

Butajira HDSS, Ethiopia

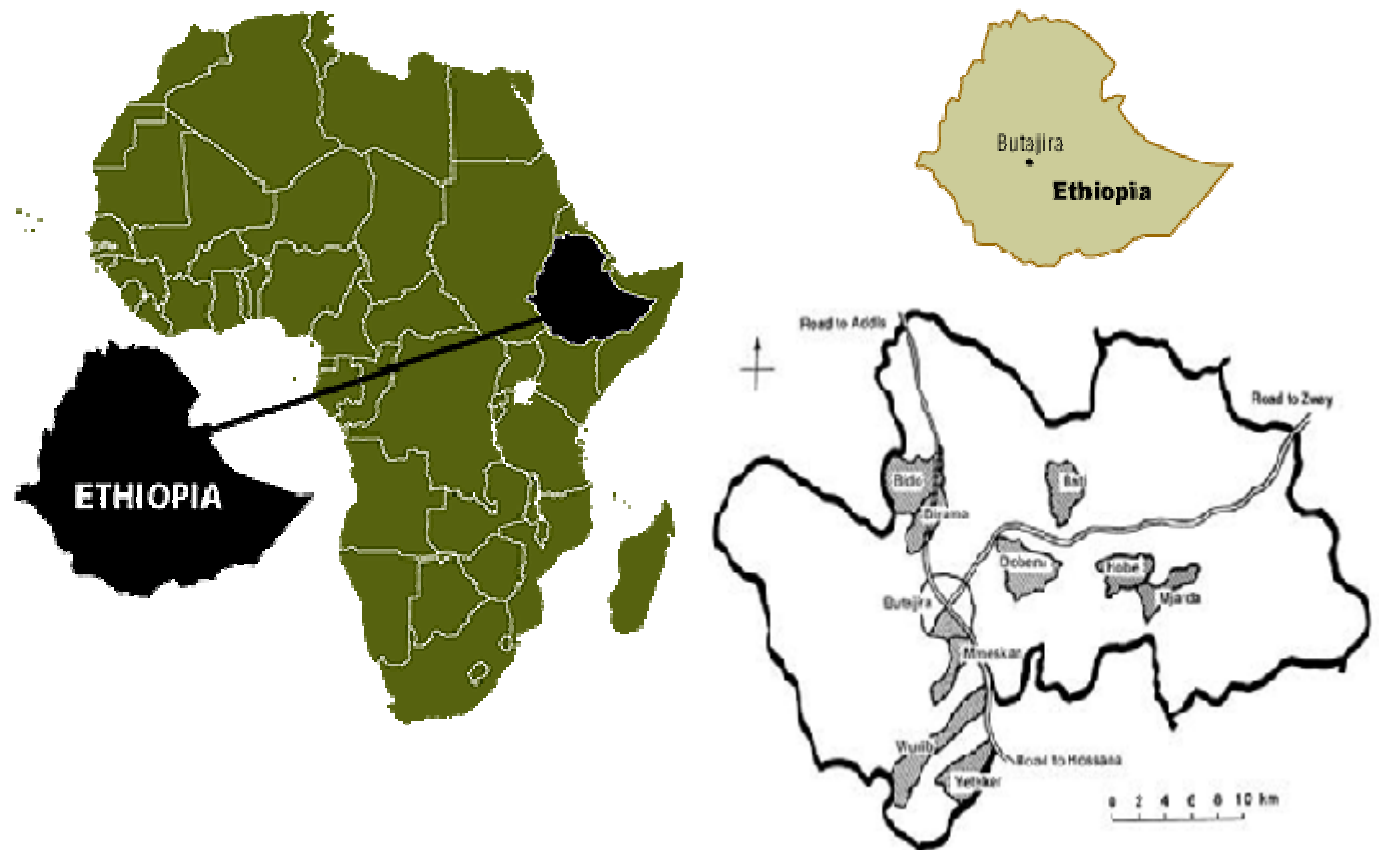


Figure 1. BRHP study area

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

