20. The need for rapid ethnographic procedures for environmental contaminant assessments with indigenous people

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By Harriet V. Kuhnlein

Harriet Kuhnlein, Ph.D., R.D. is professor of Human Nutrition and Director at the School of Dietetics and Human Nutrition, MacDonald College of McGill University, Montreal, Canada

This paper describes a novel application of a RAP-type methodology by an experienced anthropologist. She explores the exposure of an indigenous population in Canada to environmental toxins and contaminants, particularly organochlorines and heavy metals through their dietary dependence on wildlife. For this purpose, rapid ethnographic procedures not only provide background data for more extensive survey research, but also monitor influences that may affect the quality of survey data. Valuable guidance on how to reduce exposure to food contaminants is also provided. - Eds.

ENVIRONMENTAL RESEARCH HAS shown disturbingly elevated levels of contaminants, such as organochlorines and heavy metals, in animal and plant wildlife in many parts of the world. Those who depend on wildlife as food resources are therefore at risk for these contaminants.

Indigenous people have special concerns for the integrity of the environment of wildlife species not only because they often depend on wildlife as their primary food resource, but also because wildlife usually maintains a central part of their cultural identity. A working definition to recognize a group of indigenous people is a cultural group in a particular environment that developed a successful subsistence base from the natural resources available in the ecological area.

While wildlife food resources have been central to the subsistence of many indigenous groups and are indicators of general environmental contamination, agricultural food resources of subsistence groups have also been scrutinized recently for contaminants that compromise human health.

In the latter case, the primary concern for contaminants has been for bacteria and other parasites [1], but as well, the widespread use of agricultural pesticides has warranted concern for indigenous people who have been convinced to use them.

In recent years, certain groups of indigenous people in Canada have been shown to have substantial exposure to organochlorines and heavy metals through their animal wildlife foods. Polychlorinated biphenyls and toxaphene have been documented in land- and sea-dwelling wildlife across the Canadian Arctic, and the extent of dietary exposure in Inuit and Dene diets has been reported [2-4]. Of the heavy metals, mercury has been shown to place Canadian Cree and Chipewyan people at risk following hydroelectric dam building and consequent flooding of mercury-containing rock and forest environments [5,6]. Cadmium has also been reported as a

concern in arctic wildlife used for food [7], and strontium and lead have been identified in the maize foods of indigenous people of Arizona [8,9].

Research programmes designed to identify exposure, and following this, to reduce exposure would do well to use some rapid assessment methodologies on a routine basis. Extensive and expensive detailed dietary surveys and wildlife sampling and analysis are essential for the definition of seasonal contaminant exposure and the species contributing this exposure. Risk definition also usually requires human blood, urine or milk analysis for comparison to accepted standards of health. However, to proceed with these evaluations, and to expand the usefulness of their results, rapid assessment data are valuable.

Examples of rapid assessment data needed

In considering the variety of indigenous communities and the diversity of food resources used, it is universally accepted that knowledge of seasonal variation in food use should be obtained. This includes variations in use by subsets of the population and if there are particular beliefs about the special usefulness of individual foods during specific seasons.

Alternative food resources to those known or suspected to be contaminated should be identified, as well as the availability and acceptability of these to community members. A corollary to this, information on any recent changes in food behaviour of the community is useful, such as recently increased use of alternatives or decreased use of foods suspected of contamination. This is particularly so if an extensive seasonal dietary survey is planned to define regular annual exposure to contaminants.

Popular beliefs of the people about "nutritional value" or "healthfulness" of their foods are important. Beliefs about the contaminants, and their origin are also relevant. The sources of information and opinion in the community about foods, nutrition, health and food contaminants need clear identification, as far as is possible. This information is needed to define the best, most effective methods to change food behaviour so as to reduce exposure to contaminants.

Examples of techniques used to gather needed data

An essential first step is communication with the leadership, at various levels, of the specific indigenous groups or communities. Local leaders are especially instrumental in giving a view of the local knowledge and opinion as well as in identifying personnel who can best assist the research. Relevant reports may exist on the hunting/trapping/harvesting of the local food resources, and these can be reviewed.

Interviews and discussions with the elders either individually or in groups are extremely useful in defining traditional uses of food resources. The variety of opinion among elders needs recognition, and it is therefore wise to explore this thoroughly to obtain a sense of the practices within the whole community. Discussions in groups or individually with the various community leaders and school personnel are helpful. Often discussions with the oldest school students can give valuable impressions of community opinion and activity. Finally, focus group discussions

within key extended families can obtain needed information on beliefs and behaviour related to food procurement and preparation. Needless to say, these discussions should be conducted in the first language of the community, and ideally are led by a respected member of the community.

Examples of difficulties with research on food contaminants among indigenous people

One of the greatest potential difficulties is the possibility of change in food behaviour within households because of media reports or other "news" on contaminants. Ideas and opinions so generated are often sensational and can cause havoc with established healthful dietary patterns virtually overnight. Since indigenous people in their natural environments usually have substantial cultural and nutritional investments in traditional food resources, the news of contaminants, which are usually imposed from external sources, is a cause for surprise, anger, and fear for the health of family members. These emotions can substantially influence opinion and attitude toward the researchers and thus affect the quality of research data. They can also generate forceful political action and demand at various levels of leadership and government (for land claim proceedings or financial compensation, for example). Hence, political motives should also be considered as potentially influencing the information gathered in rapid assessment procedures or in the more detailed surveys the rapid procedures are assisting.

In summary, rapid ethnographic procedures are useful for providing background data that can help more extensive survey research on contaminants in food resources of indigenous people. Ongoing rapid techniques throughout the survey will help to monitor influences that may affect quality of survey data and provide valuable guidance on how to implement policies to reduce exposure to food contaminants.

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QUESTION:

When the researcher enters the community to study a problem which threatens the community and about which the community is unaware, isn't there a danger that the community will see the researchers as part of the problem and a threat?

ANSWER:

This is a problem and you must be very frank with the community and explain to them why you are there.

QUESTION:

Are there ways of changing food alternatives? Are people aware of alter natives, etc.? How would you get at this behaviour?

ANSWER:

The best way to get at food beliefs and an understanding of what foods are good would be through discussion with the elders. They may not know about contaminants but they will be able to tell us about "good" food.

COMMENT:

It might be useful to begin a sub-network on the use of RAP in the service of environmental questions.