

20

DHS COMPARATIVE STUDIES

Infant and Child Mortality



**DEMOGRAPHIC
AND HEALTH
SURVEYS**

The Demographic and Health Surveys (DHS) is a 13-year project to assist government and private agencies in developing countries to conduct national sample surveys on population and maternal and child health. Funded primarily by the United States Agency for International Development (USAID), DHS is administered by Macro International Inc. in Calverton, Maryland.

The main objectives of the DHS program are (1) to promote widespread dissemination and utilization of DHS data among policymakers, (2) to expand the international population and health database, (3) to advance survey methodology, and (4) to develop in participating countries the skills and resources necessary to conduct high-quality demographic and health surveys.

For information about the Demographic and Health Surveys program, write to DHS, Macro International Inc., 11785 Beltsville Drive, Suite 300, Calverton, MD 20705, U.S.A. (Telephone 301-572-0200; Telefax 301-572-0999).

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**Demographic and Health Surveys
Comparative Studies No. 20**

**Infant and Child
Mortality**

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Preface

One of the most significant contributions of the DHS program is the creation of an internationally comparable body of data on the demographic and health characteristics of populations in developing countries. The *DHS Comparative Studies* series and the *DHS Analytical Reports* series examine these data across countries in a comparative framework, focusing on specific topics.

The objectives of DHS comparative research are: to describe similarities and differences between countries and regions, to highlight subgroups with specific needs, to provide information for policy formulation at the international level, and to examine individual country results in an international context. While the *Comparative Studies* series is primarily descriptive, *Analytical Reports* utilizes a more analytical approach.

The comparative analysis of DHS data is carried out primarily by staff at the DHS headquarters in Calverton, Maryland. The topics covered are selected by staff in conjunction with the DHS Scientific Advisory Committee and USAID.

Reports in the *Comparative Studies* series are based on a variable number of data sets reflecting the number of countries for which data were available at the time the report was prepared. Each report provides detailed tables and graphs for countries in: sub-Saharan Africa, Asia, the Near East and North Africa, and Latin America and the Caribbean. Survey-related issues such as questionnaire comparability, survey procedures, data quality, and methodology are included in the reports. Where appropriate, data from previous DHS surveys are used to evaluate trends over time.

Some *Comparative Studies* reports published under the current phase of the DHS program (DHS-III) are updates and expansions of reports published earlier in the series. Other reports cover new topics that reflect the expanded scope of the DHS program.

It is anticipated that the availability of comparable information for a large number of developing countries will have long-term usefulness for analysts and policymakers in the fields of international population and health.

Martin Vaessen
Project Director

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Executive Summary

Levels, Trends, and Differentials in Childhood Mortality

The aim of this report is to assist in the formulation of child health policy and the evaluation of programs intended to improve the well-being and survival prospects of young children. The report is comparative in nature; levels, trends, and differentials in childhood mortality are presented using DHS data collected in 20 countries over the period 1990-1994. Included are 12 countries in sub-Saharan Africa, five in Asia, the Near East and North Africa, and three in Latin America and the Caribbean.

The results indicate wide disparity in the degree of recent improvement in child survival prospects. In sub-Saharan Africa, most countries have shown declines in under-five mortality. However, in all but three of these countries the declines have been modest—less than 25 percent decline in the 10-year period preceding the survey—and in five countries the declines have been 10 percent or less. In Zambia, under-five mortality has risen by 26 percent over the reference period. In Niger, little change has occurred to improve child survival, and under-five mortality still exceeds 300 deaths per 1,000 live births—i.e., nearly 1 in 3 children dies before reaching the fifth birthday.

For the countries outside sub-Saharan Africa, the picture is *more encouraging*. With the exception of Pakistan, recent declines in under-five mortality have been greater than 25 percent and, using the most recent estimates, less than 1 in 10 children dies before the fifth birthday (under-five mortality of less than 100 per 1,000 live births). The examples of Colombia, Turkey, and Morocco illustrate particularly dramatic declines of 40 percent or more in the 10-year period before the survey. In Colombia, under-five mortality now stands at 23 deaths per 1,000. This compares with 12 per 1,000 in the United States and 318 per 1,000 in Niger. In Pakistan, the pace of decline is slower (15 percent) and under-five mortality still exceeds 100 per 1,000.

In many countries of sub-Saharan Africa, especially those in the western part of the region, under-five mortality remains high due in large part to high rates of mortality during ages 1-4 years (i.e., after infancy). These findings, which are consistent with previous studies, signal the need for more structured investigation into the underlying causes of poor survival during these ages in this part of the world. The report discusses potentially fruitful areas of research. Also, these results argue for the development of a new set of mortality schedules that will encompass the West African experience.

In countries that have experienced rapid mortality decline (to currently low levels), further improvements in child survival will

require improving neonatal and early infant survival through programs to ameliorate problems of adverse pregnancy outcome and poor maternal health and nutrition.

Differentials in Childhood Mortality

This report documents substantial variations in mortality risk across socioeconomic and demographic segments of national populations. While considerable differences exist between countries in the level of excess risk associated with particular characteristics of individuals and households, some generalizations can be made that may be helpful for policy formulation and evaluation. Perhaps the most important of these concerns the relationship between the pace and age pattern of childbearing and child survival. Short birth intervals (less than 24 months) and teenage childbearing (before age 20) are the demographic factors most likely to heighten mortality risk during childhood. The excess risk associated with short interval length (compared with intervals of 24 to 47 months) is substantial, averaging 116 percent (all countries) during the neonatal period, 67 percent during the postneonatal period (1-11 months), and 32 percent during ages 1-4 years. These results underscore the potential for improvement of child health and survival through programs that enhance the choices available to couples to limit or space their children more appropriately.

Mortality differentials are also presented according to residence, migration, parental education and literacy, and father's occupation. As in previous studies, this report documents the "urban advantage" in child survival. Rural children are twice as likely, on average, as their urban counterparts to die in the first five years of life. However, there are differences within the urban setting: poorer urban households and those that recently migrated from rural areas are more likely to report childhood deaths and to exhibit mortality rates approaching those observed in rural areas. Mother's education is shown to be a key factor related to mortality risk during childhood. Death before age five is, on average, more than twice as common among children whose mothers did not complete primary school as among those whose mothers attended secondary school. The strength of the association between any particular socioeconomic indicator and survival chances varies widely by age period. Generally, the "protective" effect of better socioeconomic standing tends to increase in strength with increasing age of the child. However, the strength and age pattern of the socioeconomic-mortality association varies among countries, suggesting that the distribution of health and social services in a particular context may influence how effectively individual assets (i.e., education or employment) can be converted to behaviors that enhance child survival.