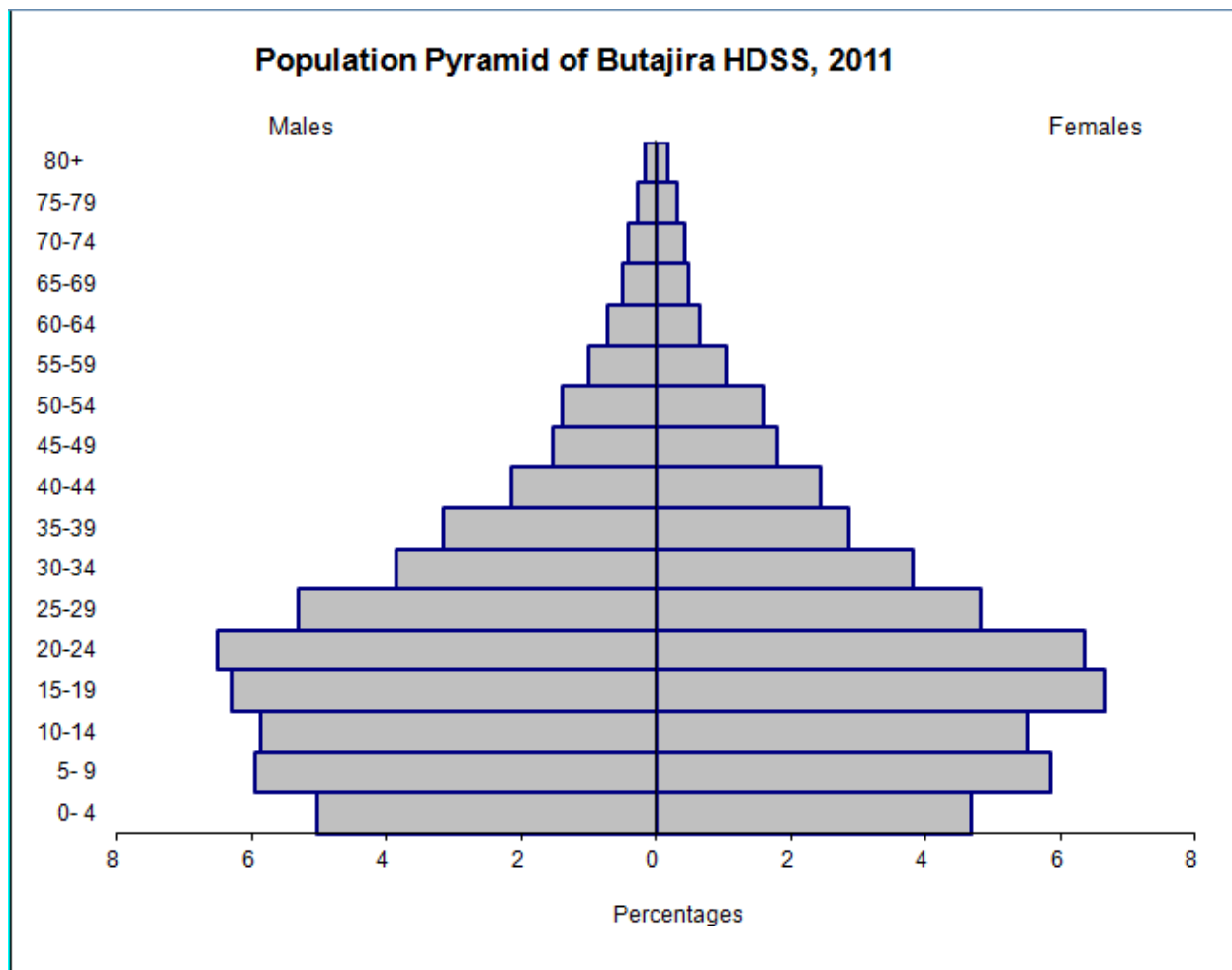


Figure 2. Male and female population by age and sex Butajira HDSS, 2011

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.

