Butajira HDSS, Ethiopia

Figure 1. BRHP study area
Brief Introduction

The Butajira Rural Health Program was initiated in 1986 following a population census of randomly selected nine peasants association (rural communities) and one urban dwellers association (urban village) using the probability proportionate to size technique. The initial census was used to obtain the baseline population and to establish a system of demographic surveillance with continuous registration of vital and migratory events (birth, death, marriage, new household, out-migration, in-migration and internal move) at the household level. Initially data were collected every month. This was recently changed to be every three months. In addition, censuses were conducted every 3-5 years to update the baseline. Since 2003, this has been changed to annual housing, individual and family reconciliation.

The BRHP was established as a collaborative program between the then Department of Community Health (now School of Public Health), Faculty of Medicine, Addis Ababa University and the Division of Epidemiology, Department of Epidemiology and Public Health, Umea University (Sweden). The collaboration started as a doctoral-study project (Shamebo 1993). Later, it grew into a departmental collaboration and included the development of the study-base infrastructure and involvement of a multidisciplinary group of researchers. The original DSS population in 1987 was around 28 000 and grew over 23 years to about 70 000 individuals.

BRHP is located in one of the most densely populated parts of Ethiopia, Meskan, Mareko and Silti districts. The districts are part of the Southern Nations Nationalities and Peoples’ Region (SNNPR). The estimated size of the Districts is 797 km², of which Butajira town covers approximately 9 km². The districts lie at an average of 2100 m above sea level ranging from 1750 to 3400 meters above sea level, from 1750 m in lowlands to 3400 m in mountainous areas, which are sparsely inhabited. Annual rainfall ranges between 900 and 1,400 mm. The main rainy season is from June to September, with “small rains” common around March and April. The area has rich soil and farming is the main mode of living for the rural population and the staple food is Enset (false banana). Teff (a cereal staple), maize, millet, barley and legumes are the main crops. Pepper, coffee and khat (a mild stimulant drug) are also grown as cash crops.

Demographic Characteristics
Objectives

The overall objective of the Butajira Rural Health Program is to develop and evaluate a system for continuous registration of births and deaths, to generate valid data on fertility and mortality and to provide a population and study base for essential health research and intervention in the area.

Figure 2. Male and female population by age and sex Butajira HDSS, 2011
Priority Research Areas

- Adolescent and youth Reproductive health
- HIV/AIDS
- Women’s health and Domestic violence
- Child health
- Mortality patterns in different gender and age groups;
- Malaria Prediction
- Health Systems and Financing:
  - Epidemiology of Cardiovascular Disease Risk Factors
  - Mental Health studies
  - AIDS Mortality surveillance
  - Environmental health studies
  - Non-communicable diseases
  - Health service studies
  - Demographic studies including fertility, mortality and migration.
  - A verbal autopsy cause of death study

Completed Key Projects

Among others the following are projects completed in the site are:

- Mortality and Survival from Childhood to Old Age in Rural in Ethiopia
- Study of mechanisms and rate of spread of HIV from rural to urban areas
- Studies of mortality patterns in different gender and age groups
- Study of in-door air pollution and its association with respiratory tract infection in children
- Mental health studies
- Epidemiology of Cardiovascular Disease Risk Factors in Ethiopia
- Women’s health and domestic violence
- Transmission Patterns of Measles, Rubella and Hepatitis B viruses
- Adolescent and youth reproductive health
- Communicable and non-communicable diseases

Ongoing Key Projects

- The role of mHealth in improving maternity and family planning services (intervention studies)
- The epidemiology of Meningococcal carriage in five countries (African Meningitis Belt, Ethiopia)
• Multi-country Typhoid Fever Surveillance Program in Sub-Saharan Africa.
• Improving the situation of people with mental illness: the contribution of Butajira
• Climate change and food security: a follow-up study
• Ethiopian malaria prediction system
• Rapid appraisal techniques for research ethics
• Impact of maternal death on living children: mixed methods research

**Key Publications**

**PhD dissertations using Butajira HDSS Site: 1993-2012**

4. **Lingkvist P. (1999).** Risk factors for infection with Helicobacter pylori,. Huddinge University Hospital, Sweden, Karolinska Institute, Sweden.


Publications from Butajira Rural Health Program in reputable journals: 1987-2012 in Alphabetical Order


64. Martin Adjuik, Tom Smith, Sam Clark, Jim Todd, Anu Garrrib, Yohannes Kinfu, Katy Kahn, Mitike Molla and et al. Cause specific mortality in sub-Saharan Africa and Bangladesh. Bulletin of the WHO 2006: 84: 181-188


66. Mekonnen W and Worku A: Determinants of low family planning use and high unmet need in Butajira District, South Central Ethiopia. Reproductive Health 2011, 8:37


80. Peter Byass, Mesganaw Fantahun, Anders Emmeline, Mitike Molla Yemane Berhane, Spatio-temporal clustering of mortality in Butajira, Ethiopia, from1987 to 2008 INDEPTH mortality clustering supplement. COACTION. June, 2010


Masters of Public Health Theses work in Butajira Rural Health Program: 1987-2012


12. Girma A. Effect of polygamous marriage on the reproductive health and nutritional status of currently married women in Meskan and Mareko district
23. Tadesse A. Assessment of current sexual activity and risky sexual behavior for HIV/AIDS infection among Butajira High School students, Gurage Zone, SNNPR, Ethiopia, 2010
25. MPH Theses works in Butajira Rural Health Program: 1987-2012
36. MPH Theses works in Butajira Rural Health Program: 1987-2012


Pictures

Picture 1. Households in Wurib, one of the rural villages of BRHP

Picture 2. Field visit by workshop participants during community sensitization and dissemination day March, 2013.
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