



5

Childhood and the Transition to Adulthood

Learning Objectives

In this chapter, you will learn to

- Understand why and how fetal and early childhood development affects health over the life course
- Appreciate how programs and services targeting mothers and young children can alter health outcomes
- Describe and analyze factors affecting the health of older children and youth

Chapter Overview

The chapter begins by identifying the importance of fetal and early childhood development for individual's health. The mother's environment during pregnancy may impact the development of the fetus and the subsequent health status of the individual. Epigenetic effects of the womb, birth, and early development impact the health of the individual in later life.

The second part of the chapter deals with latent, cumulative, and pathways effects that have long-lasting impact on the life course. Exposure to certain conditions shapes development in later life. Early life course experiences are critical for proper development.

In terms of early childhood policy, Canada lags behind many other countries in providing good quality education and access to childcare services. There are important differences between universal programs and those that target high-risk families, and there are many benefits and disadvantages in the public schools system, as well.

The chapter finishes with the discussion of later childhood and teen years. Teenagers have a unique set of health-related factors that can impact their health during teen years and also in later life. Injuries and suicides are teenagers' major causes of death. It is important to examine the links between teenagers' socio-economic status and protective mechanisms, such as social supports and social net-

works. The chapter finishes with summarizing how the life course approach can be applied for understanding the importance of social determinants of health.

Key Terms and Concepts

Attachment theory the attached figure (usually the mother) provides a secure base from which the infant and toddler can “venture forth,” exploring the spaces and things that make up his or her environment (p. 142).

Birth cohort studies studies following a particular cohort since birth (p. 130)

Brain plasticity brain’s ability to change throughout life (p. 134)

Critical developmental junctures key junctures that are critical for successful development (p. 134)

Cumulative effects the effects of certain conditions that accumulate over one’s life course (p. 133)

Emotional lability exaggerated changes in mood and emotions (p. 150)

Epigenetic effect arise from environmental conditions in the womb, including nutrition, oxygen level, and maternal stress hormones, as well as from living conditions shortly after birth (p. 132)

Fetal alcohol spectrum disorder (FASD) a condition affecting infants who were exposed to excessive amounts of alcohol during a mother’s pregnancy (p. 132)

Latency capacity for an early exposure or event to influence later developments, even though no change is detectable for years or decades (p. 130)

Latent effects early life experiences and contexts that affect adult health independently of what happens later in life (p. 135)

Pathway effects early life experiences that set the stage for future experiences, which in turn give shape to subsequent ones (p. 137)

Phenotypic physical or biomedical traits that can be observed as characteristics of an organism (p. 132)

Programming a concept employed in life-courses analysis to explain how earlier events in human development can determine outcomes in later life (p. 130)

Progressive universalism when social support is provided universally but more support is provided to those in need (p. 146)

Psychogenic dwarfism a partially reversible condition characterized by severe learning disorders, lack of normal emotional control, and acute anxiety (p. 139)

Study Questions

Scroll down for answers.

1. Explain the differences between programming and latency.
2. Outline Baker’s hypothesis?

3. Define latent effects and provide an example.
4. Define cumulative effects and provide an example.
5. Explain pathway effects and provide an example.

Critical Thinking Questions

Scroll down for answers.

1. Explain why taller individuals are more successful.
2. Describe and differentiate among latent, cumulative, and pathway effects. Which of them would you consider to be most important for child development?
3. Summarize attachment theory. In what way does it reproduce gender inequality in our society?
4. Identify the unique challenges facing later childhood development and teens

Annotated Multimedia Resources

1. Full story: Generation poor
<https://www.youtube.com/watch?v=1B4w8MQPdEE&t=22s> (26:59 min)
This Global News report discusses what progress has been done in the past two decades to eradicate child poverty in Canada.
2. Planet Youth: How Iceland turned around the crisis in teen drinking
<https://www.cbc.ca/listen/shows/white-coat-black-art/episode/15593392> (26:54 min)
This episode from the CBC radio program *White Coat Black Art* by Dr Goldman describes the Planet Youth intervention in Iceland which aimed to reduce drinking among teenagers.
3. What is the life course approach to public health?
<https://www.youtube.com/watch?v=3OBFYIXmAwQ> (4:55 min)
This video by Pan American Health Organization explains the life course approach and its relevance to public health.
4. TedXChange: Hans Rosling
<https://www.gapminder.org/videos/reducing-child-mortality-a-moral-and-environmental-imperative/> (15:19 min)
In this talk, Hans Rosling explains how some countries in Sub-Saharan Africa work to reduce child mortality.
5. TedxTalk: Tom Weisner
<https://www.youtube.com/watch?v=gIZ8PkLMMUo> (8:41 minutes)
This TedxUCLA talk addresses the question *What is the most important influence on child development?*