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-Sahara 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

1. **Shamebo D. (1993).** Epidemiology for public health research and action in a developing country: the Butajira Rural Health Project in Ethiopia. Umea University Medical Dissertation New Series No 360.
2. **Muhe L. (1994).** Child health and acute respiratory infections in Ethiopia: epidemiology for prevention and control. Umea University Medical Dissertation New Series No 420.
3. **Alem A. (1997).** Mental health in rural Ethiopia: Studies on mental distress, suicidal behaviour and use of khat and alcohol. Umea University Medical Dissertation New Series No 332.
4. **Lingkvist P. (1999).** Risk factors for infection with *Helicobacter pylori*. Huddinge University Hospital, Sweden, Karolinska Institute, Sweden.
5. **Berhane Y. (2000).** Women health and reproductive outcome in rural Ethiopia. Umea University Medical Dissertation New Series No 674.
6. **Andersson T. (2000).** Survival of mothers and their offspring in 19th century Sweden and contemporary rural Ethiopia. Umea University Medical Dissertation New Series No 684.
7. **Shibre K. (2002).** Community based studies on Schizophrenia in rural Ethiopia. Umea University Medical Dissertation New Series No 802.
8. **Deressa W. (2007).** Malaria in rural Ethiopia: household response, economic and demographic impacts. School of Public Health, Addis Ababa University.
9. **Zergaw A. (2008).** Economic Burden of Schizophrenia and Bipolar Disorders. School of Public Health, Addis Ababa University.
10. **Tesfaye F. (2008).** Epidemiology of cardio-vascular disease risk factors in Ethiopia: the rural-urban gradient. Umea University Medical Dissertation New Series No 1151.
11. **Fottrel EF. (2008).** Dying to count: Mortality surveillance methods in resource-poor settings. Umea University Medical Dissertation New Series No 1152.
12. **Fantahun M. (2008).** Mortality and survival from childhood to old age in rural Ethiopia. Umea University Medical Dissertation New Series No 1153.
13. **Zergaw A. (2008).** Economic Burden of Schizophrenia and Bipolar Disorders in Ethiopia. School of Public Health, Addis Ababa University

14. **Emmelin A. (2009).** Counted – then? Trends in child mortality within Ethiopian demographic surveillance site. Umea University Medical Dissertation New Series No 1256.
15. **Kumie A. (2009).** Air Pollution in Ethiopia: Indoor air pollution in a rural Butajira and Traffic Air Pollution in Addis Ababa. School of Public Health, Addis Ababa University.
16. **Negash A. (2009).** Bipolar disorder in rural Ethiopia. A community-based studies in Butajira for screening, epidemiology, follow-up, and the burden of care. Umea University, Sweden
17. **Molla M. (2009).** Preventing HIV among Young People. A Community based study from Butajira on traditional norms, sexual health and HIV associate deaths. University of Bergen, Norway.
18. **Deyessa N. (2010).** Intimate partner violence and depression among women in rural Ethiopia.
19. **Mekonnen W. (2012).** The interrelationship between Population Dynamics and Childhood Mortality. School of Public Health, Addis Ababa University.

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

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2. Abebe A, Mitikie G. 2009. Perception of High School Students towards Voluntary HIV Counseling and Testing, using Health Belief Model in Butajira, SNNPR. *Ethiop J Health Dev* 23(2):148-153.
3. Alem A, Jacobsson L, Araya M, Kebede D, Kullgren G. 1999a. How are mental disorders seen and where is help sought in a rural Ethiopian community? A key informant study in Butajira, Ethiopia. *Acta Psychiatr Scand Suppl* 397:40-7.
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Masters of Public Health Theses work in Butajira Rural Health Program: 1987-2012

