



# **Powering Prevention with Developmental Theory**

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Executive Director, CSU Prevention Research Center  
Professor, Human Development and Family Studies

**Resource Supplement**

**October 16, 2024**



# ADAPT

A Division for Advancing  
Prevention & Treatment

CULTIVATING PREVENTION

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# ADAPT: A Division for Advancing Prevention & Treatment

## Mission

The mission of ADAPT is to support integration of the best available evidence for substance use prevention into communities by advancing mindsets, knowledge, and skills.

## Goals

1. Advance substance use prevention strategies through essential training and technical assistance services and resources.
2. Prepare future Public Health/Public Safety workforces through engagement in substance use prevention activities.

## HIDTA Prevention

ADAPT supports the National High Intensity Drug Trafficking Area (HIDTA) Program by operationalizing the National HIDTA Prevention Strategy. ADAPT assists HIDTAs with implementing and evaluating substance use prevention strategies within their unique communities. ADAPT also keeps HIDTA communities up to date with advances in prevention science. A variety of trainings, technical webinars, and other resources to cultivate, nurture, and support hospitable systems for implementation are offered throughout the year.

## Technical Assistance

Technical assistance is available to all HIDTA communities in the following domains:

1. Identification of the Best Available Evidence in Substance Use Prevention
2. Training
3. Implementation
4. Evaluation
5. Finance/Budgeting
6. Sustainability
7. Early Response
8. Prevention Communication
9. Systems Development
  - Infrastructure
  - Assessment

## Learn More

Visit us at <https://www.hidta.org/adapt/> to learn about our technical assistance services, event and training announcements, resources, and more!

## Contact Us

For more information, email us at [adapt@wb.hidta.org](mailto:adapt@wb.hidta.org) or reach out to Dr. Lora Peppard at [lpeppard@wb.hidta.org](mailto:lpeppard@wb.hidta.org).

## Connect with Us

For frequent updates from ADAPT, be sure to *follow* and *like* us on the platforms below. These platforms provide an opportunity to share resources and connect with each other.



Like our Facebook page today @ <https://www.facebook.com/ADAPT-100681361632663/>



Follow our LinkedIn Company page for the latest insights and updates @ <https://www.linkedin.com/company/adapt-a-division-for-advancing-prevention-treatment>



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# ADAPT

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# PREVENTION INTERVENTION RESOURCE CENTER

Access e-learning courses, evidence-based program registries, & other resources to support you in advancing evidence-based prevention programming in your community.



<https://www.hidta.org/adapt/prevention-intervention-resource-center/>

# COME LEARN WITH US!

*Announcing the*

## HIDTA PREVENTION LEARNING MANAGEMENT SYSTEM



[adaptlms.hidta.org](http://adaptlms.hidta.org)

### GET STARTED WITH THE 1ST COURSE TODAY!

#### Substance Use Prevention Fundamentals

- Designed to help you understand the field of substance use prevention.
- Defines key prevention concepts and connects HIDTA's mission with the goals of substance use prevention.
- Introduces critical targets for prevention, explores the ways prevention exists in multiple contexts, and shares what works (and what doesn't) in substance use prevention.



# PRESENTER BIO

## Nathaniel Riggs, PhD



Dr. Riggs is the Executive Director of the CSU Prevention Research Center (PRC), a campus-wide trans-disciplinary center committed to studying the development, implementation, and evaluation of effective and sustainable preventive interventions across the lifespan. The PRC has four divisions, each in which he is actively engaged: Healthy Schools, Community-University Partnerships, Intellectual and Developmental Disabilities, and Healthy Aging.

Dr. Riggs' personal research interests include testing preventive interventions that promote youth socioemotional development and prevent adolescent risk behaviors. A primary research interest is translating basic research in developmental neuroscience to school-based and family-focused interventions that prevent child and adolescent behavioral health problems including substance use. He is also an engaged scholar who works alongside community partners to support the implementation of evidence-based preventive interventions and is principal investigator on several federally-funded projects with community partners from around the state of Colorado.

