1. Introduction

When conducting biocultural research in developing countries, specially research with a strong ethnographic component, local logistic and scientific collaboration is fundamental.

For that, bilateral training is needed.

Foreign researchers need ethnographic training to be able to deal effectively with the groups they aim to study.

Local researchers and fieldworkers need training on theoretical and methodological details that are the basis of the research project.

2. Background

Populations are facing a dual burden of both chronic undernutrition (stunting in height) and overweight/obesity (OW/OB).

Low income groups in developing countries are more likely to be affected than higher income groups in developed countries.

Within the Maya, this project focuses on:

- nutritional and metabolic impairments,
- intergenerational effects,
- negative early life outcomes,
- the role of energy expenditure.

3. Research aims

- To identify long-and-short term causes leading to the nutritional dual-burden among the Maya in Merida, Yucatan, Mexico.
- To identify intergenerational and early life biocultural factors that shape nutritional status outcomes during childhood.

4. Participants & Methods

This project focuses on an urban Maya community in Mérida, Yucatan, Mexico.

Fifty-eight mother-child pairs

Children’s mean age= 8.43±0.8

Mothers’ mean age=34.44±6.3 years

Figure 1: These Maya are a dual-burden group

5. Work components/Outputs

Nutritional status and health outcomes in a dual-burden population of Maya in Yucatan

- Long-and-short term causes of the nutritional dual-burden
- Intergenerational and early life factors that shape nutritional status during childhood
- Assessment of energy expenditure
- Biocultural theory and application for the assessment of health and nutritional status
- Ecological & anthropological research in Mexico
- Growth standards and references

Policy: Evidence to inform policy development to improve the health and nutritional status of the Maya in Yucatan

Practice: Promote transmission of theoretical, practical and ethnographic knowledge that further contribute to the international development of anthropology
6. Research component

To achieve the 1st research aim
- Anthropometric assessment of the mother and child pairs,
- Body composition (bioelectric impedance),
- Estimation of energy expenditure (Actiheart®),
- Validated food frequency questionnaire.

To achieve the 2nd research aim
- Interviews:
  - Prenatal and birthing care for mothers,
  - Birth outcomes,
  - Mother’s early life factors,
  - Caring practices for children,
  - Sanitation,
  - Socioeconomic status.

7. Training component

Assessment of energy expenditure
- Theoretical assumptions, methods, data collection and data analysis of the Actiheart®,
- Hands-on experience using the Actiheart®.

Biocultural theory and application
- Basics of biological life history theory, parental investment, intergenerational effects hypothesis and biocultural interactions,
- Basic procedures to conduct health and nutritional status assessment.

Anthropological Research in Mexico
- The status of Ecological and Anthropological research in Mexico, Yucatan, Mexico,
- Ways of improving the quality of research via international collaborations, graduate courses and others.

Growth standards and references
- Differences between standards & references,
- Using z scores and percentiles,
- Interpreting growth data.

8. Impact of the training on the research
- A research project with a training component provides richer, more accurate and more abundant datasets,
- We only had funding to pay for 2 fieldwork assistants but we always had between 3 and 7 trained fieldworkers working at each time to gain experience,
- Most of the ethnographic data were collected by the participants of the training component,
- The training component was favourable to the funders,
- The training component helped to build good research collaborations between the UK and the Mexican-based research teams.