

FAMILIES CREATING THEIR OWN NUTRITION EDUCATION MATERIALS:
A CASE ILLUSTRATING THE USE OF ANTHROPOLOGICAL
RESEARCH PERSPECTIVES IN INDONESIA

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A few weeks ago, I read a news release from a National Academy of Sciences meeting on diet and pregnancy in the U.S. One of the conclusions of the meeting was that "food selection and consumption is deep seated, difficult to change, and, therefore, requires special attention from those providing medical counseling." The report urged health practitioners to learn the cultural mores influencing their patients' diets.

I thought that this sounded like something I had heard before: a call to anthropologists to assist in the process of appropriate patient counseling. However, I was sure that anthropologists had probably investigated and written papers on diet and pregnancy for different ethnic groups in the U.S. Yet, a gap still exists between the study and its application.

A step beyond anthropological studies must be taken to bring the insights gained from the anthropological investigation together with the patient education.

The criticism of anthropologists most often expressed to me by development program planners is their inability to move beyond the anthropological study. Whenever I or my colleagues approach development program planners to ask them to consider including an anthropological perspective in their work, they reply that although anthropologists write interesting papers on regional traditions and practices and are quick to point out problems and interesting circumstances when they evaluate development projects, they leave the program planner without any constructive suggestions or concrete ways to proceed.

The case I would like to summarize here is an example of the melding of anthropological investigation and program planning. The program was a nutrition education pilot project in Indonesia. This case is of interest to social scientists (1) because of the manner in which the information from the anthropological investigation was translated into specific program objectives; and (2) because of the way the investigation set the style and tone of the educational messages and materials and formed the basis of the plan for delivering educational information to the mothers involved in the project.

It is also interesting because there was a commitment from the initial stages of program design

- to apply anthropological research techniques;
- to truly involve program participants in the design of the program; and
- to undertake nutrition education in a serious and careful way by basing it on the anthropological data.

Finally, this case is important because the program was successful. The program helped rural Indonesian mothers alter their children's and their own dietary habits, and these alterations appear to have made a positive difference in the nutritional status of both.

It must be noted at the outset that all parties involved in this pilot project were committed to the intensive investigation conducted prior to undertaking nutrition education. First, the Indonesian Government was dedicated to involving the villagers in planning the program; second, the World Bank was supportive and programmed money from the outset for this activity; and, finally, Manoff International, a firm dedicated to thorough market research, hired a research specialist and a nutritional anthropologist to work on the project, because experience had shown that traditional market research surveys were not sufficient for designing messages and materials that would aid families in altering their daily dietary practices.

The objective of the pilot project was to show substantial changes in nutritional status through nutrition education interventions alone. The challenge, therefore, was to produce educational messages that addressed the most pressing problems facing the people in the project areas, and to formulate them in such a way that they offered appropriate, practical suggestions for practices that rural families could try in their homes as often as three or four times every day.

The project used a formative evaluation framework to ensure regular consultation with the participating families on their perceptions and desires for the project as it progressed. The first stage, the concept investigation phase, had the strongest anthropological orientation.

This research phase, although openended, was not completely unstructured. The parameters that were provided were those of the major nutrition problems, which had been decided by the Division of Nutrition in the Indonesian Ministry of Health. These were: (1) protein calorie malnutrition, (2) iron deficiency, (3) vitamin A deficiency, and (4) iodine deficiency/goiter.

The areas were then further defined in educational terms. For example, protein calorie malnutrition presented many options for investigation: breastfeeding, introduction of solid foods, feeding the toddler, diet during illness, oral rehydration during diarrhea, etc. On the other hand, because iodized salt was not readily available, that topic was dropped: since education about using iodized salt is useless without the salt.

The first stage of the concept investigation was carefully planned. The area of the pilot project was only five kecamatan (subdistricts) in three provinces: Yogyakarta, Central Java, and South Sumatra. The plan called for a small sample, intensive investigation. Therefore, in each kecamatan we selected two villages that were representative of that area for a number of criteria. In each of the villages, the families for the investigation were selected because of the presence of a pregnant woman, a lactating woman, a malnourished child or a child with diarrhea, preferably under the age of two. A total of 330 households participated in some aspect of the investigation. Village midwives, shopkeepers, health workers, and officials also participated.

The investigation procedure was the following:

1. The first step was a community meeting to discuss general nutrition concerns, food resources, and possibilities of practices that could be altered and how this could be done.

2. The second step was to write question guides based on the community meeting information. The question guide was opened. It was divided by topic and contained suggested lines of questioning and probes for the investigators. In addition to the nutrition topics, there were inquiries on media habits and the social and economic circumstances of the families.

A precoded dietary food recall form accompanied the guide. It was precoded so that during the visit, the investigator could make a rough calculation of the diet's adequacy in calories, protein, and vitamin A.

Following the dietary recall, the investigator made suggestions for dietary changes the family could try. The suggested changes were determined by the outcome of the dietary food recall. The precoded recall forms were only used as guides: the investigator would work with the families to find what was feasible for each family's particular situation.

3. The third stage was the actual household investigations, during which the trained interviewers listened, probed, recorded the mothers' and infants' reactions and taped the

mothers' words, participated in activities with the mothers, and made their own observations. The informal, openended interview was conducted at a leisurely pace and encouraged the mothers and interviewers to explore together some of the less obvious rationales and behaviors.

Two visits were made to each home. The first visit involved an initial discussion of no more than two nutrition related topics. For example, an interview with a mother of a young baby would include discussions of diet during lactation and breastfeeding practices during the infant's first three or four months.

