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Participatory concept mapping to understand perceptions of urban malnutrition

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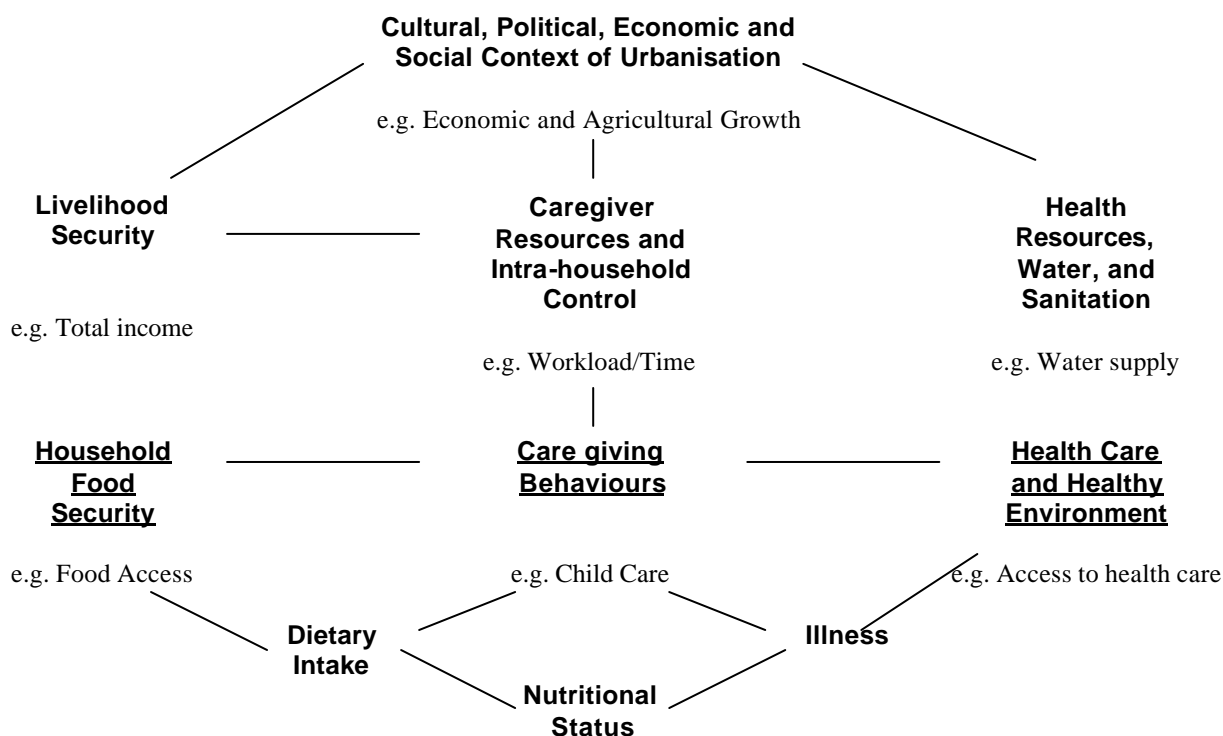
• **Introduction**

Malnutrition in Sub-Saharan Africa has long been viewed as a rural phenomenon. But with rapidly growing cities, and particularly rapidly growing urban poverty, concern has been expressed about the prevalence of malnutrition in cities as well. In Accra, Ghana, urban poverty has increased rapidly since the mid 1980s, prompting a study into the extent and causes of food insecurity and malnutrition in the city. The study deliberately relies on multiple methods, and incorporates PRA with

a random sample household survey to investigate the complex determinants of nutrition: food, health and care (see Figure 1).

There are large gaps in the knowledge base about malnutrition in the study areas selected. Thus, the first step of the research was to use a PRA-based methodology to rapidly gain community level information on the problems of food insecurity and related factors. The aim was to gain an understanding of people's own perceptions of malnutrition and its causes.

Figure 1. Conceptual framework for malnutrition (Study Proposal, based on UNICEF 1990).



