4 Population Aging:
A Demographic and Geographic Perspective

Chapter Overview

This chapter will introduce you to major demographic and geographic patterns, terms, and issues that are placed in both a global and national perspective. One principle theme is that there needs to be balance between viewing demographic trends related to aging as deterministic and therefore a social problem and viewing them as social facts with complex causes and consequences that need to be understood through careful examination. The demographic statistics presented in this chapter will clarify patterns of population aging. You will be challenged to consider the relevance of these statistics for an aging society against the backdrop of myths, stereotypes, and exaggerations that prevail in the media, and even in some academic literature.

Learning Objectives

By the end of this chapter, you will be able to do the following:

- Explain why populations age, at what rate they age, and how we measure population aging.
- Discuss and provide evidence that population aging is a global concern, especially in developing countries.
- Give examples of how and why demographic statistics can be misused and misinterpreted.
- Develop and support an argument that dependency ratios have been used to create an aging crisis in Canada.
- Describe trends, with examples, and the significance of the following terms for aging: life expectancy, disability-free life expectancy, sex ratio, demographic transition, and epidemiological transition.
- Describe where older Canadians live—rural or urban areas, central city or suburbs, eastern or western provinces, metropolitan areas or small towns and cities, and what this means for their mobility and for the availability of, and access to, assistive resources.
- Provide several examples of the ways in which demographic statistics and indices can be used to develop or revise policies, programs, and practices.

Key Facts

- Globally:
  - It is projected that the population aged 65 and over will increase from about 617 million worldwide (8.5 per cent of total global population) in 2015 to 1.6 billion by 2050 (16.7 per-cent), with about three-quarters living in developing regions.
  - At around 2016, people age 65 and older outnumbered children under 5 years of age.
  - The "oldest" countries (highest percentage of the population 65 and over) in 2015 were Japan (27), Germany (22), Italy (22), Greece (20), Finland (20), and Sweden (20).
  - The "youngest" countries (lowest percentage of the population 65 and over) in 2015 were Qatar (1), United Arab Emirates (1), Gambia (2), Angola (2), and Kuwait (2).
- In Canada:
  - The 2016 census found that there were 5.93 million people over 65 years of age, representing about one in every six persons, or 16.9 per cent of the total population.
  - More than 1.5 million people (1.54 million) are over 80 years of age; and 82,305 Canadians were centenarians, one of the fastest-growing age groups in the country.
  - Based on 2015 data, the life expectancy in Canada is approximately 79 for males and 83.5 for females.
  - According to the 2016 census, Nova Scotia and New Brunswick have the oldest populations of the provinces (19.9 per cent) and Alberta has the youngest (12.3 per cent), although the three territories comprise the youngest regions because of high fertility rates and a lower life expectancy (Nunavut, 3.8 per cent; Northwest Territories, 7.7 per cent; and Yukon, 11.6 per cent).

Key Terms

active life expectancy The number of years an individual can expect to live free of serious disability. (p. 115)

crude birth rate The number of births per 1000 people during a one-year period. (p. 116)

crude death rate The number of deaths per 1000 people during a one-year period. (p. 116)

demographic transition A gradual process in which a society moves from having high rates of fertility and mortality to having low rates of fertility and mortality. Populations begin to age when fertility declines and adult mortality rates decline. (p. 104)

demography A field of study that examines changes in the fertility, mortality, and migration rates of a society and that makes projections pertaining to the future size and composition of the population. (p. 103)

dependency ratio The number of non-workers who are supported directly or indirectly by members of the labour force. (p. 118)

epidemiological transition A process by which a nation's health improves as nutrition, personal health care, and public sanitation improve. During the transition, the leading causes of death shift from infectious, parasitic, acute, and epidemic illnesses to chronic and degenerative diseases, especially as the population ages. (p. 104)

generation A unique group of people (e.g., baby boomers), born during the same period, who have experienced and reacted similarly to significant social, political, or historical events that emerged at particular points in their life. These special events or factors have led members of the cohort to think and behave in ways that make them different from other generations. (p. 105)

median age The chronological age at which the population is divided into equal numbers of younger and older persons. (p. 113)

natural growth rate Population growth associated with only births and deaths. (p. 115)