Also, during the first visit, the children were weighed and a dietary assessment was made. Based on the assessment, a decision was made on which specific dietary modifications were to be tried with the mother.

Some of these trials included the addition of green vegetables in the porridge, offering a child two more spoonful of rice at every meal, or--for the lactating woman--drinking more fluids.

We worked on refining a good weaning food. One of the issues was the interpretation of "finely chopped, green, leafy vegetables," which is how the women described the vegetables they prepared. Cooking sessions were conducted to demonstrate the preparation of the weaning food, and were most often held the day after the initial interview.

The second visit was made four to five days after the first to find out the reaction of the families to the trials--had they been attempted? What was the outcome? What were the benefits, the problems? Was the behavior modified?

It is easy to see how much information was generated from this process and how many interesting tidbits emerged from the investigations that would have made wonderful papers. But all of the information had to be translated into a communications strategy and into educational messages.

The results from each village were examined, and the dominant ideas, rationales and trends, as well as promising behavioral changes were extracted. These findings were discussed with the investigators and with others at each administrative level to corroborate the applicability of the information to other villages. The information obtained was qualitative. It did not provide statistics on a problem, but rather insights into why something was a problem, where the true resistance to changing an idea or a practice lay, and what would be acceptable to try and what extremely difficult.

The investigation uncovered many interesting practices and beliefs. For example, colostrum was commonly discarded by women because they were told that it was dirty. While this was not a new finding, we did learn that the belief was not firmly held: many women were willing to change the practice because they thought the idea was old-fashioned and because they had heard of other women giving colostrum to their infants with no harmful effects. On the other hand, it proved extremely difficult to work out advice for pregnant women to help them increase their food consumption. The fear of a large baby was strong. The only dietary change these women seemed willing to make was to eat more vegetables, because this addition to their diet made them feel better.

The investigations on oral rehydration uncovered a considerable amount of information for the education unit on diarrhea, not the least of which was that the households did not have the kind of spoon that was recommended in the message that was being disseminated nationally at that time. Consequently with the help of the mothers, a new homemade oral rehydration mixing procedure was designed.

After numerous trials, a weaning food was developed that used local ingredients, but could be prepared with different cooking methods in the different areas. The inclusion of some fat source to improve the caloric density of the food was an important addition to the weaning food. This was achieved in one area by frying the tempe before it was mashed in the porridge; in another area, a few drops of coconut oil were added to the cooked rice; and in another, the mixture of ingredients was cooked in coconut milk.

Another interesting finding altered the usual treatment of breastfeeding in the messages disseminated by health workers and through radio broadcasts. In the rural areas of Indonesia where the project took place, frequent breastfeeding was practiced by all the mothers through at least the first two years of the child's life. It appeared that there would not be any need for breastfeeding education. However, it became clear from the investigation that there was something unsuitable in the breastfeeding practice of many women, because they complained that their children cried often and were not satisfied by breastmilk, and that, as a result, they were forced to feed solid foods to the infants at a very early age. After more observation and discussion, we learned that women in Java were primarily using their left breast to feed their infants. We had many hypotheses for this practice, but never came close to discovering the reason until it slipped out during a focus group interview with some health workers that the left breast contained "food" and the right breast "water"; the women offered the "food" before the "water," and if a child seemed content after one breast, the mother never offered the other. Therefore, within a few months, the milk in her right breast had begun to dry up. The message

for breastfeeding became, "Each time you breastfeed, use both the right and the left breast: Be sure your child is satisfied."

The information collected on media habits influenced the choice of the material to be produced to support the radio communication and to aid the health workers in their work with families. The enthusiasm the families showed for having something to display in their homes, such as calendars, was overwhelming. Therefore, priority was given to developing a material for the village families to put up in their homes that would remind them of their commitment to improve dietary practices. The material was called an Action Poster. It was the outcome of an effort to overcome the weakness of the traditional poster, which is a passive material whose impact fades after initial exposure. The Action Poster* engages the mothers in the message of the poster on a continuing basis.

The village health worker presented the appropriate poster to the mother with an explanation of its content and the new practices it urged. The poster served as a guide for the health worker in conveying messages to the mothers. The boxes under each recommended action were to be checked by the mother when she followed the advice: even though we knew that she might not always check the box. The poster's purpose was to remind the mother, so that even if she only marked the boxes twice, she had consciously thought of the activity two times since her contact with the health worker.

These have been a few examples of how an investigation that relied heavily on anthropological research techniques used the results to form a communications strategy that may be taken beyond the pilot project stage and used nationally.

The chances of national implementation happening are good. Preliminary findings from the evaluation showed positive results. Two groups of families with similar socio-economic characteristics were compared: those participating in the intense nutrition education program and those participating in the regular nutrition program. We found that:

* A sample Action Poster is shown below.

- Parents in the Nutrition Education villages knew more specific information about nutrition problems and what to do about them.
- Parents in the Nutrition Education villages were offering more of the foods stressed in the messages to their children.
- Children of the families in the Nutrition Education villages had higher protein and calorie intakes.
- In fact, children in the Nutrition Education areas were growing significantly better after five months of age than children whose families participated in the national nutrition program.

We believe that the principal reason for this success should be attributed to the early investigation phase, to the fact that the intended audience for the education program participated in the design of the materials and that what they said was directly applied to the program plan, without a great deal of interpretation and using the words of the families whenever possible. More of this should be done and anthropologists should be doing it.

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This paper was presented at
the 81st Annual Meeting of the
American Anthropological Association,
in Washington, D.C.,
December 3-7, 1982.