Dr. Riggs is committed to training graduate students who will become the next generation prevention researchers and practitioners. He has served as the chair of HDFS graduate programs and on the board of directors for the Society for Prevention Research, where he chaired the training committee that sets the Society's national agenda for training in prevention science research and practice. He also frequently participates in the process of translating research to policy. He is a member of CSU's Government Relations Faculty Ambassadors Initiative, a program training CSU faculty on best practices for engaging federal policy makers and funding agencies. He also regularly provides testimony and public comment on state legislation and has several contracts with Colorado state agencies related to translational prevention research and policy.

# PRESENTATION SLIDES





HUMAN DEVELOPMENT  
AND FAMILY STUDIES  
COLORADO STATE UNIVERSITY



PREVENTION RESEARCH CENTER  
COLORADO STATE UNIVERSITY

COLLEGE OF HEALTH AND HUMAN SCIENCES

# Powering Prevention with Developmental Theory

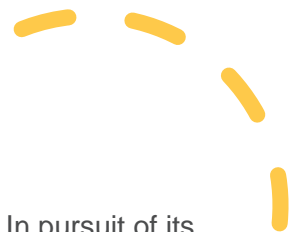
NATHANIEL R. RIGGS  
EXECUTIVE DIRECTOR, CSU PREVENTION RESEARCH CENTER  
PROFESSOR, HUMAN DEVELOPMENT AND FAMILY STUDIES



## Standards of Knowledge

**Prevention Science Principles** - In pursuit of its goals, prevention science is grounded in the following principles.

1. Theoretically-guided
2. Informed by lifespan development
3. Multi-level/contextual
4. Prioritizes rigorous and ethical approaches
5. Health equity-focused
6. Interdisciplinary
7. Empirically-informed
8. Collaborative
9. Community-based





## Today's Agenda

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- Human Development Within Context Defined
- Prevention Defined
- Developmentally-timed Prevention
- Examples of Developmentally-timed Prevention in the Real World



**W**  
UNIVERSITY of  
WASHINGTON

The top right portion of this block features an aerial view of the University of Washington campus, showing various buildings, green spaces, and trees.

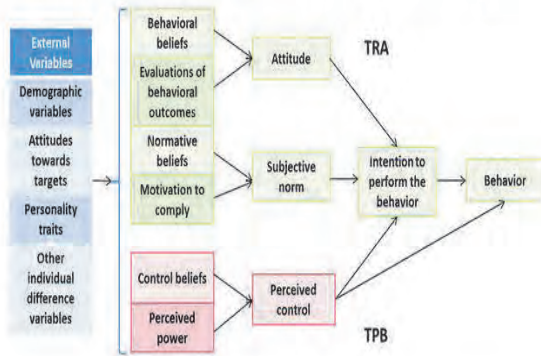


  
**PennState**

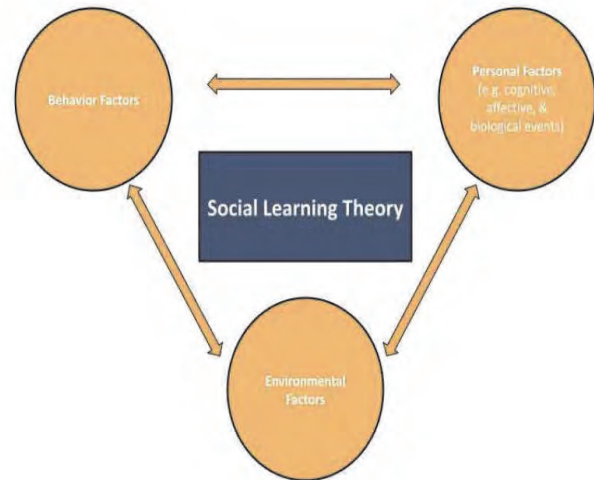
The bottom left portion of this block shows a large, classical-style building with many columns, likely a part of the Penn State campus, with a field of colorful tulips in the foreground.

