

# Chapter 2

## Human Performance: The Life Course Perspective

### OBJECTIVES

Upon completion of this chapter, readers should be able to:

- Define and describe key terms associated with development, including functional differentiation of the terms *development*, *maturation*, and *growth*;
- Discuss life course theory (LCT) and associated implications;
- Reflect on the implications of the Human Genome Project and the increased influence of behavioral genetics in the study of human participation;
- Discuss the concept of early programming as it impacts both health and educational policy and best practices;
- Discuss a systems theory of human development and motor control, including correct application of key terms; and
- Define key terms in genetics and apply them to behavior development and health.

### CRITICAL THINKING TOPICS

1. We hear the term *health disparity* frequently in the professional and lay press. What is the obligation of health professionals to address this problem?
  - Define and give examples of health disparity.
  - Go to the appropriate professional website and discuss code of ethics, professional values, and so on.
  - Have students find local programs offered through agencies such as Women, Infants, and Children (WIC) or the local health department, and determine what services are available at reduced cost.
  - Have students determine if health professional volunteers run any local programs to address the underserved health needs in the community.
2. Physical activity has been linked to many aspects of positive health. Discuss this in the context of terms used in the chapter, such as:
  - Epigenetics
  - Risk factor
  - Protective factor
  - Resilience

3. As health professionals, we often see individuals at a cross-sectional “snapshot” in time. How does the life course theory impact our perspective in clinical management?
  - Health trajectory
  - Cumulative impact
  - Risk and protective factors
4. Going from a sitting to a standing position has been considered a key to functional independence. Analyze this task from a dynamical systems theory perspective.
  - Determine the control parameters, such as musculoskeletal, CNS, sensory, and environment.
  - Discuss how the motor pattern is emergent based on the control parameters such as the height of the seat.
  - Determine agonist versus antagonist muscle activation patterns.
  - Discuss how age might impact the selected strategy to go from sitting to standing.
5. Duvall presented eight stages to the family life cycle theory. Discuss your personal reactions to this theory:
  - Do you think it is representative and still valid (considering it was originally dated 1957)?
  - How do you think this cycle might differ across cultures?
  - Discuss timing versus stages, that is, timing might change and be accelerated in some systems, but cycle is still typical.

## ACTIVE LEARNING EXERCISE 1

**Activity:** Family systems play a critical role in an individual’s life. Health care professionals should take the family system into account in planning interventions at the participation level. Consider each of the eight stages in the family life cycle.

**Report/Discussion.** With your group, answer the following questions:

- Consider these terms from Chapter 1: *age-normative*, *history-normative*, and *nonnormative influences*. Give examples of age-normative versus nonnormative experiences for a person in each stage. How do nonnormative influences affect the family life cycle?
- Discuss how an understanding of the family life cycle interacts with establishing therapy goals at each stage of the cycle.
- Consider the birth of a child with a congenital but not life-threatening condition, such as Down syndrome. Analyze the stages of the family life cycle from all perspectives (the child, parents, grandparents, siblings).
- Why are family systems important to health care professionals?

## ACTIVE LEARNING EXERCISE 2

**Activity:** Conduct a series of “interviews” using the following suggestions and questions as a guide. The purpose of these interviews is to determine how individuals change with respect to participation across the lifespan. At the end of the interviews, write a short paragraph on the theme of participation across the life span, with a conclusion about how this exercise informs your clinical decision making.

### Interview One

**0 to 5 years old.** This observation/interview (depending on the child's age) should be arranged to reflect the child in an interactive setting (for an infant less than 1 year) or for a child of 1 to 5 years of age, the setting should be one of play or adaptive (self-care) behavior. If your observation is done in a setting where more than one child is present, it is fine to talk with other children and incorporate a summary of this into your paper.

Samples of what to include:

- Describe the infant/child in a variety of postures (lying down, being held, sitting, and so on).
- After observing the child's behaviors, try to analyze the child's temperament.
- What kinds of toys/activities does the child like? Ask the child what he or she likes to do.
- Did you see any stranger anxiety? If so, what impact did it have on your interaction?
- Does the parent/teacher describe the child's behavior that day as typical?
- Summarize the child's activity in developmental terms.
- What is the child's level of independence?
- What is the child's response to difficult situations? What are the caretakers' responses to discipline?
- What might you have tried in a therapeutic situation to engage this child in an activity?
- What do you see that might be problematic for a therapist?

## Interview Two

**8 to 18 years of age.** If possible, observe the child/adolescent in a group setting, that is, a classroom, Sunday school, and so on. How would you characterize the individual (for example, quiet, extroverted, active)? If you are able to see the child or youth in a group setting, it is fine to mention other members of the group.

