

Nutrition and Population

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POPULATION

During the second half of the 20th century, the world population experienced demographic changes at an unprecedented pace. According to United Nations estimates, the world's population was 2.521 billion in 1950 and 6.055 billion by mid-2000. This represents a mean annualized growth rate of 1.75 percent per year, and 2.09 percent per year for developing regions. At the same time, average life expectancy at birth worldwide increased by 9.5 years in just 15 years (from 46.5 years in 1950-55 to 56.0 years in 1965-70), and in developing regions by 11.3 years (from 40.9 years to 52.2 years), almost certainly the fastest pace in human history. The latest birth data suggest that the world's population will likely peak at about 8 billion people in 2030 and then move on a downward trend for the rest of the century (Figure 1).

Programs that seek to slow population growth and improve the quality of life under conditions of rising populations will be most successful if they take into account the many links between demographic changes and nutrition.

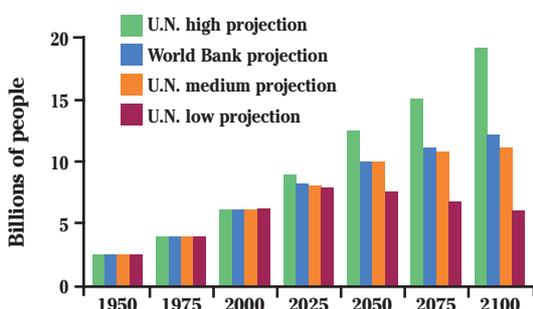
The Links between Nutrition and Demographic Change

Nutrition and population changes are intimately linked in several ways. First, a population's ability to nourish itself is a major factor in fertility and mortality rates. Maternal nutritional status affects fecundity, and hence fertility. This relationship has been observed during famines, when birth rates drop markedly.

In addition, good nutrition reduces maternal, neonatal, and child mortality. Improved child survival helps slow population growth by increasing birth intervals and reducing the demand for large families. A situation of fewer pregnancies, in turn, reduces the risk of maternal death.

Well-nourished mothers are more likely to survive childbirth themselves and to deliver healthy babies for several reasons. The prevention of stunting among girls allows them to reach their full growth potential, including that of the pelvic girdle, and helps reduce the risk of

FIGURE 1: WORLD POPULATION PROJECTIONS, 1950–2100



Source: UNICEF, *State of the world's children 2000* (New York, 2000).

POPULATION

both obstetrical complications and low birth weight. Micronutrient programs reduce maternal mortality by as much as 44 percent via reductions in hemorrhage, sepsis, anemia, and eclampsia. Adequate maternal folate and iodine status are known to reduce birth defects, fetal brain damage, and the risk of stillbirth.

After birth, infants that receive good nutrition face better chances of survival. Severely malnourished children are 8 times more likely to die than their well-nourished counterparts, and bottle-fed babies are 14 times more likely to die than those that are breast-fed. Vitamin A programs have been demonstrated to reduce mortality rates of children under five years of age in both Africa and Asia.

Breast-feeding, especially when exclusive for about six months after birth, is not only important for infant nutrition but also for reducing fertility. Lactation amenorrhea is the process whereby breast-feeding suppresses the hormone necessary for fertility. This method of family planning provides protection comparable to other methods (98 percent effective with typical use), up to 0.5 couple-years of protection. In addition, breast-feeding stimulates contraction of the uterus after birth, reducing the risk of complications associated with delivery.

Not only does nutrition affect population growth and reproductive health, but population and demographic changes also have an influence on people's nutritional status. Rising population, for instance, threatens food availability in many developing countries, especially those in which populations are expected to double in the next 20 to 25 years.

Population growth is sure to go hand in hand with increased urbanization. By 2020 populations in urban areas of developing countries, where malnutrition is commonplace, may double to reach 3.4 billion. In many poor and congested urban areas, diarrheal diseases and undernutrition are frequent because of poor food hygiene, inadequate water supplies and waste disposal, poor housing, and the declining prevalence and duration of breast-feeding and the corresponding increase in bottle-feeding.

Other demographic changes also affect people's quality of life and nutritional status. For instance, the number of people over 65 years of age has increased substantially in most countries. According to estimates, about 60 percent of the world's population over the age of 65 lives in developing countries. This situation has a significant impact on the types of health and social services people demand. The health sector must cope with the increased incidence of noncommunicable diseases that occur with aging. And the transition to highly processed market foods coupled with reduced physical activity compounds the effects of age, with the result that obesity now affects 250 million individuals worldwide and cancer, diabetes, and coronary heart disease are becoming more common in developing countries.

Nutrition Components in Population Programs

Many population policies address high fertility levels through family planning programs designed to reduce the number of births per woman and to increase the intervals between pregnancies. They also work to reduce maternal mortality and ensure healthy pregnancy outcomes. These commitments are outlined in the Program of Action of the International Conference on Population and Development (ICDP), adopted by the signatory countries of this conference (see Box 1).

Programs designed to slow population growth and achieve better health status should include not only actions to promote maternal health and safe delivery of infants, but also actions encouraging immunizations,

Box 1
ICPD PROGRAM OF ACTION, PARAGRAPH 7.2

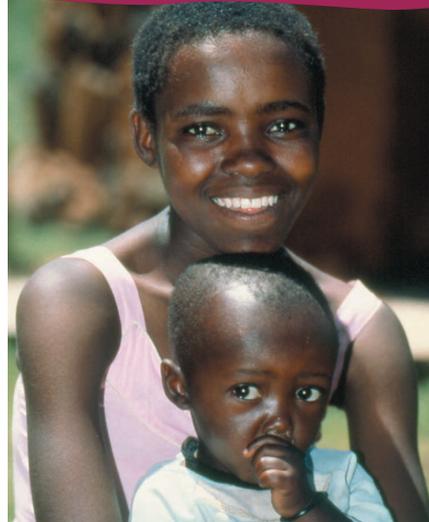
Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capacity to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last condition are the right of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice for regulation of fertility which are not against the law, and the right of access to appropriate health care services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant.

breast-feeding, healthy complementary feeding of infants and young children, consumption of micronutrients, and household education to improve caregiving practices.

Conclusions

Universal access to basic social services, including nutrition-related services, is a “social absorber” that smoothes the transition from poverty to a more developed status. Countries that have invested in basic social services have achieved increased success in reducing poverty and increasing human development.

Nutrition actions can not only help ensure that rapid increases in population, life span, and urbanization are accompanied by improved quality of life and economic development, but also help slow population growth by lowering fertility rates. The development of sustainable rural and urban food systems can help ensure that growing populations are fed and environments are conserved. Micronutrient programs and breast-feeding promotion can lead to healthy, well-spaced pregnancies and can reduce mortality. Nutrition communications can help reverse trends toward obesity and increased rates of cancer, diabetes, and coronary heart disease occurring in developing countries. By increasing the level of physical



and mental effort a person is able to exert, nutrition programs can also yield increased wage returns up to \$84 per dollar invested. All these programs enhance human capital, improving the capacity of populations to develop to their full potential.

Suggested Reading

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