

Abstract

The objectives of this study are to provide a comprehensive assessment of *inequalities in infant and under-five years' child survival, access to and utilisations of child health services* among different socio-economic groups in Ethiopia; and identify issues for policies and programmes at national and sub-national levels. This thesis examines the effect of parental socioeconomic status, maternal and delivery care services, mothers' bio-demographic and background characteristics on the level of differences in *infant and under-five years' child survival and access to and utilisation of child health services*. Descriptive and multivariate analyses were carried out for selected variables in the literature which were considered as the major determinants of infant mortality rate (IMR) and under-five years' child mortality rate (U5MR); access to and utilisations of child health services based on data from Ethiopian demographic and health survey (EDHS), covering the years 2000-2005. In the multivariate analysis a logit regression model was used to estimate *inequalities in infant and under-five years' child survival, and inequalities in access to and utilisation of child health services*. In Ethiopia, little was known about *inequalities in IMR and U5MR, and inequalities in access to and utilisation of child health services*. Besides, there is no systematic analysis of health inequalities and into its determinants using logistic regression. According to the available literature, this is the first comprehensive and systematic analysis of inequality of health in Ethiopia.

The findings show that compared to under-five years' children of mothers' partners' with no work, mothers' partners' in professional, technical and managerial occupations had 13 times more chance of under-five years' child survival for 2000 weighted observations. In addition, compared to infants of mothers who were gave birth to one child in last 5 years preceding the survey, infants of mothers who were gave birth to 2 children in last 5 years preceding the survey had 70% less chance of infant survival while infants of mothers who were gave birth to 3 or more children had 89% less chance of infant survival for 2000 weighted observations. Moreover, this study finding also indicates that inequalities increased significantly in the five years period between 2000 and 2005 among mothers with different birth interval. Most of the relations between birth interval and receiving childhood immunisation for vaccine-preventable diseases were statistically significant. Moreover compared to non-educated mothers, mothers who completed secondary and higher education were nearly 10 times more likely to receive DPT3 immunisation for their young children.

This study concludes that policy measures that tackle health inequalities will have a positive impact in the implementation of health sector strategy of Ethiopia. Health inequalities studies in Ethiopia and Sub-Saharan Africa (SSA) countries should focus on systematic analysis of different socio-economic groups. The finding of this study support investing in the Ethiopia's health extension package (HEP) is a necessary but not sufficient condition for addressing rural poor health problem. HEP is successful in increasing primary health care coverage in rural Ethiopia to 89.6% (FMOH, 2009) but unable to reduce Ethiopia's higher level of IMR and U5MR. HEP is one of the success stories that address the rural poor health problem and can also be adapted to developing countries of SSA. The finding also shows that the success stories such as health insurance programs like Rwanda (World Bank, 2008a) and Ethiopia (FMOH, 2009/10) will play a key role in achieving country's health care financing goal of universal coverage. This can also be replicated in the developing SSA countries.

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Abbreviations and Acronyms

AAU	Addis Ababa University
AEPHCC	Accelerated Expansion of Primary Health Care Coverage
AFR	Africa (WHO Africa Region)
ACC/SCN	Administration Committee on Coordination-Sub-Committee on Nutrition
AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
AOR	Adjusted Odd Ratio
ARI	Acute Respiratory Infection
BCG	Bacille Calmette-Guérin
BMI	Body Mass Index
CBHI	Community Based Health Insurances
CED	Chronic Energy Deficiency
CI	Confidence Interval
CMH	Commission on Macroeconomics and Health
CMR	Child Mortality Rate
CSAE	Centre for the Study of African Economies
CSA	Central Statistics Agency
DAC	Development Assistance Committee
DALY	Disability Adjusted Life Years
DFID	Department for International Development
DHS	Demographic and Health Survey
DHSS	Department Health and Social Security
DLY	Discounted Life Years
DOTS	Directly Observed Treatment Short Course
DPT3	Diphtheria Pertusses and Tetanus (3 doses vaccination)
DTP	Diphtheria Tetanus Pertusses Vaccines
EA	Enumeration Areas
EC	European Commission
ECuity	Health Equity Project consist of EU countries, Norway, Switzerland and US
EDHS	Ethiopian Demography and Health Survey
EFY	Ethiopia's Fiscal Year (1990 corresponds with 97/98)
EHNRI	Ethiopia Health and Nutrition Research Institute
ENN	Early Neonatal
EPI	Expanded Program of Immunization
EquiLAC	Equity in Health Project in Latin America and Caribbean
Equinet	Regional Network on Equity in Health in Southern Africa
Equitap	Equity in Asia-Pacific Health Systems
ERHS	Ethiopian Rural Household Survey
ESRDF	Ethiopia Social Rehabilitation and Development Fund
ETB	Ethiopian Birr
EU	European Union
FDRE	Federal Democratic Republic of Ethiopia
FMOH	Federal Ministry of Health
FP	Family Planning