# Examples of Non-Developmental-Contextual Theories

## Triad and the Theory of Reasoned Action/Theory of Planned Behavior



Source: [https://www.researchgate.net/figure/The-theory-of-reasoned-action-and-planned-behavior-Revised-from-Health-behavior-and\\_fig1\\_308784496](https://www.researchgate.net/figure/The-theory-of-reasoned-action-and-planned-behavior-Revised-from-Health-behavior-and_fig1_308784496)



**COLORADO STATE UNIVERSITY**

**PREVENTION RESEARCH CENTER**

The PRC has 4 divisions, each directed by CSU faculty who are experts in the field.



### Healthy Schools

We partner with schools, districts, and state departments of education to test and implement evidence-based approaches to promoting student health, wellness, and academic achievement.



### Intellectual and Developmental Disabilities

We support people with intellectual and developmental disabilities and their families through transformative research and innovative programs.



### Healthy Aging

We apply the latest research in healthy aging to community-based applied interventions for older adults and their families including grandparents raising grandchildren.



### Community-University Partnerships

We collaborate with our partners to assess community needs, translate research to practice, support program implementation, and evaluate program impact.

### Focus Areas Include:

- Substance use and misuse
- Mental health
- Positive school climate
- Academic success
- Social-emotional learning

- Executive function
- Pathways to employment
- Identification of Co-occurring conditions
- Physical health

- Mental health
- Physical health
- Social health
- Caregiver self-efficacy
- Support systems

- Policy change
- Family resilience
- Leadership Training
- Civic engagement
- Supporting communities



# Human Development Within Context

- Human development is a multifaceted concept that encompasses the growth and progression of individual health, education, and overall well-being.

## Human Development Defined

Mental, emotional, and behavioral development often occur as we hope.

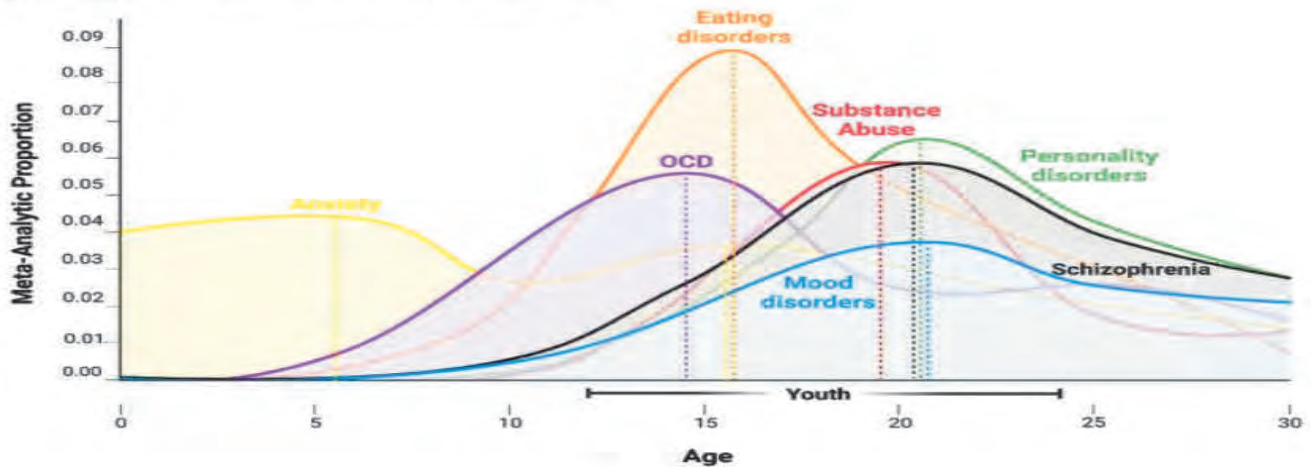
- Youth thrive academically
- Mental and emotional wellbeing
- Healthy peer and family relationships
- Healthy and developmentally appropriate sexual relationships
- Substance use within a healthy range
- Physical health

Development can also occur in ways we don't want it to.

- Academic failure
- Mental health challenges (e.g., anxiety, depression, suicide)
- Interpersonal problems
- Sexual violence (e.g., Intimate partner violence)
- Substance use disorders
- Health risk (e.g., CVD, cancer, etc.)

