

Research Capacity Strengthening and Applied Medical Anthropology within the Kenyan-Danish Health Research Project (KEDAHR): The Background

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INTRODUCTION

This article gives an overview of the Research Capacity Strengthening (RCS) and applied medical anthropology as they had been implemented by the Institute of African Studies within the interdisciplinary framework of the Kenyan-Danish Health Research Project (KEDAHR) during the past eight years. This introductory chapter deals with general issues whereas some of the more specific research findings are reported elsewhere in this volume.

KEDAHR was sponsored by the Danish International Development

Assistance (DANIDA), which is a 'branch' of the Danish Ministry of Foreign Affairs dealing with assistance to developing countries. The support took place within the framework of DANIDA's 'Bilateral Programme for Enhancement of Research Capacity in Developing Countries' (ENRECA). As the name indicates, RCS is the main priority. The support was given to about 40 joint research ventures between Danish institutions and other institutions (of which KEDAHR is just one) in one or more developing countries. In principle, all sectors can get support, but the bulk of the funding should go to the partner institutions in the South.

¹ The people who have contributed to KEDAHR are far too many to be mentioned individually. However, we owe special gratitude to the people of Bondo District - not least the women and children - who have patiently put up with our numerous and sometimes incomprehensible questions and ideas; the project staff who have worked tirelessly in the field; the offices and the laboratories; the local administration who have been very supportive; the researchers and students who have each picked up topics, the sum of which forms the whole KEDAHR in all its complexity; and finally DANIDA, DBL and the other donors who have sponsored the projects. Many thanks indeed to all of you for your invaluable contributions.

THE PROJECT

The project's title is 'Kenyan-Danish Health Research Project (KEDAHR): Maternal and Child Health in Bondo District in Western Kenya - a Community-Based, Trans-disciplinary Study'. The project started in 1994 and implemented in two phases.

The two broad objectives of Phase 2 were:

- To further strengthen the research capacity of the participating institutions within the fields of anthropology, educational

psychology, health education, health systems research, nutrition and parasitology with special regard to consolidating interaction between researchers from all institutions involved.

- To carry out research which will contribute to the improvement of the health status of the people of Bondo District and elsewhere with specific reference to pregnant mothers and children.

From the outset, the KEDHR set-up has been very big - comprising nine institutions (five in Kenya and four in Denmark). KEDHR was probably one of the most complex ENRECA projects. The

project consisted of six disciplines ranging from biomedical sciences (parasitology and nutrition) to social sciences such as educational psychology and anthropology. In terms of institutional arrangement and research administration, each discipline constituted a component, headed by a senior researcher in each of the twin institutions.

Given the range of disciplines outlined in Table 1, it is evident that the anthropological component had been operating in a complex environment characterized by intra-disciplinarity and inter-disciplinarity within and between the biomedical and social sciences.

Table 1: The disciplines and components within KEDHR

| Components | Participating Institutions |
|-------------------------|--|
| Anthropology | <ul style="list-style-type: none"> • Institute of African Studies, University of Nairobi • Institute of Anthropology, University of Copenhagen |
| Health Education | <ul style="list-style-type: none"> • Division of Health Education, Ministry of Health (MOH), Nairobi • Danish University of Education, Copenhagen |
| Health Systems Research | <ul style="list-style-type: none"> • Centre for Public Health Research, Kenya Medical Research Institute (KEMRI), Nairobi • Division of Vector Borne Diseases (DVBD), MOH, Nairobi • Danish Bilharziasis Laboratory (DBL), Copenhagen |
| Nutrition | <ul style="list-style-type: none"> • Centre for Public Health Research, Kenya Medical Research Institute (KEMRI), Nairobi • Research Department of Human Nutrition, Royal Veterinary and Agricultural University, Copenhagen |
| Education Psychology | <ul style="list-style-type: none"> • Department of Educational Psychology, Kenyatta University, Nairobi • Danish University of Education, Copenhagen |
| Parasitology | <ul style="list-style-type: none"> • Division of Vector Borne Diseases (DVBD), MOH, Nairobi • Danish Bilharziasis Laboratory (DBL), Copenhagen |

THE CULTURAL AND SOCIO-ECONOMIC CONTEXT OF THE RESEARCH

KEDAHR project was made up of a number of research activities which were interwoven in a complex pattern of mono- and interdisciplinary studies. The project was located in Bondo District, Western Kenya and conducted among the Luo. Bondo District was created in 1999 having been carved out of Siaya District.

