



Participatory Rapid Assessment: Facilitating a Holistic Conceptual Framework

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Childhood malnutrition remains a significant public health problem in sub-Saharan Africa, largely caused by sub-optimal feeding practices and poor diet quality. Deficiencies in micronutrients can lead to poor growth and impaired cognitive performance, among other health problems. Improving diet quality through the consumption of animal source foods (ASF) is one approach to enhance child wellbeing and prevent deficiencies in micronutrients. A multidisciplinary team of researchers from Iowa State University and the University of Ghana are utilizing participatory rapid assessments (PRA) to analyze ASF accessibility, availability and utilization in Ghana. Here, we report on the methodology of PRA and describe some of the tools common to this community-focused research approach. Several of the approaches used in this study include, interviews with key informants, wealth ranking, community mapping, focus groups, semi-structured interviewing, food tracking, linkage diagramming through consensus building and group intervention selection. Our experience confirms that PRA helps to facilitate a holistic conceptual framework that includes the perspectives of all stakeholders, leading to a more successful selection and implementation of interventions.

Background

Childhood malnutrition, resulting from sub-optimal feeding practices and poor diet quality, remains a significant public health problem in sub-Saharan Africa. Children consuming primarily vegetarian diets, as is typical in sub-Saharan Africa, are often deficient in vitamin A, vitamin B-12, riboflavin, calcium, iron and zinc. Deficiencies in micronutrients can lead to anemia, poor growth, impaired cognitive performance, blindness and death. Improving diet quality through the consumption of Animal Source Foods (ASF) is one approach to enhance child wellbeing and prevent deficiencies in micronutrients. In a 1984-1987 Nutrition Collaborative Research Support Program (NCRSP) study, Kenyan school children who consumed low levels of ASF performed poorly on cognitive tests, were the least active, and were the least attentive in the classroom (Neumann et. al., 1992). Several follow-up school feeding intervention studies of the Global Livestock CRSP (GL-CRSP) demonstrated a positive link between the intake of ASF, particularly meat, and improved cognitive, behavioral and physical development (Whaley et. al., 2002; Sigman et. al., 2005). Based on the NCRSP and GL-CRSP studies and others, we are moving forward to increase the availability of ASF for young children. Currently, a multidisciplinary team of researchers from Iowa State University and the University of Ghana are utilizing participatory rapid assessment to analyze ASF accessibility, availability and utilization in Ghana. The main objectives of this project are to foster local, regional and national stakeholder participation in defining the

constraints to ASF in Ghanaian children's diets and to prioritize relevant and sustainable interventions to combat these constraints.

The study took place in six communities in Ghana, located in rural or peri-urban settings in the three ecological divisions of the country – Coastal Savannah, Forest Transitional and Interior Savannah Grassland. Stakeholders comprised all those who played a role influencing the availability, accessibility and utilization of ASF for children in Ghana, including caregivers of two to five year-old children, ASF producers and distributors, agriculture extension and community health/nutrition workers, Non Governmental Organization (NGO) program managers, Ministry of Food and Agriculture program directors and university researchers.

Participatory Rapid Assessment Methods

Participatory Rapid Assessment (PRA) is a family of approaches that engages the knowledge and critical analysis of local people to arrive at sustainable solutions to community problems. It is the stakeholders themselves – those who share a vested interest in the outcomes – who define the problem, guide the selection of interventions and are empowered to manage their resources in a more sustainable way. The PRA approach draws from sociology, public health, psychology, applied anthropology, economics and agriculture methodologies and can be effective tools for multi-disciplinary research

teams in NGOs, government field organizations, aid agencies and universities.

The recognition of a breadth of indigenous knowledge and expertise present in communities has changed our mode of learning. In the top-down development approach, frequently used in the past, an urban-based professional might make a brief rural visit, conducting meetings with the male elite of the community, but overlooking voices of women and the poor. Often, visits were planned during favorable seasons, avoiding conditions such as drought or rain, which inequitably affect the poor. Such visits gave an incomplete understanding of the underlying problems and, therefore, handicap the search for effective solutions.