## Health Behavior Challenges are Developmental

**Fig. 1: Age of onset of mental disorders.**



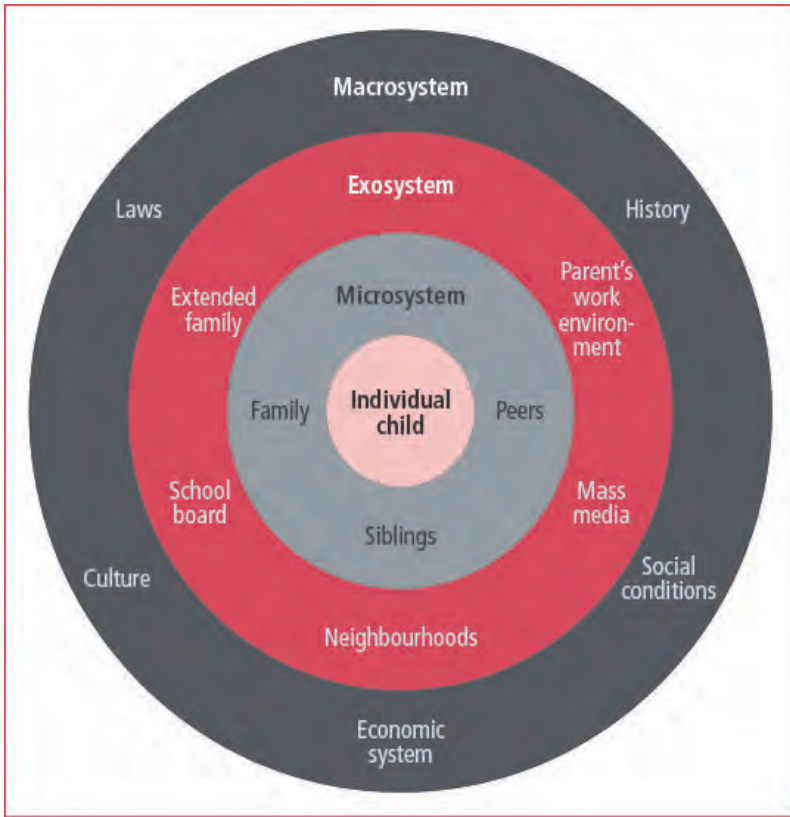
Uhlhaas et al., (2023). Towards a youth mental health paradigm: a perspective and road map. *Molecular Psychiatry*, <https://doi.org/10.1038/s41380-023-02202-z>

## Human Development Within Context

- Human development is a multifaceted concept that encompasses the growth and progression of individual health, education, and overall well-being.
- Development is influenced by multiple biological, social, contextual, and societal factors.



Urie Bronfenbrenner's Social Ecological Theory



Arnold Sameroff's Unified Theory of Development

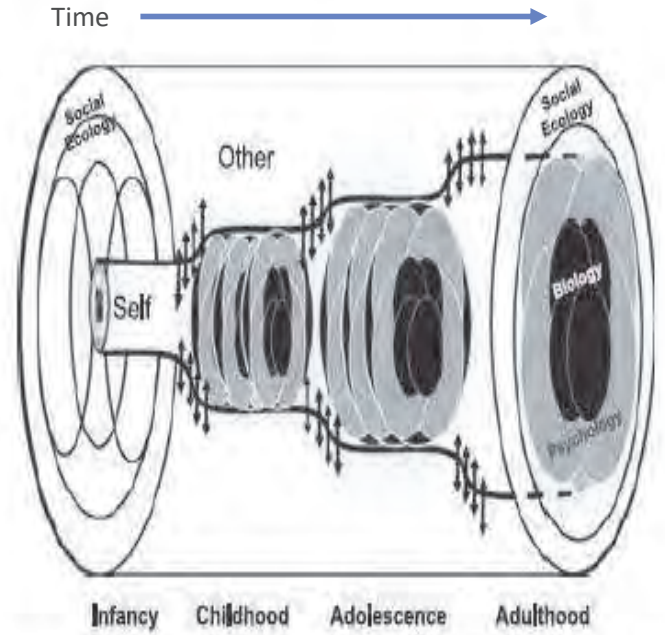


Figure 7. Unified theory of development including the personal change, context, and regulation models.

