OBJECTIVES

- Be able to explain how addiction interacts with psychosocial development across the lifespan.
- Understand how substance use affects an individual at different stages of life.
- Understand how psychosocial development has the potential to influence the risk of substance use in an individual across the lifespan.

LIFE STAGES

- Preconception
- Prenatal
- Infancy
- Childhood
- Adolescence
- Adulthood
- Late Adulthood
PRECONCEPTION

• Approximately half of all pregnancies in the United States are unplanned.
• Non-planning Impulsivity has been shown to be associated with an increased risk of unplanned pregnancy.
• Non-planning Impulsivity has also been shown to be associated with substance use.
• By the time a woman discovers she may be pregnant, the fetus may be in its 4th–6th week of life.
  - The first trimester is a critical period for neural development
  - Most teratogenic effects of substance use occur during the first trimester


PRENATAL

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PRENATAL

• Fetal Alcohol Spectrum Disorders
  - Neurobehavioral Disorder Associated with Prenatal Alcohol Exposure (ND-PAE)
  - Mother must have consumed more than minimal levels of alcohol before child’s birth in the 13 standard drinks in 30 days or more than 2 standard drinks in one setting
    - Children Have Problems in 3 Areas:
      - Thinking and Memory
      - Behavior Problems
      - Trouble with day-to-day living (problems with ADL’s)
  - Alcohol-Related Birth Defects (ARBD)
    - These individuals will have problems with the heart, kidney’s, bones, or hearing.
    - They could also have a combination of birth-defects.
**PRENATAL**

- Fetal Alcohol Spectrum Disorders
  - Alcohol-Related Neurodevelopmental Disorder (ARND)
    - Individuals may have intellectual disabilities and problems with behavior and learning.
    - Individuals may do poorly in school and have difficulties with math, memory, attention, judgment, and poor impulse control.
  - Fetal Alcohol Syndrome (FAS)
    - Most severe end of the Fetal Alcohol Spectrum Disorder.
    - Death is the most extreme outcome of alcohol use in pregnancy.
    - Individuals have abnormal facial features, growth problems, and central nervous system (CNS) problems.
    - May have problems with learning, memory, attention, span, communication, vision, or hearing.

**INFANCY**

- Age 0-18 Months old
  - Erikson’s Psychosocial Stage: Trust versus Mistrust
    - Characterized by Complete Dependence
    - Basic Needs include food, shelter, and nurturing
    - Trust develops in the relationship dyad when basic needs are met; mistrust develops when basic needs are not met.
  - A mother’s addiction may negatively influence her affect toward her infant leading to weaker parent-child bonds.
    - Not every mother with substance use develops abnormal mother-child attachment.
    - Abnormal bonding does occur, however, it can increase the risk of the child having problems with relationships later in life.
    - Such trouble with relationships may increase the propensity for substance use in the child.
    - Such bonding issues increases the risk of continued substance use by the mother.

  **References:**

- Maternal Bonding Style in Infancy May Affect Child’s Choice for Substance Use
  - Optimal Parenting (high care; low overprotection)
  - Affectionless Control (low care; high overprotection)
  - Neglectful Parenting (low care; low overprotection)
  - Affectionate Constraint (high care; high overprotection)
  - A comparative study between smokers and nonsmokers demonstrated a statistically significant relationship between the neglectful maternal parenting bond and initiation of tobacco use by the child later in life.

  **References:**
CHILDHOOD

• Early Childhood: Age 18 months – 3 years
• Erickson's Psycho-Social Stage: Autonomy versus Shame and Doubt
• Parenting style influences childhood autonomy as well as what the child does with such autonomy
• Parenting Styles:
  – Authoritarian (Affectionless Control)
  – Authoritative (Affectionate Constraint)
  – Permissive (Optimal Parenting)
  – Uninvolved (Neglectful)

ADVERSE CHILDHOOD EXPERIENCES (ACE’S)

• All childhood experiences have an effect on the growth and development of an individual
• Negative childhood experiences, otherwise known as Adverse Childhood Experiences (ACE’s) can have long-term negative consequences for children
  – Cumulative effect of ACE’s has been well studied
  – ACE’s Can Be Prevented: (CDC Recommendations)
    – Parenting Training/Programs
    – High quality Child Care
    – Social Support for Parents
    – Intimate Partner Violence Prevention
    – Income Support for Low Income Families

ADVERSE CHILDHOOD EVENTS (ACE’S)

• ACE’s Include:
  – Physical Abuse
  – Sexual Abuse
  – Emotional Abuse
  – Physical Neglect
  – Emotional Neglect
  – Intimate Partner Violence
  – Mother Treated Violently
  – Substance Misuse Within the Household
  – Household Mental Illness
  – Parental Separation or Divorce
  – Incarcerated Household Member
ADVERSE CHILDHOOD EXPERIENCES (ACE’s)

ACES can have lasting effects on....