The extended family structure is one of the salient features of the traditional Luo family system. A typical rural Luo family comprises three generations of relatives (grandparents, parents and grandchildren) with strong kinship ties which still serve as a vital and viable social support system based on mutual kinship obligations to assist the needy. The Luo kinship system is based on patrilineality, clan exogamy and virilocality. Among the Luo of Bondo District and elsewhere in the region, if a parent died, the surviving members of the extended family are expected to take responsibility for the care of needy children and other vulnerable groups in the family (Suda, 1997).

Much of the strength of the human resources and social capital among the Luo in Bondo District and the resilience which they offer during times of adversity is being challenged by widespread poverty, recurrent droughts, chronic food shortages, high disease burden from malaria and the rapid spread of HIV/AIDS. The HIV prevalence rate in Bondo District was estimated at 29.4% in 1999 against a national rate of 14% (FAO, 2001). These are conservative estimates. The actual figures could be much higher considering the fact that the surveillance coverage is still relatively low. Almost every family in

Bondo District is affected in one way or another by the HIV pandemic. In many families both parents have died and increasing numbers of orphans are cared for by relatives who cannot cope especially with the high cost of education resulting in high rates of school drop-outs (Nyambedha, 2000).

The main economic activity of the area is subsistence farming with additional incomes based on fishing, small-scale gold mining and other activities. Although most families in Bondo have adequate land and the District is considered to have a relatively high potential for subsistence agriculture, only about 30% of its arable land is under cultivation. The main problems are low input systems of production based on hoe cultivation, late planting and recurrent droughts which are due to inadequate water resources and have led to crop failures and chronic food insecurity. The District is a food deficit area and imports from other districts much of what it consumes (FAO, 2001). Bondo District has several beaches along the shores of Lake Victoria and the fishing industry plays an important role in the local economy as it provides the main source of income for a number of rural households. Although fish is often available in the community, the bulk of it is processed and marketed outside the District with relatively little financial benefit to the fishermen in particular and the local fishing communities in general.

Small-scale gold mining is undertaken in some parts of the district and provides income to some families. The mining industry, whether run by individuals or small cooperatives is highly labour-intensive and has made little impact on the overall level of rural incomes.

AN OVERVIEW OF KEDHR RESEARCH ACTIVITIES

The KEDHR research activities were carried out in phases under various components and within a mono- or an inter-disciplinary framework:

Biomedical Research Activities

In Phase 1, the school cohort was one of the major research activities. The focus of the school cohort study was on children of primary school going age. A total of 1,000 children in Standard five and six from 19 schools were selected. They were randomised in four arms combining the interventions of anti-helminthic drugs (praziquantel and albendazol) and daily micronutrient supplementation or equivalent placebo. Before, during and after the interventions which were carried out for a full school year, the children were examined for helminthic status (egg count in stools), anthropometric measurements, school performance (reading test) and serum micronutrient levels (iron, zinc and vitamin A).

In Phase 2, KEDHR initiated a community-based study comprising pregnant women and their newborn babies (the birth cohort). The idea was to monitor the impact of Fansidar (given to pregnant women) and vitamin A (given to mothers and their infants) on various key indicators of disease and early childhood development. Another parasitological sub-study in relation to the birth cohort examined issues relating to soil eating as a risk factor for infection by geohelminths.

Anthropological Research Activities

The anthropological research basically fell into two broad categories namely; studies in the domain of medical anthropology which had been chosen in order to supplement the biomedical activities; and other studies dealing with broader contextual issues. Studies under the genre of medical anthropology have provided useful knowledge on the socio-cultural aspects of biomedical diseases such as malaria, helminth infections, geophagy, nutrition, as well as peoples health seeking behaviour, the use of alternative geophagy, medicine and reproductive health. Examples of such studies include:

- Nyikuri, Mary: Determinants of Breast-feeding Practices in Usigu Division, Bondo District (MA Thesis) Institute of African Studies, University of Nairobi.
- Wanjala, Kennedy B.: Perception of Diarrhoea in Children among th Luo of Bondo District, Kenya (MA Thesis) Institute of African Studies, University of Nairobi.
- Maende, James Ochieng: Children's Perceptions and Self-treatment Practices in Relation to Malaria Associated Symptoms in Usigu Division, Bondo District (MA Thesis) Institute of African Studies, University of Nairobi.
- Muthanje, Anne: Gender Relations in the Utilization of Family Planning Services in Nyang'oma Sub-location, Bondo District (MA Thesis) Institute of African Studies, University of Nairobi.
- Okungu, Vincent Robert: The Influence of Socio-Cultural and Economic Factors on the Girl Child Education in Nyang'oma Sub-

location, Bondo District (MA Thesis) Institute of African Studies, University of Nairobi.