FSU	Former Soviet Union
FUNSAALUD	Fundación Mexicana para la Salud (Mexican Health Foundation)
GAVI	Global Alliance for Vaccines and Immunization
GC	Gregorian Calendar
GDP	Gross Domestic Product
GNI	Gross National Income
GOE	Government of Ethiopia
GP	General Practitioner (Medical Doctor)
GPER	Gross Primary Enrolment Ratio
HC	Health Centre
HCF	Health Care Finance
HDI	Human Development Index
HDR	Human Development Report
HEF	Health Equity Funds
HEP	Health Extension Package
HESP	Health Extension Service Package
HEW	Health Extension Worker
HF	Health Facility
HICE	Household Income Consumption Expenditure
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HNP	Health, Nutrition and Population
HP	Health Post
HPI	Human Poverty Index
HSDP	Health Sector Development Program
HS	Health Station
HSR	Health Sector Reform
ICDDR	International Centre for Diarrheal Disease Research
IEC	Information, Education and Communication
IMNCI	Integrated Management of Neonatal and Childhood Illnesses
IMR	Infant Mortality Rate
LAC	Latin America and Caribbean
LBW	Low Birth Weight
LDC	Low Developed Countries
LSMS	Living Standards Measurement Survey
MCH	Maternal and Child Health
MDGs	Millennium Development Goals
M&E	Monitoring and Evaluation
MHSM	Millennium Hygiene and Sanitation Movement
MICS	Multiple Indicator Cluster Surveys
MMR	Maternal Mortality Rate
MOFED	Ministry of Finance and Economic Development
MOH	Ministry of Health
MPI	Multi-dimensional Poverty
MTR	Mid Term Review
NCU	National Currency Unit
NGO	Non Government Organization
NHA	National Health Accounts
NHE	National Health Expenditure
NHS	National Health System

NN	Neonatal
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary Least Squares
OOP	Out of Pocket
OPD	Outpatient Department
OR	Odd Ratio
ORS	Oral Rehydration Syrup
ORT	Oral Rehydration Therapy
PA	Peasant Association
PER	Public Expenditure Review
PEM	Protein-Energy Malnutrition
PBS	Protection of Basic Services
PASDEP	Plan for Accelerated and Sustained Development to End Poverty
PHC	Primary Health Care
PHCU	Primary Health Care Unit
PHRD	Policy and Human Resource Development
PHS	Potential Health Service
PNN	Post Neonatal
PPP	Purchasing Power Parity
PRB	Population Reference Bureau
PROGRESA	Health, Nutrition and Education Program (Spanish Acronym)
PRSP	Poverty Reduction Strategy Paper
R&D	Research and Development
RED	Reaching Every District
RHB	Regional Health Bureau
RHF	Recommended Home Fluids
RPP	Reaching the Poor Program
SAMPERR	Sampling Error Module
SC-UK	Save the Children UK
SEA	South East Asia
SES	Socio-economic Status
SHI	Social Health Insurance
SHIR	Subsidized Health Insurance Regime
SNNPR	Southern Nations, Nationalities and Peoples Region
SP	Serguro Popular
SPSS	Statistical Package for Social Science
SSA	Sub-Saharan Africa
SWAp	Sector Wide Approach
TB	Tuberculosis
TGE	Transitional Government of Ethiopia
THE	Total Health Expenditure
TBA	Traditional Birth Attendant
TT2	Tetanus Toxoid (2 doses vaccination)
TV	Television
UK	United Kingdom
U5MR	Under 5 Years Old Children Mortality Rate
UMI	Upper Middle Income
UN	United Nations
UNAIDS	Joint UN Programme on HIV/AIDS

UNDP	United Nations Development Programme
UNHCR	United Nations High Commission for Refugees
UNICEF	United Nation Children Funds
USAID	United States Agency for International Development
US	United States
USSR	Union of Soviet Socialist Republic
WDR	World Development Report
WMS	Welfare Monitoring System
WHO	World Health Organization
WHS	World Health Survey
WorHO	Woreda Health Offices

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