Beginning in the 1970's, researchers realized that their interventions could be more effective if they became fully engaged in the communities where they were working. The classic questionnaire surveys that produced generalizations of a situation started to make room for informal in-depth interviewing with individuals knowledgeable about a community. This shift from centralized standardization to local diversity led to a greater understanding of social and cultural practices and local economic constraints. The shift continued as development institutions around the world brought to light the value of indigenous technical knowledge. Researchers began to incorporate local expertise more fully into the analysis of local situations. This methodology, which came to be referred to as Rapid Rural Appraisal (RRA), provided an additional breadth and quality of insight that was inaccessible through traditional research methods. RRA helped make research more time and cost effective and stakeholder inclusive.

A nutritional anthropologist, Margaret Bentley, and colleagues, in the 1980's, integrated RRA into routine health care program development. Using information from a small number of key community residents, they used informal open-ended interviewing tools to listen to people's beliefs about diarrhea and feeding patterns during diarrhea, which in turn helped shape community-specific and effective interventions.

A shift occurred in the mid-1980s, when researchers began to recognize the abilities of local individuals to be facilitators and analyzers of their own problems. As local people become more empowered to conduct, analyze, plan and take action in their communities, the label of Rapid Rural Appraisal was replaced with Participatory Rural Appraisal (PRA). Much of the spread of PRA was South-South as people exchanged field experiences and training approaches. This new methodology places ownership in the hands of local people. Rather than being the main decision maker, the researcher can catalyze and enable people to undertake and share their own investigation and analysis.

The methods used in PRA are varied and depend on the community and problem being addressed. The idea of triangulation is central to PRA where a minimum of three sources is consulted or a minimum of three techniques is used to insure the quality and reliability of the information. Some of the common methods include:

Identifying key informants. These individuals are knowledgeable about the community in terms of its history and inhabitants and represent a balanced male to female ratio. Informants provide essential local perspectives that lay a foundation for working in the community.

Developing a wealth ranking. Through discussion the key informants define criteria for high, medium, and low wealth rankings for their community. For example in one community a family of high wealth may be defined as one with a profession and regular income or the ability to give a loan to others. A household of low wealth may be characterized as one unable to send children to school or one depending only on farming for money.

Community mapping. Community members draw out homes, shops, rivers and other landmarks on a large sheet of paper. Homes that pertain to the study are numbered and given a wealth ranking. This is done first in separate groups and then each subgroup compares their rankings. A majority must be in agreement on the wealth ranking for it to be assigned to an individual household.

Focus groups. Stakeholders from the community are randomly selected from each wealth category to participate in group discussions. Depending on the study, focus groups of agricultural extension workers, community health/nutrition workers, and program managers from different NGO or governmental or research institutions may also be helpful. Semi-structured interviewing techniques are used during the focus group discussions.

Semi-structured interviewing. Researchers use a set of guiding questions, but the format is flexible and open ended. The goal of the interview is to gain qualitative data on individual perceptions, beliefs, values and definitions of the situation.

Food tracking. Tracing the path an item of food takes, starting with the consumer and working back to the producer or vendor. This process is done through observation and informal interviewing. This tool provides insight into the constraints or obstacles that face the local community.

Linkage diagramming through consensus building. Community members create a diagram that links constraints and obstacles that contribute to the problem under analysis. This diagram is referred to as the problem model. Before

Figure 1. Community mapping is a common method used in PRA. Here, community members in Winneba, work together to draw a map of their village. Photo by Esi Colecraft.



beginning the diagram, community members must agree on the criteria for including an element in the problem model. The diagram is drawn on a large sheet of paper for group accessibility.

Group intervention selection: Plenary and small group activities with stakeholders are used to brainstorm on appropriate interventions. Background information and results from the semi-structured interviewing are used to help prioritize intervention. Stakeholders also identify strengths and weaknesses for each intervention with respect to existing community activities and/or practices.