- Geissler, PW, Harris, S, Prince, RJ, Olsen, A, Odhiambo RA, Okech-Rabah, H, Madiaga, PA, Andersen, A, M=F8lg=E5rd, P (2002) Medicinal plants used by Luo mothers and children in Bondo District, Kenya. *Journal of Ethnopharmacology*(in press).
- Geissler, P.W., Nokes, K., Prince, R.J., Odhiambo, R.A., Aagaard-Hansen, J. and Ouma, J.H. (2000) Children and medicines: self-treatment of common illnesses among Luo primary school children in western Kenya. *Social Science and Medicine*, Vol. 50(18) 1771-1783.
- Geissler, P.W. (2000) The significance of earth-eating. Social and cultural aspects of geophagy among Luo children. *Africa*, Vol. 70(4) 653-682.
- Prince, R. J. and Geissler, P. W. (2001) Becoming 'one who treats': a case study of a Luo healer and her grandson in western Kenya. *Anthropology & Education Quarterly*, Vol. 32(4) 447-471.
- Geissler, P.W. (1998) "Worms are our life" Understandings of worms and the body among the Luo of western Kenya (Part 1 + 2). *Anthropology and Medicine*, Vol. 5(1+2) 63-81 and 133-144.

In the second cluster of anthropological studies, students have looked at a wide range of issues related to orphans, disability, daily life activities of school age children, the girl child education, school drop out, childcare, traditional Luo vegetables, gender dimensions of reproductive health and community-based

HIV preventive strategies. Some of the studies in this category are:

- Onyango-Ouma, Washington: Children and Health Communication: Learning about Health in Everyday Relationships among the Luo of Western Kenya (PhD Thesis) University of Copenhagen).
- Nyambedha, Erick Otieno: Support Systems for Orphaned Children in Nyang'oma Sub-location, Bondo District, Western Kenya (MA Thesis), Institute of African Studies, University of Nairobi.
- Andersen, M. S.: Childhood and Disability among the Luo in Western Kenya - An Examination of Deaf Children's Negotiation of Identity (MA Thesis).
- Gunilla, Atieno Ouko: Potential of a Local Community Initiative in HIV Preventive Strategies and Care: The Case of Nyoluoro in Usigu Division, Siaya District. (MA Thesis), Institute of African Studies, University of Nairobi.

All the anthropological studies were planned in such a way that they gave research its intrinsic value and at the same time contributed to knowledge in the biomedical field. As can be seen from the titles listed above, basically the theme of 'the anthropology of childhood' though expressed, in various ways, remained dominant.

Research Capacity Strengthening

Research Capacity Strengthening (RCS) remained a primary goal in KEDHR throughout the project period. Over the past seven years, KEDHR provided the framework for the training of a number of students from Kenya and Denmark within

all the components. Within the anthropology component alone, six PhD students and 23 Master's students (the majority of whom were Kenyans) had participated in the project by the end of 2001. Many of them have already graduated while a few others are still working on their theses, reports and papers. In addition, a handful of senior anthropologists have conducted their own individual studies in the project area for varying periods of time. Only the Kenyan students were funded by KEDAHR, while the others (mostly Danish students) brought their own funds.

DISCUSSION

A number of lessons have been learnt during these seven years of KEDAHR's existence. The lessons are discussed under three broad issues:

(i) Interdisciplinarity

Interdisciplinary issues are complex and their theoretical discussion falls outside the scope of this article. It was the aim of KEDAHR to give the components as much leeway as possible in defining their own priorities in terms of RCS and research themes, while at the same time encouraging all researchers to conduct studies which are related to the main theme of maternal and child health and schooling. However, KEDAHR had also provided a framework within which researchers from various disciplines could interact and develop new joint projects. An example is a study by Geissler, P.W., Mwaniki, D.L., Friis, H., Thiong'o, F.: entitled: "Geophagia, worms, and nutrition in Western Kenya. A study on the prevalence of and motivations for geophagia, its role as a possible risk factor for geohelminth infections and its nutritional effects."