6. Lessons from the longest study on human development
https://www.ted.com/talks/helen_pearson_lessons_from_the_longest_study_on_human_development/footnotes (12:26 min)
This Ted Talk by Helen Pearson summarizes her book the Life Project, which describes the most comprehensive longitudinal study on child development.
7. Brain Plasticity HQ
<https://www.brainhq.com/brain-resources/brain-plasticity>
This webpage explains the concept of brain plasticity and offers some interactive exercises for maintaining plasticity of your brain.
8. Child poverty in Canada
<https://www.ctvnews.ca/video?clipId=1420697> (4:26 min)
The CTV news segment summarizes the report on child poverty in Canada produced by Power Play and features an interview with Families Children & Social Development Minister Duclos.

Answers to Study Questions

1. An epigenetic effect of poor maternal nutrition might not be evident in the infant or young child, but it may predispose that child to obesity in adulthood through its effects on regulation of genes affecting metabolism. The child has been programmed for obesity. A low-birth-weight baby may subsequently grow to be of normal weight for age, but in middle age, he or she has an elevated risk of heart attack. The child's high risk of adult heart attack is latent. (p. 130)
2. Low-birth-weight babies, typically under-nourished during gestation, consequently are susceptible to adverse health outcomes. Barker showed that low-birth-weight infants, irrespective of their weight or general health over their lives, are more likely to have a heart attack in middle age than babies born with normal weights for gestational age. (p. 130)
3. Latent effects of early life experiences and contexts affect adult health independently of what happens later. For example, intellectually and emotionally impoverished early years may impair learning and social functioning over the individual's entire life regardless of the quality of schooling she or he receives from kindergarten to grade 12. (p. 135).
4. Cumulative effects are the ones that accumulate over the life course. The longer one is exposed to negative environmental, social, or dietary factors, or alternatively, the more intense the exposure to those negative factors, the worse the health effects. (p. 136)
5. Pathway effects refer to early life experiences that set the stage for future experiences, which in turn give shape to subsequent ones. A rich and positive yet challenging early life experience may increase coping skills and sense of self-worth that in turn incline the child to respond favourably to future opportunities (p. 137).

Answers to Critical Thinking Questions

1. There is a link between birth weight and income. Lower income mothers are more likely to experience more poor health, adverse health effects, and chronic health problems. These mothers are also more likely to have poorer educational attainment and lower income. Overall, these mothers tend to give birth to children with lower birth weight, which in turn, translates into poorer cognitive and physical development and can impact height. (pp. 130–131)
2. Latent effects are the one that can be programmed even prior to birth but would not manifest themselves until later life. Cumulative effects are the ones that accumulate across the life course and pathways effects are the early life experiences that set individuals for a particular life trajectory. All of these effects are equally important in shaping the health of individuals. (pp. 135–139)
3. Attachment theory suggests that early life connection with a parent is critical for the cognitive and physical development of a child and can have long-lasting implications. Since in our society women are the ones that provide care for young children, the attachment theory navigates women to prioritizing the care for the child. The mother can potentially be blamed for not providing proper attachment to her infant in the early development years. (p. 142)
4. During teen years, the brain goes through an important process of physical consolidations and if something goes wrong, the teens' development may be affected. A number of health problems, including mental illnesses and schizophrenia are likely to occur during 15–25 years of age. There are a number of health-related issues that arise in teen years and have implications for the later life. These include higher incidence of injuries among teens, which are the leading cause of death for teenagers, high rates of suicide, alcohol and sugar drinks consumption, and dietary behaviours. Educational attainment, social supports, and availability of social networks can serve as protective factors (pp. 150–154).