Findings

PRA methods used in this study include selecting key informants, creating wealth rankings, community mapping, and conducting focus group discussions with stakeholders knowledgeable about the communities. Agriculture Extension Agents assisted in the identification of the key informants who were residents. Communities were similar in their perception of wealth. Key informants ranked households as high wealth if the families owned high value property (e.g., automobile), lived in a well-built house, were able to provide adequate food and education for their children, and were able to loan money to others. Households of medium wealth were perceived as those with the ability to provide enough food for the family, had members who usually had a steady job, but had more limited financial resources as compared to the high wealth rank. Finally, the low wealth category was assigned to households that cultivated a small piece of land or were landless laborers, had insufficient money for food, medical bills, and children's education, and were described as living 'from hand to mouth'. Households were assigned a wealth

ranking on the community map and included in the sampling frame.

Key informant interviews were held with program managers and policy makers from different non-governmental organizations to gain their perspectives on the constraints on ASF availability, accessibility and utilization in the communities in which they worked. Between six and fifteen caregivers were randomly selected from each wealth category to participate, yielding three focus groups per community. A total of 192 people were interviewed. Separate focus group discussions were also held with local agriculture extension workers and community health/nutrition workers.

The information gathered during the focus group discussions pertained to ASF availability, accessibility and utilization. Examples include information on household livestock/animal ownership and rearing activities, reasons for livestock/animal rearing, perceptions of constraints to availability and accessibility of ASF, household food distribution and child-feeding practices relative to ASF. One Agriculture Extension Agent in the north explained that "...animals, particularly large animals like sheep, goats and cattle are not viewed as a regular income source for the households that have them; they serve more as a bank or savings account to be used in times of hardship or for emergencies, they are sold for money to take care of specific problems or needs". This was confirmed by a caregiver from the same region who explained the difference between availability and accessibility of ASF for the household: "We don't normally eat what we raise in the home because they serve as security for us. If we want to eat goat or sheep in the home then we'll buy the meat from the market and that takes money."

Food tracking was used to trace typical ASF from two caregivers per community back to the vendor/producer source(s). This data collection process allowed us to understand how consumption of fish was universal. Over 80% of the ASF tracked across the three zones was either fresh or smoked fish. Caregivers of all wealth ranks indicated that fish was most frequently included in family meals because it was relatively inexpensive compared to other ASF. In interior and coastal communities, both freshwater and marine fish were readily available in the fresh, smoked, dried or fermented form. Caregivers obtained fish from vendors selling next to the ocean, river, or dam, cold stores and community and township markets.

Linkage diagramming, consensus building, and group intervention selection methods were used during a two day workshop with representative stakeholders. During the workshop, three problem models were developed and a final step was taken to create an integrated problem model of the constraints on availability, accessibility and utilization of ASF. The key constraints included in the

integrated problem model were the following: low income of the rural household resulting in the inability to purchase ASF, poor producer market linkages, inadequate food processing and storage facilities, inadequate knowledge and skills of field staff and caregivers, inequitable household food allocation practices, and cultural beliefs and attitudes.

Practical Implications

The ENAM Project's use of PRA methods facilitates a holistic conceptual framework that includes the perspectives of all stakeholders, which leads to a more successful selection and implementation of interventions. PRA methods help to

identify the policies and interventions that will be the most cost effective, sustainable and acceptable by the community. For example, knowing the cultural beliefs about child feeding practices in Ghana helps guide intervention messages to account for these beliefs. Because PRA methodology increases the participation and active analysis by local community members, the capacity of a community increases. PRA approaches create collaborative opportunities with NGO's and policy makers at national levels and facilitate a buy-in of policy makers to organize activities and offer resource assistance. Overall, PRA methods link local communities, national policy makers and international research institutions in an integrated and balanced approach.

Further Reading

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The GL-CRSP Enhancing Child Nutrition through Animal Source Food Management (ENAM) project was established in 2003 and, through research, training and outreach, monitors the multiple pathways that might increase availability, accessibility and utilization of animal source foods in the targeted communities of Ghana. The project is led by Dr. Grace Marquis, Iowa State University and McGill University. Email contact: grace.marquis@mcgill.ca.



The Global Livestock CRSP is comprised of multidisciplinary, collaborative projects focused on human nutrition, economic growth, environment and policy related to animal agriculture and linked by a global theme of risk in a changing environment. The program is active in West and East Africa, Central Asia and Latin America.

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