The PRA studies were carried out in two neighbourhoods in the study area: one in the most densely populated, low-income area of the old part of the central city; and the other in the rapidly growing, but as yet still sparsely populated, peri-urban area. The study team included nutritionists, social scientists, urban planners, urban community activists, and members of the communities where the studies took place. Full reports of both studies have been published (Ga Mashie Study Team, 1996; Ngleshie-Amanfro Study Team, 1996).

In both of the study sites, the link between poverty and food insecurity was clear in people's perceptions of the problem of malnutrition. However, in both places, the study team saw evidence of many other factors that contribute to malnutrition besides food insecurity. Yet in most group interviews in the early part of the studies, the standard answer from community members about the causes of malnutrition was captured as poverty. One woman, who was a bit frustrated with questions to which she thought the answer was so obvious, cried 'Shika, shika, shika!' meaning 'The answer to all your questions is money, money, money!'

In an attempt to solicit more detailed perceptions of the causes of child malnutrition other than the simple linkage of poverty => food insecurity => malnutrition, the team devised a participatory concept-mapping exercise. This attempted to improve the quality of group discussion, and to understand in more detail people's own understanding of the central problem of the study.

Part of our difficulty was the issue of language. The term 'kwashiorkor', which describes one kind of severe malnutrition, was actually invented within the study area in the early 20th century. The term is used in the local dialect, though it is not the most common form of malnutrition found currently. Marasmus, or wasting, is much more common under contemporary circumstances. But there is not a commonly used term to describe this condition in the languages used in the study area except 'being too skinny.' Complicating the language problem is the fact that within the city, there is rarely one single language that all members of a single community share. Researchers face the problem of either using a

lingua franca that some people may not speak, or speak only very poorly (certainly not well enough to know and understand complicated concepts like 'malnutrition'), or working in more than one language. With a focus group methodology, we had little choice but to work in a single *lingua franca*, but took some time to understand all the words related to malnutrition. In general, malnutrition was perceived as a kind of illness related to what one eats, and both 'kwashiorkor' and 'being too skinny' served as the definition of malnutrition.

Methods

The method relied primarily on focus groups made up of women who all shared a single characteristic (e.g. mothers with young children, working mothers) but who otherwise represented a broad cross section of the community. The procedure developed was first to describe and discuss the definitions noted above and to make sure that members of the group shared the same understanding of the topic under discussion. Then the facilitator would ask the group to brainstorm all the possible causes of the condition, or things they believed to be associated with the condition.

Each idea or concept resulting from the brainstorming exercise was noted by the note-taker, and this continued until all possibilities had been exhausted. Each idea or concept was written down on a piece of card. Some kind of symbol was drawn to represent the concept so that all members could participate in the exercise, even if they could not read, or could not read the language in which the word was written. Using a concrete floor or slab, the group was then given the whole stack of note cards and several pieces of chalk.

The participants were asked to discuss as a group, all the concepts on the note cards, and arrange them on the floor in such a way as to show how they thought the various concepts were related to the central issue of malnutrition. They used the chalk to draw lines, arrows or whatever they thought would indicate the kind of relationship they believed to exist between two or more of the concepts brainstormed.

For the most part, the facilitators, did not intervene in any of the group discussion or arrangement of the cards. Occasionally facilitators posed questions asking 'what is related to what?' where a group was having difficulty deciding how to arrange their cards, or questions about 'what leads to what,' if a group was having a problem deciding how to draw lines between related concepts. Among twelve focus groups, only two had difficulty in arranging the cards in a way in which they could agree. In these two cases, the exercise eventually had to be stopped. But in the other ten groups, members were able, with very little intervention from facilitators, to derive concept maps showing what they believed depicted causal relationships determining child malnutrition. A number of these maps depicted a very sophisticated understanding of the etiology of malnutrition. Two of these, drawn by working and lactating mothers respectively, are shown in Figures 2 and 3 and contrast with UNICEF's (1990) well-known conceptual framework for analysing child malnutrition (an adapted version of which appears in Figure 1). Upon completion of the concept maps, it became much easier to discuss and analyse the

'root causes' of child malnutrition. This discussion clearly still included a poverty and food insecurity element, but also focused on, for example, environmental sanitation, unsafe drinking water, contamination of food (especially the street foods on which people in the densely populated study site are heavily dependent) and other forms of illness and stress.