1. **Abebe S.** A utilization of trained Traditional Birth Attendants in three farmers' association in Haikoch and Butajira Awraja. **Master's thesis in Public Health, Addis Ababa University, 1986.**
2. **Bekele A.** Magnitude and determinants of bottle feeding practices in Butajira, Ethiopia.. Master's thesis in Public Health, Addis Ababa University, **1995.**
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4. **Gedif T.** Self medication and its determinants in Butajira, Ethiopia. Master's thesis in Public Health, Addis Ababa University, **1995.**
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6. **Abicho T.** Magnitude, pattern and differentials of internal migration. **Master's thesis in Public Health, Addis Ababa University, 1996.**
7. **Awais M.** Prevalence of major mental disorders. **Master's thesis in Public Health, Addis Ababa University, 1997.**
8. **WoldeMichael K.** Perinatal mortality in Butajira. **Master's thesis in Public Health, Addis Ababa University, 1997.**
9. **Gossaye Y.** Health and socio-cultural problems of women in rural Butajira. **Master's thesis in Public Health, Addis Ababa University, 1998.**
10. **Ashenafi Y.** Mental and behavioral disorders among children in Butajira. **Master's thesis in Public Health, Addis Ababa University, 1998.**
11. **Fitaw Y.** Differential of fertility in rural Butajira, Ethiopia. **Master's thesis in Public Health, Addis Ababa University, 2001.**
12. **Girma A.** Effect of polygamous marriage on the reproductive health and nutritional status of currently married women in Meskan and Mareko district

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 14. **Lijalem M.** Assessment of nutritional status of people with major mental disorders and their controls, in Meskan and Mareko District (Butajira), Ethiopia. **Master's thesis in Public Health, Addis Ababa University, 2002.**
 15. **Aliym J.** Assessment of equity in provision and utilization of public health programs in Butajira, Southern Ethiopia **Master's thesis in Public Health, Addis Ababa University, 2005.**
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 17. **Abebe A.** Perception of High School Students towards Voluntary HIV counseling and Testing, Using Health Belief Model in Butajira, SNNPR. **Master's thesis in Public Health, Addis Ababa University, 2006.**
 18. **Kifle A.** Retrospective cohort study in the determinates of child mortality in Butajira Demographic and Surveillance sites. **Master's thesis in Public Health, Addis Ababa University, 2006.**
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 20. **Denboba W.** Validation of the IUATLD bronchial symptoms questionnaire in Butajira, Ethiopia. **Master's thesis in Public Health, Addis Ababa University, 2007.**
 21. **Akalu T.** Economic Burden of health care at household level: examination of out-of-pocket expenditure on sexual & reproductive health care including HIV/AIDS in Butajira District. **Master's thesis in Public Health, Addis Ababa University, 2008.**
 22. **Abdi T.** Assessment of the prevalence and factors influencing the utilization of long acting and permanent contraceptive method in butajira town, Gurage zone SNNPR Ethiopia. **Master's thesis in Public Health, Addis Ababa University, 2009.**
 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**
 24. **Muluken G.** Trends in Neonatal Mortality and Assessment of Associated risk factors in Burajira District, South Central Ethiopia (1987-2008), **2012**
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47. **Wako G.** Quality of reproductive health services with emphasis on structural aspects in Soutj Ethiopia. **Master's thesis in Public Health, Addis Ababa University, 1998.**
48. **Abdulahi H.** Burden of disease in Butajira Southjer Ethiopia. **Master's thesis in Public Health, Addis Ababa University, 1998.**
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51. **Negusse S.** The effect of maternal work on nutritional status of mothers and children. **Master's thesis in Public Health, Addis Ababa University, 1999.**
52. **Deressa W.** Self treatment of malaria in rural communities, Mezzanine Mareko Wereda. **Master's thesis in Public Health, Addis Ababa University, 1999.**
53. **Zergaw A.** Cost-effectiveness analysis of health care interventions in rural Ethiopia. **Master's thesis in Public Health, Addis Ababa University, 2000.**
54. **Worku S.** Sero epidemiological survey on HIV and syphilis among antenatal care attendants and general population in Mezzanine Mareko Wereda, SNNPR, Ethiopia.. **Master's thesis in Public Health, Addis Ababa University, 2000.**
55. **Kidist L.** Determinants and causes of adult mortality in Butajira.. Master's thesis in Public Health, Addis Ababa University, **2000.**
56. **Umeta T.** Comparative study on determinants of modern contraceptive utilization among women of reproductive age group in rural Ethiopia. **Master's thesis in Public Health, Addis Ababa University, 2001.**

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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