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Socioeconomic determinants of infant mortality in Kenya

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DECLARATION

The present work entitled, **"Socioeconomic Determinants of Infant Mortality in Kenya"** has been carried out entirely by me under the guidance of Professor Clifford Odimegwu, is being submitted to the University of the Witwatersrand, Johannesburg for the degree of Master of Science (Med) in Epidemiology and Biostatistics for the 2006 academic Year.

I, hereby, declare that this work is an original one and has not been submitted earlier to any other University/ Institute for any other degree.

Date

Hisham Elmahdi Mustafa

DEDICATION

This work is honorably dedicated to all Third World children and their faithful mothers.

Hisham Elmahdi Mustafa

May 2007

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
AOR	Adjusted Odds Ratio
CBS	Central Bureau of Statistics
CDC	Centers for Disease Control and Prevention
DFID	Department for International Development
DHS	Demographic and Health Survey
DSS	Demographic Surveillance System
FWI	Family Welfare Index
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Virus
IMR	Infant Mortality Rate
JICA	Japan International Cooperation Agency
KDHS	Kenya Demographic and Health Survey
LSMS	Living Standard Measurement Survey
MDG	Millennium Development Goals
NCPD	National Council for Population and Development
NPPSD	National Population Policy for Sustainable Development
SPSS	Statistical Package for Social Scientists
STI	Sexually Transmitted Diseases
TT	Tetanus Toxoid
UN	United Nations
Un-OR	Unadjusted Odds Ratio
UNDP	United Nations Development Program
UNFPA	United Nations Population Fund
UNICEF	United Nation International Children's Emergency Fund
USAID	United States Agency for International Development
WFS	World Fertility Surveys

ABSTRACT

Background: This study examines the socioeconomic factors associated with infant and postneonatal mortality in Kenya and tries to quantify these associations in order to put those factors in ranked order so as to prioritize them in health policy plans aiming to decrease infant and postneonatal mortality. The study has used wealth index, mother's highest educational level, mother's occupation and place of residence as exposures of interest. **Methods**: The study uses analytical cross-sectional design through secondary data analysis of the 2003 Kenyan Demographic and Health Survey (KDHS) dataset for children. Series of logistic regression models were fitted to select the significant factors both in urban and rural areas and for infant and postneonatal mortality, separately, through the use of backward stepwise technique. Then the magnitude of the significance for each variable was tested using the Wald's test, and hence the factors were ranked ordered according to their overall P-value. **Results**: After excluding non-singleton births and children born less than one year before the survey, a sample size of 4 495 live births was analyzed with 458 infants died before the first year of life giving IMR of 79.6 deaths per 1000 live births. After adjusting for all biodemographic and other health outcome determining factors, the analyses show no significant association between socioeconomic factors and infant mortality in both urban and rural Kenya. The exclusion of deaths that occurred in the first month of ages shows that risk of postneonatal (OR 3.09; CI: 1.29 – 7.42) mortality, in urban Kenya, were significantly higher for women working in agricultural sector than nonworking women. While in rural Kenya, the risk of postneonatal (OR 0.42; CI: 0.20 – 0.90) mortality were significantly lower for mothers

with secondary school level of education than mothers with no education. **Conclusions**: There is lack of socioeconomic differentials in infant mortality in both urban and rural Kenya. However, breastfeeding, ethnicity and gender of the child in urban areas on one hand and breastfeeding, ethnicity and fertility factors on the other hand are the main predictors of mortality in this age group. Furthermore, results for postneonatal mortality show that level of maternal education is the single most important socioeconomic determinant of postneonatal mortality in urban Kenya while mother's occupation is the single most important socioeconomic determinant of postneonatal mortality in rural areas. Other determinants of postneonatal mortality are ethnicity and gender of the child in urban areas, while in rural areas; the other main predictors are ethnicity, breast feeding and fertility factors.