Finally, and in some cases with very little prompting from the facilitators, the discussion turned to the issue of what could be done to prevent childhood malnutrition. This would not have been possible had other factors not been identified - the analysis would have become stuck at the 'shika, shika, shika' level of discussion, as happened earlier in the study. The use of the participatory concept mapping exercise thus helped to establish a group analysis of childhood malnutrition and helped to bring about a discussion analysing what could be done about the problem.

Figure 2. Concept Map of Malnutrition: Working Women's Group (from Ngleshie-Amanfro Study Team, 1996)

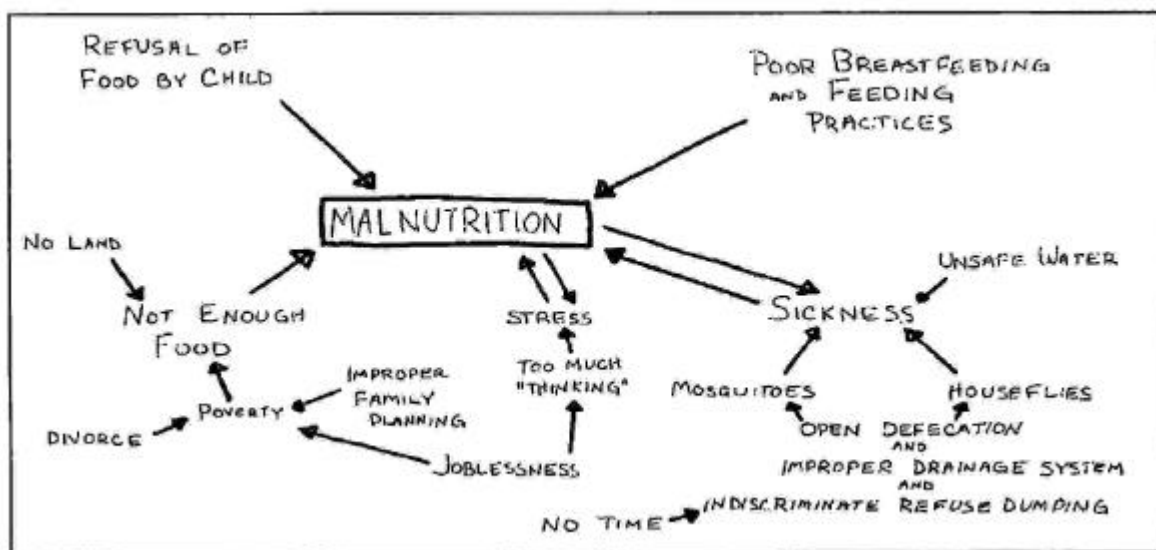
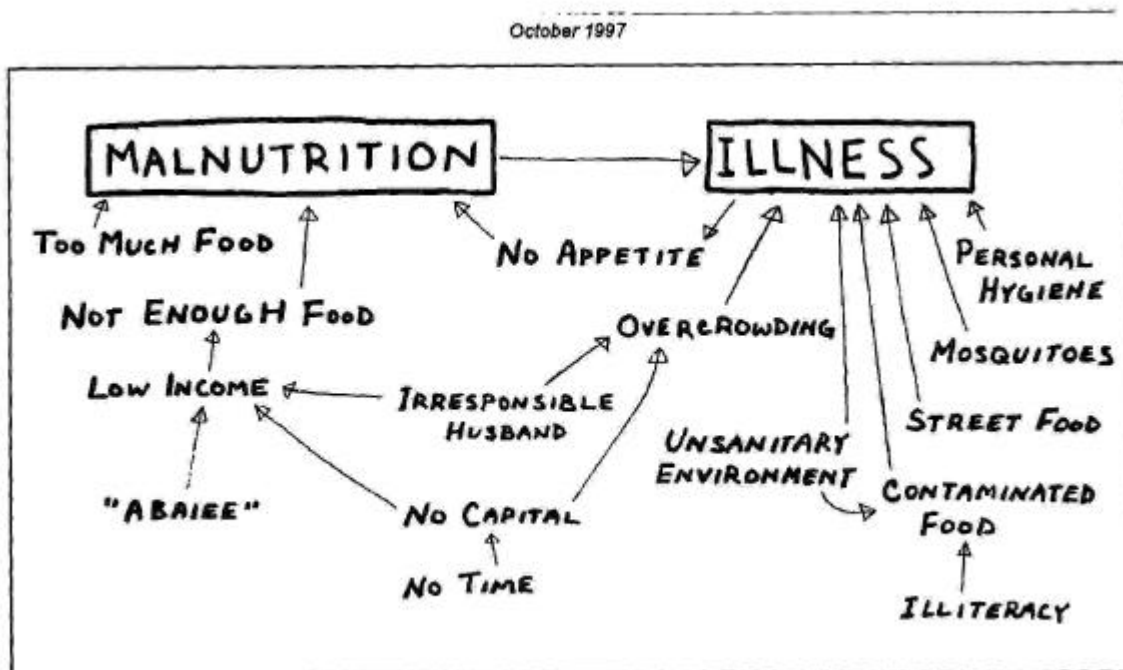


