2 Population and Health Geography

CHAPTER OVERVIEW

- The two main factors that affect population growth are fertility and mortality and rates of both vary spatially across the world.
- Fertility is affected by biological factors, economic factors, and cultural factors; and mortality is a general indicator of socio-economic status.
- The rate of natural increase (RNI) is the difference between CBR and CDR.
- Population projections are not always accurate and are based on current and past rates of fertility and mortality.
- Migration is the movement of people from one location to another and has occurred for as long as there have been humans.
- Movements of refugees and internally displaced persons (IDPs) are explained by forced and mass migration associated with war, political instability, and other push factors.
- Health, illness, and health care vary spatially.
- Within countries there are variations in the levels of access to health care.

LEARNING OBJECTIVES

After reading this chapter, you should be able to

- identify measures and concepts that explain demographics and population growth or decline;
- identify the factors that affect rates of fertility and mortality;
- understand how population, fertility, and mortality rates vary spatially;
- understand how the composition of a population changes over time;
- identify the various explanations and models for population growth or decline;
- identify the various explanations for the relationship between population and resources;
- understand the forces of migration and how migration has shaped the current population distribution; and
- understand inequalities in health status and in how health care is delivered.

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KEY TERMS

Carrying capacity The maximum population that can be supported by a given set of resources and a given level of technology. (p. 57)

Census The periodic enumeration of all individuals and collection of demographic and other data in a given country at a particular point in time (commonly every 5 or 10 years. (p. 42)

Degenerative or chronic disease Diseases that are long-lasting and result from a gradual degeneration of the body; these diseases are more common today than in the past as a result of longer life expectancies. (p. 75)

Demographic transition The historical shift of birth and death rates from high to low levels in a population; mortality declines before fertility, resulting in substantial population increase during the transition phase. (p. 67)

Demography The study of human populations. (p. 40)

Doubling time The number of years required for the population of an area to double its present size, given the current rate of population growth. (p. 55)

Epidemic A rapid increase (beyond what is normal of relatively short duration in the number of cases of a disease within a population. (p. 76)

Epidemiological transition A transition in the dominant causes of death in a population over time, typically exemplified by a relative decline in infectious diseases and an increase in degenerative or chronic diseases. (p. 79)

Epidemiology The study of the incidence, distribution, and control of disease in human populations. (p. 79)

Fecundity A biological term for the potential capability of having children; refers to potential rather than actual number of live births. (p. 47)

Fertility A population's natural capability of having children; also used to refer to the actual number of live births produced by a woman. (p. 47)

Health A state of complete physical, mental, and social well-being; not merely the absence of disease. (p. 80)

Health care The maintenance or improvement of human health through prevention, diagnosis, and treatment of physical or mental illness or injury. (p. 81)

Infectious disease Diseases that spread from human to human via bacteria or viruses; sometimes referred to as communicable disease. (p. 75)

Less developed world A large group of countries (effectively the whole world excluding those that are more developed) characterized by low standards of living and social well-being; often used interchangeably with *the developing world*; historically, referred to as the Third World. (p. 40)

Life cycle The process of change experienced by individuals over their lifespans; often divided into stages (such as childhood, adolescence, adulthood, old age), each of which is associated with particular forms of behaviour. (p. 72)

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Limits to growth A view that argues that both world population and world economy will collapse because of insufficient available natural resources. (p. 65)

Migration The long-term or permanent relocation of an individual or group of people from one area to another. (p. 69)

More developed world A group of countries, including Canada, the United States, most of Europe, Australia, New Zealand, and Japan, that are characterized by a high standard of living and social well-being; often used interchangeably with *the developed world*; historically, referred to as the First World. (p. 40)

Mortality Deaths as a component of population change. (p. 50)

Pandemic An outbreak of disease that is of greater scope and scale (a whole country or region, or even the world) than an epidemic. (p. 77)

Physiological density Population per unit of cultivable (arable) land. (p. 46)

Population aging A process in which the proportion of elderly people in a population increases and the proportion of younger people decreases, resulting in increased median age of the population. (p. 60)

Population momentum The tendency for population growth to continue beyond the time that replacement-level fertility has been reached because of the relatively high number of people in the child-bearing years. (p. 54)

Population pyramid A diagrammatic representation of the age and sex composition of a population. (p. 58)

Replacement-level fertility The level of fertility at which a population exactly replaces itself from one generation to the next; each couple has just enough children to replace themselves. (p. 47)

Sex ratio The number of males per 100 females in a population. (p. 60)

Slavery A form of labour that is controlled through compulsion and is not remunerated (paid). (p. 72)

Theory A set of interconnected statements or a system of ideas that is intended to explain something. (p. 66)

RESEARCH QUESTIONS

1. Whether or not population will encounter limits to resources has been debated since Malthus perceived this issue. Is there merit to this argument today? Give some examples of resource problems that enhance or dispel Malthus's argument, making use of current facts and the arguments of other thinkers who contributed to this debate.