Samples of what to include:

- Describe play and playfulness.
- How would you describe the individual socially (for example, is he or she a leader, a team player, a loner, and so on)?
- The following interview questions may be used as a starting point:
  - How do you like to spend your free time?
  - Do you have any special interests?
  - Tell me what a typical school day is like.
  - Tell me about your best friend.
  - If given a choice, would you rather . . .
    - a. Play with your friends
    - b. Play in sports
    - c. Play a computer game or Nintendo
    - d. Do something artistic (music, drawing, drama, and so on)
    - e. Read a book
  - What are the child's responses to difficult situations? What are the caretakers' responses to discipline needs?
  - What did you observe that seemed typical for this age child? Was there anything considered atypical?
  - What might you have tried in a therapeutic situation to engage this child in an activity? Is there anything that might pose a challenge for a therapist?

## Interview Three

**30 to 55 years of age.** This is primarily an interview, although observation may be included.

Samples of what to include:

- What are the tasks you feel obligated to accomplish within a day/week?
- Do you feel you have enough time for leisure?
- When you have leisure time, what do you like to do?
- Have you had any problems with injury/disability? How has this affected your work or leisure activity?
- If you were to acquire a serious illness or disability, what would be your greatest worry?
- What do you worry about?
- Are there things you would like to do more (exercise, spend time with family, travel)? What limits you?
- Who are the most important people in your life right now?
- What provides you the greatest satisfaction?

## Interview Four

**Over 65 years of age.** This is primarily an interview, although observation may be included in a social setting.

Samples of what to include:

The following questions may be used as a starting point for the interview portion of this assignment:

- How do you like to spend your time?
- Do you have any special interests?
- How often do you participate in your interests?
- Tell me what a typical day is like.
- Do you have a daily schedule, and do you have enough time to do what you want to do?
- Who are the most important people in your life right now?
- What is your greatest fear?
- What provides you the greatest satisfaction?

Worksheets are available on the Instructor Website.

## Web Resources

“Rethinking MCH: The Life Course Model as an Organizing Framework”:

<http://mchb.hrsa.gov/lifecourse/rethinkingmchlifecourse.pdf>

A Life Course Approach Resource Guide Developed by the MCH Training Program”:

<http://mchb.hrsa.gov/lifecourseapproach.html>

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### CASE

(Based on Case 2 in the text)

Because of increasing “dizzy spells,” Meredith sought medical attention. At this time, she was admitted to the hospital where tests revealed an infarction of the right middle cerebral artery and evidence of several past small strokes (partially reversible ischemic neurological deficits). Within 24 hours, the transient ischemic attack (TIA) symptoms had stabilized and Meredith was referred to a skilled nursing facility (SNF) for rehabilitation and further assessment.

In the SNF, Meredith walks independently but has poor endurance and is unable to sustain physical activity during self-care routines, and needs frequent rests. She uses her right hand for most tasks, and will use the left arm as a gross assist in some activities. Her left shoulder and elbow are weak, with muscles scoring in the “fair” grade of strength. She has only gross movement and control of her distal arm.

Meredith wants to return home. She says that she is able to function far better at home, where she knows where things are and how they work. Things such as eating and personal hygiene, which she manages independently at home, require assistance now, because of her poor vision. She also needs moderate physical assistance with showering/bathing, lower extremity dressing, and hair care. She would prefer to get rehabilitation and support at home. Meredith has made many accommodations for her poor vision at home, and feels she is fully functional in that environment. Also, Meredith sees herself as her husband Darrell’s caregiver and has been worried about leaving him at home alone. Darrell has been receiving meals-on-wheels since Meredith has been in the hospital. He has never done housework before, and, according to his pastor (who has visited him at home), he is just letting things pile up.

Meredith’s diabetes greatly impacts her ability to perform activities of daily living in the rehabilitation setting. Because this condition has developed gradually, Meredith had been able to plan for and accommodate this condition in her home environment. Until her recent TIA events, Meredith has been able to participate fully in her home and community activities, in spite of serious chronic health conditions. Meredith’s focus is not on her condition, but on her valued life roles, including her roles of caregiver, homemaker, and church leader.

### Questions/Activities

Establish a therapeutic goal for Meredith regarding one of her previously listed activity limitations. Apply dynamical systems theory to the therapy intervention, including the following terms:

- Emergent
- Control parameters
- Constraints
- Degrees of freedom
- Systems
- Goal

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### ACTIVE LEARNING EXERCISE

Take an example of a public health problem, such as obesity. Work through the problem from a life course perspective, filling in the following table with an analysis of obesity.				
Determinants	Early Programming	Health Trajectory	Risk Factors	Risk Reduction/Protective Factors