This was a DBL funded study on geophagy among school children which was carried out during Phase 1. Two hundred and thirty children were selected from the larger school cohort sample and additional data was collected to supplement the data already available on helminth infections, anthropometrics, micronutrient deficiency and school performance. The supplementary data contained information of geophageous behaviour and sampling of soil specimens which were examined for helminth eggs and minerals. This sub-study was not part of the original protocol for Phase 1 but was undertaken because scientists from three of the components involved (nutrition, parasitology and anthropology) were working side by side. This interdisciplinary effort was extremely useful because a large part of the data formed part of the main study and the geophagy project simply made additional use of them by introducing extra variables. The research findings have been published (see Geissler *et al.* 1997; Geissler *et al.* 1998a; Geissler *et al.* 1998b).

(ii) Intra-disciplinarity

Anthropology is not conceptualised, conceived or even applied in the same way across institutes or countries. When KEDAHR was established in 1994, the Kenyan and the Danish anthropological traditions were found to be significantly different. The Kenyan Anthropology students at the Institute of African Studies were to a large extent, trained to use quantitative techniques of data collection and analysis. Under this tradition, the relationship between variables was formulated in terms of well defined hypotheses (e.g. "levels of income directly influence availability and intake of vitamin

A rich foods by pregnant women"). These students had also been trained to design their studies using qualitative and exploratory research methodologies such as Focus Group Discussion, case studies, direct observations, narratives etc. On the other hand, the Danish students were brought up in a more qualitative research environment where participant observation and in-depth interviews were the main data collection methods. Their studies were generally more openly and flexibly designed and the formulation of hypotheses was not initially required.

During the seven years of experience in the KEDAHR research project, there has been intensive interaction between students as well as senior researchers from Kenya. Joint workshops and supervision of students have taken place as well as joint authorships. These joint ventures have led to a gradual convergence of scientific approaches. As a result, Kenyan students are increasingly using a variety of qualitative methods and more flexible research designs. The Danish researchers have also become more exposed to the challenges of conducting applied research in an environment characterized by many unmet community needs, especially in the areas of health and education. Both groups of students are now better skilled to deal with the challenges of operational research in Bondo than was the case seven years ago. The provision of more recent literature to the Kenyan researchers by their colleagues from the North and regular feedbacks on manuscripts from both sides have played a major role in consolidating this intradisciplinarity.

(iii) General issues

The significance of the long time KEDAHR span (12 years subject to approval every

three years) cannot be overestimated. The seniors from the two anthropological institutions did not know each other before KEDAHR started and many of them didn't have much experience with interdisciplinary research. Through a series of planning meetings, the long project life expectancy has allowed the key players to get to know one another and develop mutual respect. In addition, it has allowed the project to generate substantial and diverse data from the study population, to establish and strengthen links with the community, and to monitor the progress of post-graduate students in order to select the most suitable for further studies.

Up until the end of Phase 2, DANIDA should be commended for a flexible administration. Among other things, this flexibility allowed us to accommodate quite a lot of externally funded (so called 'associated') projects within the KEDAHR framework. This has been the case for all the Danish students. Some Kenyan students have also benefited from such KEDAHR associated projects. Apart from providing extra resources, the associated projects have also been an opportunity to explore research topics which initially had been at the margins of the main project, but which have since been integrated into the main themes in the following phase. Geophagy and orphan studies are two examples of such research topics.

SOME LESSONS LEARNT

Overall, some lessons have been learnt from the past seven years of research experience under KEDAHR. First, the long period of project funding and research collaboration was crucial to the establishment of an environment conducive for Research Capacity Strengthening. This provided an opportunity for

interdisciplinarity and other joint ventures to develop.

The other lesson learnt is that the same discipline can be perceived and practiced differently in different countries, cultures and institutions. In the initial stages of KEDHR project, the anthropological discourses in Kenya and Denmark were quite different. But seven years of research collaboration within the framework of KEDHR has facilitated mutual learning and cultural dialogue between colleagues in the North and South.

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