Figure 3. Concept Map of Malnutrition: Lactating Mother's Group (from Ga Mashie Study Team, 1996). 'Abaiee' is a vernacular term for the municipal security police, it literally means 'they are coming'.



Discussion

The two concept maps presented here depict a sophisticated understanding of various causes of malnutrition. They are, in many ways, comparable to the well-known UNICEF conceptual framework. Certainly, both concept maps bring out the poverty => food insecurity => malnutrition connection that was emphasised in group interviews, but they both go beyond this analysis.

Both concept maps note that poor health generally contributes to malnutrition; both note some of the environmental health hazards of living in densely populated settlements; both note the role of caring and feeding practices, as well as child appetite and stress. Thus, while there may be some discrepancies over the placement of various concepts, or the linkages among concepts, these maps show that the groups who made them were able to work together to develop a good understanding of malnutrition and its causes.

A concern discussed within the study team was whether we had 'biased' the results of the

concept mapping with the kind of questions we had been asking during the week prior to the concept mapping exercises. Clearly, the team asked questions related to several of the factors that came out in the concept mapping exercises. Was the presence of these concepts in the maps the result of the women's own analysis, or had they simply been listening to our questions over the previous week, and telling us what we wanted to hear?

Several answers were found in discussions among the study team. First, the members of these focus groups had not been members of other group exercises or interviews completed in the previous week. Second, the main point of the participatory concept mapping exercise was not the individual concepts listed, but the way in which people thought the concepts related to each other and to child malnutrition. While the study team had asked questions about some of the factors that came up in the brainstorming exercise, on this more complex matter of the way in which these factors were believed to be related, the study team had been quiet. Third, the concept maps were very much a product of group processes - several participants in both of the groups that made

the maps presented here approached members of the study team to say that they had never thought about malnutrition in quite this way before on their own. Thus our conclusion was that the analysis represented in the concept maps was truly that of the groups, even though some of the concepts may have been gleaned from the study team.

• Conclusion

This kind of an approach can have applications in other PRA studies in which the central concern of the study is a complex, multi-factorial phenomenon. This approach can help identify the 'root causes' of such problems, together with useful points of intervention for policy makers.

It is too soon to judge the impact of this kind of methodology on community change, but several points should be noted about the potential of this tool. First, the use of concept mapping helps to outline what kind of interventions could build on people's own understanding and their own means of addressing or coping with problems. This is likely to lead to more successful interventions. Second, where proposed interventions are based on conventional research methods, the interventions could be analysed with community participants, making them more likely to lead to community support and action.

The concept maps depicted here were made prior to survey-based research. But similar activities will be carried out after survey results have been analysed and possible recommendations for policy or programmatic intervention have been proposed. Promoting analysis and planning with community

members offers one of the best way of dealing with complex, poverty-related problems.

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