2. What is the current thinking on fertility policies? Does government intervention work as expected? Support your discussion with empirical examples.

3. What are some of the issues that arise when a population is aging? What measures are governments taking when they encounter this issue and are they successful?

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4. What have been some of the responses from governments and other political or religious bodies in addressing the AIDS pandemic? Where have there been successes, and where could there be improvements in responses and why?

5. Using examples, explain how migration contributes to the global population distribution.

LINKS OF INTEREST

- Global Affairs Canada
  https://www.international.gc.ca/gac-amc/index.aspx?lang=eng

- Bill and Melinda Gates Foundation
  http://www.gatesfoundation.org/

- United Nations Development Programme
  http://www.undp.org/

- Population Reference Bureau
  https://www.prb.org/2018-world-population-data-sheet-with-focus-on-changing-age-structures/

- The CIA World Factbook
  https://www.cia.gov/library/publications/the-world-factbook/rankorder/2127rank.html

- The Stephen Lewis Foundation
  http://www.stephenlewisfoundation.org/

- United Nations Programme on Ageing
  http://www.un.org/esa/socdev/ageing/index.html

SUGGESTED READINGS

Bricker, D., and John Ibbitson. 2009. *Empty Planet: The Shock of Global Population Decline*. Toronto: Signal.

For hundreds of years people have been debating about population increases and the affects it would have on the world. In this book, Bricker and Ibbitson are concerned about the opposite: population decline. *Empty Planet* looks at the positive and negative impacts of our choice to have fewer babies and the future of population decline.

Connelly, M. 2008. Fatal Misconception: *The Struggle to Control World Population*. Cambridge, MA: Harvard University Press.

A challenging, insightful book that critiques recent population policies in many countries, painting an unflattering portrait of population planners who think they know how many children people ought to have. The book argues that population policies are not needed.

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Magnus, G. 2008. *The Age of Aging: How Demographics Are Changing the Global Economy and Our World*. New York: Wiley.

This book provides a good, easy-to-read account of the greying of the world population.

Newbold, K. N. 2010. *Population Geography: Tools and Issues*. Lanham, MD: Rowman & Littlefield.

Clearly written and well-illustrated, this text explains the techniques used by population geographers and evaluates current population problems.

YOUTUBE VIDEOS

TED. 2010. "Hans Rosling: Global Population Growth, box by box." YouTube video, 10:15. Posted July 2010 https://www.youtube.com/watch?v=fTznEIZRkLg

1. The video discusses the gap between "The West and the Rest." Explain.
   - The video begins by discussing the historical differences in "wants" between the West and the developing world. The speaker presents that families in the West strive for material things (e.g., Volvo) while those in the developing world hope for food and basic clothing (e.g., shoes). The video spends considerable time discussing the differences between wants and needs and how this has become more obvious through time.
2. How has child survival and children per woman changed over time?
   - In the video, there is an image that shows the child survival and children per woman in 1960 correlated to countries in the world by colour. The largest populations in 1960 (China and India) have relatively low survival rates (70 to 80 per cent) and a high number of children per woman (between 5 and 7). By 2008, India, China, Bangladesh and many other countries have "caught" up to the West (i.e., higher child survival rates and lower children per woman). However there is still the poorest billion who continue to have high rates of children per woman yet the child survival rate has improved.

***The Agenda with Steve Paikin*. 2015. "Canada's Changing Demographics." YouTube video, 13:46. Posted June 2015 https://www.youtube.com/watch?v=CK3VTI-xhgI**

1. What is the significance of the StatsCan age pyramid that is shown in the video?
   - The significance is that it illustrates the levels of mortality and fertility. It shows that the baby boom has aged (50–70) and that accounts for the large group. The top part becomes larger relative to the bottom part. This indicates that we (Canada) have a larger population of older persons than younger. This will influence our health care costs, jobs, and several other aspects of Canadian culture.
2. What are the consequences of a lower fertility rate in the future for Canada?
   - Fertility rate has been fairly constant in Canada for the last three decades. The projection is that this will remain the same. However, depending on the number of women, there are a different number of births. So with an older population, you'll have fewer births.

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