- Health (obesity, diabetes, depression, suicide attempts, STDs, heart disease, cancer, stroke, COPD, broken bones)
- Behavior (smoking, alcohol, drug use)
- Life Potential (graduation rates, academic achievement, how long time from work)

CHILDHOOD

• Middle Childhood: Ages 3-5 Years
• Erickson’s Psycho-Social Stage: Initiative versus Guilt
• During the stage, children learn the appropriateness of specific actions
  - Addiction has a learned behavioral component
  - Parental substance use normalizes substance use for children
  - More detached parenting style may lead to greater risk of unhealthy behaviors
  - These children are at increased risk for substance use disorders and heart disease
  - Recall the "I learned it from Watching You" Public Service Announcement in the late 1980’s

"I Learned it by Watching You" Public Service Announcement 1987
**CHILDHOOD**

- **Late Childhood: Ages 6-12 Years**
- Erickson's Psycho-Social Stage: Industry versus Inferiority
- Significant Development in biological, cognitive, and psychosocial domains
  - Development of Self-Esteem
  - Interaction with the environment and other people shapes a child's world-view and self-image.
  - Parent's play a very large role at this age range in helping their child develop strong self-esteem.
  - Higher levels of parental supervision and monitoring in late childhood has been shown to decrease overall use of substances and delay onset of substance use in adolescence (important from a neurodevelopmental standpoint).


**Take Home Message:**
Children in the Lowest Quartile for Parental Supervision and Monitoring were Three Times more likely to initiate substance use in subsequent years. More importantly, Children in the highest quartile for Parental Supervision and Monitoring delayed initiation of substance use or did not initiation substance use at all. Delays in initiation of substance use beyond adolescence may decrease long-term risk of addiction.

Improved Parental Supervision and Monitoring can be taught and acquired as a learned skill.

**ADOLESCENCE**

- **Adolescence: Ages 13-19 Years**
- Erickson's Psycho-Social Stage: Identity versus Role Confusion
- Significant changes in psycho-social developmental domain
  - Maturation of Self-Understanding
  - Maturation of Self-Concept
  - Maturation of Self-Esteem
  - Most people initiate substance use (tobacco, alcohol, marijuana, prescription drug use, or other substances) in adolescence.
  - Substance use has been shown to interfere with normal brain development during adolescence.
  - Initiation of substance use during adolescence increases the risk for development of a substance use disorder (proven for cannabis and alcohol).
During Adolescence and Young Adulthood, Brain Development Involves Critical Processes that Increase its Efficiency and Specialization.

**Synaptic Refinement (Fine Tuning)**

**Myelination (Insulation)**

First Use of Alcohol in Adolescence (as Opposed to Adulthood) Increases the Risk of Chronic Alcoholism.

Alcohol Use in Adolescence is Linked to Significant Changes in Brain Development that can Lead to Permanent:

- Memory Impairment
- Decreased Attention and Processing Speed
- Impaired Executive Function (Decision Making, Abstract Thinking, Impulse Control)

**WHY ARE ADOLESCENT BRAINS SO VULNERABLE?**

First Use of Marijuana in Adolescents (as opposed to adulthood) Increases the Risk of Marijuana Addiction.

Long-Term Marijuana Use in Adolescence is Linked to Significant Changes in Brain Development that can Lead to a Permanent:

- Decline in IQ (an average of 8 IQ Points from childhood to adulthood)
- Impaired Executive Function (Decision Making, Abstract Thinking)

Delaying or Quitting Use of Marijuana Until Adulthood Decreases the Risk of Developing Permanent Brain Changes.


**YOUNG ADULTHOOD**

- Adolescence: Ages 20-24 Years
- Erickson’s Psycho-Social Stage: Intimacy versus Isolation
- Desire to Establish Long-Term Relationships
  - If such efforts occur, fear of isolation may occur
  - Downward spiral may lead to drug use
  - Drug use during early adulthood leads such individuals to exhibit less emotion and be more detached making more intense relationships more difficult to maintain.

**ADULTHOOD**

- Adulthood: Ages 25-64 Years
- Erickson’s Psycho-Social Stage: Generativity versus Stagnation
- Maintenance of Previous Life Occurrences
  - Decline in cognitive ability
  - Life’s journey continues on its path
- Cannabis use exacerbates the natural decline in cognitive functioning in adulthood.

Late Adulthood: Ages 65 years to Death

- Erickson’s Psycho-Social Stage: Integrity versus Despair

- Tendency to Dwell on the Past
  - Some miss productivity/ contributing
  - Strong feelings of depression (despair) can occur

- Substance Use in the Elderly can be More Dangerous and is Becoming More Prevalent
  - Marijuana prevalence is increasing as “baby boomers” age
  - Prevalence of other substance use may also be increasing


Questions?