

Pre-Session Reading and Activities: The Biomedical Influence of Childhood Poverty

Learning Goals and Objectives

1. **Describe the current levels of child and family poverty in the US.**
 - a. Define the federal poverty limit and its relationship to public benefits (*Knowledge*)
 - b. Contrast the US child poverty rate over time to rates in other developed nations over the past 25 years (*Knowledge*)
 - c. Distinguish poverty rates among US sub-populations; consider geography (rural/urban/suburban), race/ethnicity, age, immigrant status, family composition and level of education (*Knowledge*)
 - d. Describe poverty rates in your own local practice (*Skill*)
2. **Work effectively across the socio-demographic gap between the physician and the child and family living in poverty.**
 - a. Contrast the demographics of the physician and child health care provider workforce with the demographics of the US population (*Knowledge*)
 - b. Reflect on one's personal assumptions, biases and stereotypes about impoverished populations and its potential impact on patient care (*Attitude*)
 - c. Conduct culturally sensitive screening for indicators of poverty in one's own patient population (*Skill*)

This document is designed to prepare you for our upcoming discussion on the Biomedical Influence of Childhood Poverty. Start by reviewing the learning goals and objectives above – this will help you to focus on the most important details as we go through this information. Next watch the videos with the links below and after watching the videos, review the figures on the second page.

These materials are designed to be brief – you can plan to spend about 25-30 minutes in total reviewing them. Don't worry if you do not understand everything by the end of this document – we will be digging in as we go through the material together during the session.

Videos:

Center on the Developing Child – Harvard University

- Brain Development
 - <http://developingchild.harvard.edu/resources/experiences-build-brain-architecture/> (2min)
 - <http://developingchild.harvard.edu/resources/serve-return-interaction-shapes-brain-circuitry/> (1min 45sec)
- Toxic Stress
 - <http://developingchild.harvard.edu/resources/toxic-stress-derails-healthy-development/> (2min)

Adverse Childhood Experiences - TED talk

- <http://www.tedmed.com/talks/show?id=293066> (16min)

APA Poverty Task Force – Poverty Curriculum – Biomedical Influences

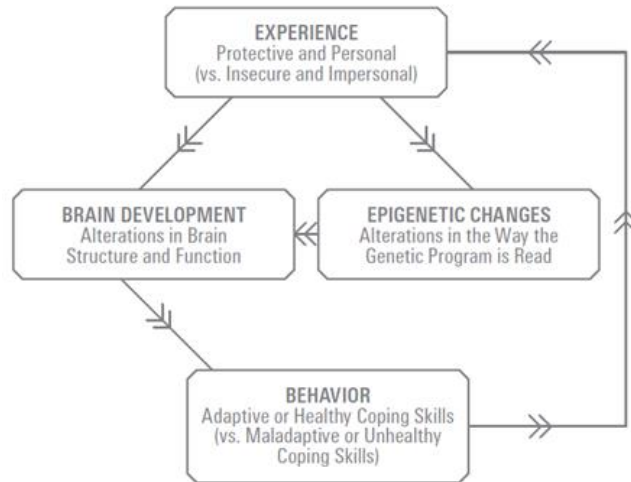
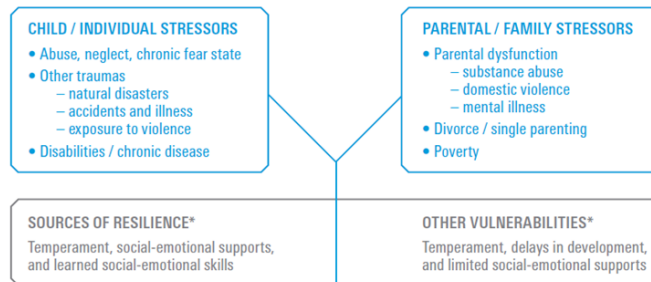


Figure 1

Development results from on-going and cumulative interactions between experience, biology, and behavior. If early childhood experiences are protective and personal, adaptive or healthy coping skills are more likely. If early experiences are insecure or impersonal, maladaptive or unhealthy coping skills are more likely.



	Physiologic STRESS in Childhood		
STRESS RESPONSE	Positive	Tolerable	Toxic
DURATION	Brief	Sustained	Sustained
SEVERITY	Mild/moderate	Moderate/severe	Severe
SOCIAL-EMOTIONAL BUFFERING	Sufficient	Sufficient	Insufficient
LONG-TERM EFFECT ON STRESS RESPONSE SYSTEM	Return to baseline	Return to baseline	Changes to baseline

* Sources of Resilience and Other Vulnerabilities are able to mitigate or exacerbate the physiologic stress response

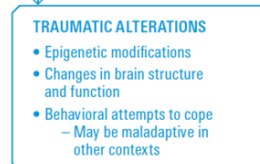


Figure 2. Precipitants and Consequences of Childhood Physiologic Stress

Significant sources of adversity in childhood, from both individual and family stressors, precipitate a physiologic stress response. Sources of resilience and other vulnerabilities are able to mitigate or exacerbate the physiologic stress response. With sufficient levels of social-emotional buffering, the stress response can be either positive (and actually build resilience), or tolerable (and result in no sustained changes). With insufficient levels of social-emotional buffering, the physiologic stress response is sustained or severe and becomes toxic, resulting in potentially permanent alterations to the epigenome, brain structure, and behavior. These traumatic alterations may actually be adaptive in threatening or hostile environments, but they are often maladaptive in other, less threatening contexts.