

Population Association of America/ Association of Population Centers

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The National Institutes of Health: Investing in Population Sciences to Improve Health

What is demographic, or population, research?

Demography is the study of populations and how or why they change. Population scientists, including demographers, sociologists, economists, and statisticians, collect and analyze data on trends in births, deaths, family formation and separation; patterns of migration; health and disability; and racial, ethnic, and socioeconomic diversity in populations. Major policy issues that researchers from the field focus on include:

- » **Population Aging**
Understanding the consequences of population aging is essential to monitoring and maintaining the health and productivity of our population.
- » **Fertility, Marriage, and Children's Health**
Studying fertility and family trends provides key insights into the long-term health and development of children.
- » **Immigration and Migration**
Analyzing how migration from other countries affects the diversity, health, and well-being of our population informs policy-making on immigration. Analyzing migration within the United States in response to natural disasters and local economic conditions helps federal, state, and local policymakers plan for the future.
- » **Population Health**
Understanding how and why health, disease, and disability differ across demographic groups and regions of the country provides critical information for improving health of all U.S. citizens.

Why does NIH support demographic or population research?

A central component of the NIH mission is "to seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce the burdens of illness and disability."

The health of our population is fundamentally intertwined with the demography of our population. Recognizing the connection between health and demography, the NIH supports population research programs primarily through the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD) and the National Institute on Aging (NIA).

Demographic or population research provides the scientific tools for understanding the relationships between "macro" factors, such as changing family dynamics, population diversity, marriage, community, migration, and economic resources, and the health and wellbeing of people. Further, demographic or population research identifies the conditions that produce poor health and unhealthy behaviors. The methods, experience, and empirical rigor of demographic or population research are necessary to identify and understand the complex and interdependent causal processes affecting health behaviors and the health status of our population. This basic research mission belongs at the NIH because the NIH is the federal agency with the statutory mission for funding basic health research.



Examples of recent NIH-funded demographic research advances

U.S. Unintended Pregnancy Rate Falls to 30-Year Low; Declines Seen, But Disparities Remain

In March 2016, researchers from the Guttmacher Institute published a paper in the *New England Journal of Medicine*, announcing that the U.S. unintended pregnancy rate declined substantially, dropping from 54 unintended pregnancies per 1,000 women in 2008 to 45 for every 1,000 women aged 15–44 in 2011. The 2011 rate was the lowest observed in three decades. Despite the overall declining rates, disparities still exist, especially for poor women and women of color. *Declines in Unintended Pregnancy in the United States, 2008–2011*, *New England Journal of Medicine*, March 2016.

Fathers' Involvement Associated with Decreased Behavioral Problems in Children

Using longitudinal data from the Fragile Families and Child Wellbeing Survey, scientists examined how fathers and mothers in married and cohabiting households engage with their children to determine if the father's engagement is associated with childhood behaviors independent of the mother's characteristics and her level of involvement. Researchers found significant and negative associations between father engagement and children's behavioral problems, independent of maternal engagement. *Effect of Father Engagement on Child Behaviors*, National Symposium of Family Issues, October 2015.

Social Relationships Affect Health as We Age

With support from the National Institute on Aging (NIA), scientists integrated data from four large, NIH-funded nationally representative population-based studies to examine linkages between social relationships and health patterns over the life course. The study concluded that individuals with stronger social connections experience better health outcomes and enhanced longevity across the human life span. Alternatively, social isolation increased the risk of inflammation by the same magnitude as physical inactivity in adolescence, and the effect of social isolation on hypertension exceeded that of clinical risk factors such as diabetes in old age. *Social relationships and physiological determinants of longevity across the human life span*, *PNAS*, vol. 113, no. 3, January 19, 2016.

Study Points to Dementia Rate Declining

A November 2016 article published in the *Journal of American Medical Association* featured findings by scientists who, using data from the Health and Retirement Study, concluded that the prevalence of dementia in the U.S. declined significantly, falling from 11.6 percent in 2000 to 8.8 percent in 2012. Researchers found that the decline can be attributed in part to educational attainment. It is unclear what affect other social, behavioral, and medical factors may contribute, which should be the focus of future research. *A Comparison of the Prevalence of Dementia in the United States in 2000 and 2012*, *JAMA*, November 21, 2016.

Future research

Population sciences are poised uniquely to research the underlying causes and consequences of disease and disability. Some of the unanswered research questions population scientists are pursuing include:

- » What effects will changing family patterns have on the health of children and adults?
- » How do population movements caused by migration, immigration, and natural disasters, impact the social and natural environments and health of communities, families and individuals?
- » What accounts for the strong connection between education, income, and health?
- » Why are racial and ethnic disparities in health large and persistent?
- » How will population aging and trends in health and disability affect pensions, Social Security, and health and long-term care systems as the Baby Boomers retire?
- » How will programmatic changes in the U.S. health care system affect population health and health disparities?

Continued NIH investment in demographic, or population, research ensures these important health-related issues will be addressed, employing the highest standards of peer-reviewed scientific research.