This Brings Us to Prevention

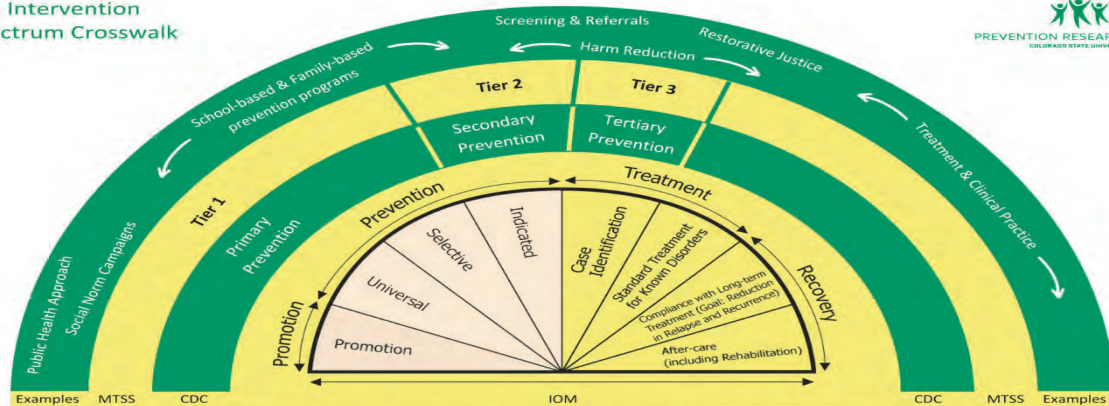


# Prevention Defined

## Prevention or Treatment?

Prevention may be defined differently depending on who you ask. Different fields have different benchmarks and terminology. Here is a helpful model that combines multiple frameworks:

### The Intervention Spectrum Crosswalk



Adapted From: Institute of Medicine (IOM) Continuum of Care; Center for Disease Control and Prevention (CDC) Public Health Model; & Multi-Tiered System of Supports (MTSS), Colorado Department of Education

Among the Factors Contributing to Healthy/Unhealthy Developmental Trajectories?

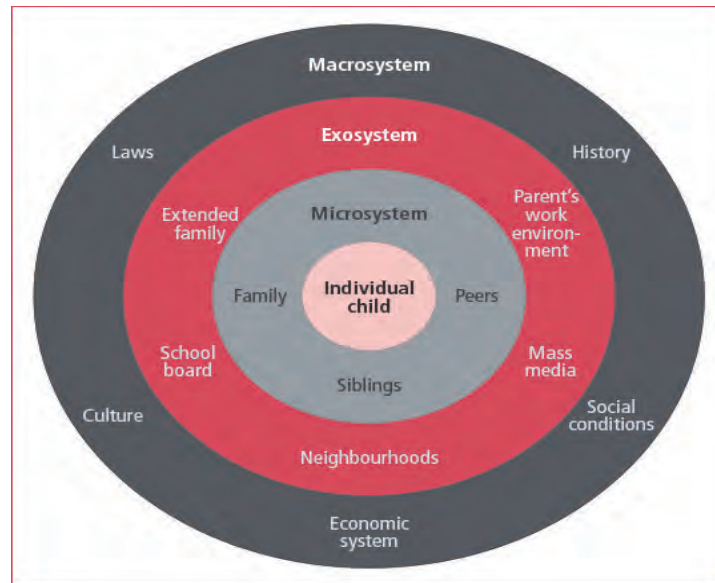
**Risk Factors:** Any attribute, characteristic, exposure, or process that increases the likelihood of developing a disease, injury, or other health condition.

**Protective Factors:** Any attribute, characteristic, exposure, or process that protects against or buffers the effects of risk factors.

# Risk and Protective Factors are Contextually Embedded

## PRO TIP

It is best practice to use community-level data and community voice to identify where the risk and protective factors exist and then select community-specific, evidence-based preventive interventions accordingly.

