve their planning and service delivery. Part of this is because of the

improvements in the way it has been packaged and part is because of improved training in these areas.