old-age dependency ratio The number of retired people supported by those in the labour force who are between 18 and 64 years of age. (p. 119)

population displosion A process in which the composition of a population within a geographic region becomes more heterogeneous (e.g., in terms of age, wealth, power, education). (p. 104)

population explosion A demographic process that results in a large increase in the size of a population over a relatively short time (e.g., the baby boom from the late 1940s to the mid-1960s). (p. 104)

population implosion A demographic process in which the population becomes concentrated in urban areas. (p. 104)

sex ratio The number of males per 100 females in a population. (p. 109)

technoplosion A rapid growth in the discovery and adoption of technological developments, which in turn has a significant impact on the work and leisure lifestyles of the population. (p. 104)

Study Questions

See below for answers.

1. What is a demographic transition and how does a country moves through the different stages?

2. What characterizes the compression of aging in developing countries?

Additional Resources

Articles

Grover, D. 2014. What is the Demographic Transition Model? Population Education.

Martin, S. 2018. The New Old Age. Longevity is now our reality. Are we ready for it? *The Walrus*.

McDaniel, SA. 2003. Toward Disentangling Policy Implications of Economic and Demographic Changes in Canada's Aging Population, *Canadian Public Policy*, 29(4), pp. 491–510.

McMaster University. 2017. What will the next 150 years look like for Canada's aging population?

Statistics Canada. 2017. Age and sex, and type of dwelling data: Key results from the 2016 Census.

The Economist. 2014. Demography, growth and inequality: Age invaders.

United Nations. 2017. World Population Prospects: The 2017 Revisions.

World Health Organization WHO. 2015. World report on ageing and health 2015.

Videos

Ezer, J. 2013. Population Aging and the Demographic Transition. (29:03 minutes)

Using Japan as an example, this video explains the phenomenon of our aging population and the demographic transition as well as the social and economic impacts on countries.

Hartt, M. 2017. The Future of Aging. Walrus Talk. (6:25 minutes)

Maxwell Hartt was a postdoctoral fellow at the University of Toronto's Department of Geography and Planning. His research focuses on the evolution of shrinking cities and how local actors can manage the challenges associated with economic and population decline.

Rosling, H. 2010. Global Population Growth, box by box. TEDTalk. (9:54 minutes)

The world's population will grow to 9 billion over the next 50 years—and only by raising the living standards of the poorest can we check population growth.

Rosling, H. 2010. 200 Countries, 200 Years, 4 Minutes BBC Four. (4:47 minutes)

This video tells the story of 200 countries over 200 years using 120,000 numbers—in just four minutes. Plotting life expectancy against income for every country since 1810, Hans shows how the world we live in is radically different from the world most of us imagine.

Statistics Canada. 2017. 2016 Census: Population trends in Canada by age and sex. (2:10 mins)

This video looks at the population trends in Canada by age and sex.

Websites

Gapminder, www.gapminder.org

Global AgeWatch Index, http://www.helpage.org/global-agewatch/

International Federation on Ageing, www.ifa-fiv.org

International Longevity Centre Global Alliance, www.ilc-alliance.org

Statistics Canada, Seniors; Historical Age Pyramid

Study Questions—Answers

1. The first phase of the demographic transition was a population explosion in which the world's population increased from about one billion in 1800 to about six billion at the beginning of the twenty-first century. A second phase of the, demographic transition was population implosion; that is, the population of most countries became concentrated in a relatively small area, primarily when young adults migrated to cities in search of work and an urban lifestyle. Population displosion, the third phase, began when the population of a specific geographic area became increasingly heterogeneous owing to in- or out-migration and immigration. Finally, as a country modernized, a technoplosion (the rapid spread of new technological developments) created major changes and improvements in public health (such as disease control, public sanitation, and health promotion), individual health and longevity, work and leisure lifestyles, and quality of life.

2. The rate of population aging is therefore higher in developing nations—and compressed into a shorter period. The changes in age structure in developing countries began in the early 1950s as fertility rates began to decline. At the same time, life expectancy is projected to increase, on average, from 40 to 76 years, but with extreme variations by country. Globally, life expectancy is estimated to be about 69 in the world and will rise to over 76 by 2050. As a proportion of all older people in the world, it is estimated that by 2050, over 75 per cent will live in the less developed countries compared to about 65 per cent in 2015.