Welcome to CCEI120

Course Objectives:

By taking notes on the handout and successfully answering assessment questions, participants will meet the following objectives as a result of taking this course:

- Identify the lasting effects of early deprivation and maltreatment
- Define child maltreatment
- Identify key conclusion of research linking childhood maltreatment to overall health and well-being
- Define neurons, synapse, and synaptic pruning
- Identify methods for promoting the formation of synaptic pathways
- Identify the long-term effects of synaptic pruning
- Identify the effects of repeated early childhood maltreatment
- Identify sensitive periods in early childhood brain development
- Define major types of stress
- Identify the five premises of the Cascade Model of Stress Response Theory

References:

- Greenbaum, Jordan (2008) Stress Adversity and Brain Development. Atlanta: Children’s Health Care of Atlanta

This handout is designed to be a resource for note taking.

Early Childhood Brain Development and the Effects of Early Deprivation. Early childhood maltreatment and deprivation has a significant effect on brain development in early childhood and may result in cognitive, motor and language delays. As early childhood educators, we may see this manifest in:

1. 
The effects of early deprivation in brain development are so significant that follow-up studies of these children at age eight show that they:

1. 
2. 
3. 
4. 

**Child Maltreatment**

Young children who are abused or neglected struggle with:

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. 
10. 
11. 

**Supporting Research**

**Adverse Childhood Experiences (ACE) Study:**

**Major Findings of the Adverse Childhood Experiences (ACE) Study:**

Adverse Childhood Experiences (ACE) which include childhood abuse, neglect, and exposure to other traumatic stressors unfortunately are common.

1. 
2. 

The study showed that the more a child is exposed to Adverse Childhood Experiences (ACE) the number of health and social problems increases. Likewise, the risk for the health problems listed on this and the following two slides increases the more a child is exposed to Adverse Childhood Experiences (ACE):

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. 
10. 
11. 

The connection between early childhood exposure to Adverse Childhood Experiences (ACE) and risk-related behavior during adolescence:

**Early Brain Development:**

Neurons:

Synapses:
Between birth and eight months of age, the synapses are formed more quickly. There may be _________
synapses in the brain at ___ months.

Synaptic Pruning:

**The Connection between Experience and the Formation of Synaptic Pathways:**

The Effect of Repeated Early Childhood Maltreatment:

**Critical Early Experiences:**

Sensitive periods:

**Stress and Early Brain Development:**

The Stress Response:

Stressful events may be harmful or beneficial depending on:

1.
2.
3.
4.
5.

Positive Stress:

1.
2.
3.
4.

Tolerable Stress:

1.
2.
3.
4.

Toxic Stress:

**The Cascade Model of Stress Response:**

*Early stress affects the stress response system:*

**Stress affects hormones:**

- Adrenaline:
• Cortisol:

**Different areas of the brain are uniquely sensitive to the effects of stress hormones:**

• Hippocampus:

• Cerebellum:

**There are long-term functional consequences of stress:**

**Chronic toxic stress affects physical and emotional well-being:**

As early childcare educators, these issues have a significant impact on our classrooms. Studies also show that having exposure to a nurturing, sensory-rich environment that provides opportunities for social play and cognitive exploration may compensate to some degree for these consequences. When we provide these opportunities for abused children, we may actually be helping the brain reverse some of the damage.

**Classroom Tips for Promoting Healthy Brain Development:**

New Born to One Year:

Two-Year-Old Classroom:

Three-Year-Old Classroom:

Four-Year-Old Classroom

Five-Year-Old Classroom:
Summary:

Stress caused by early childhood adverse experiences may be positive, tolerable, or toxic. In a supportive and nurturing atmosphere, children learn to adapt to stressful experiences. In an abusive atmosphere, toxic stress may lead to social and emotional problems, substance abuse, and heart disease.

As early childhood educators, we are in a unique position to create positive, safe, and responsive care environments which may help to compensate for some of the long term effects of toxic stress caused by early childhood adverse experiences.