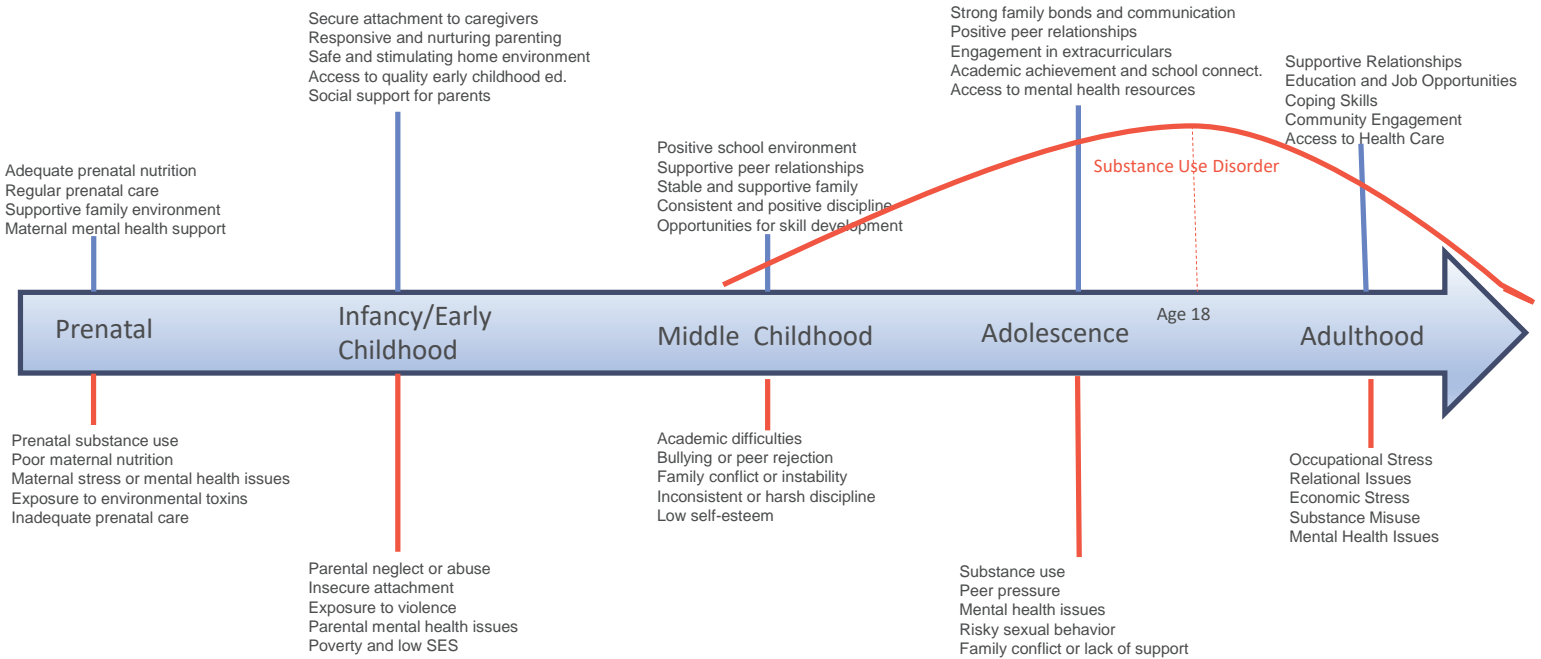


Risk and Protective Factors  
Can Differ Across  
Developmental Periods





# Protective Factors

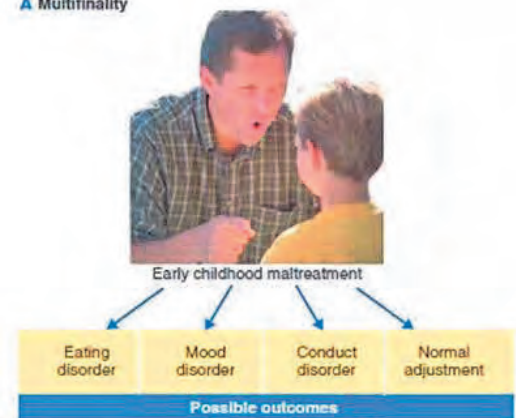


# Risk Factors

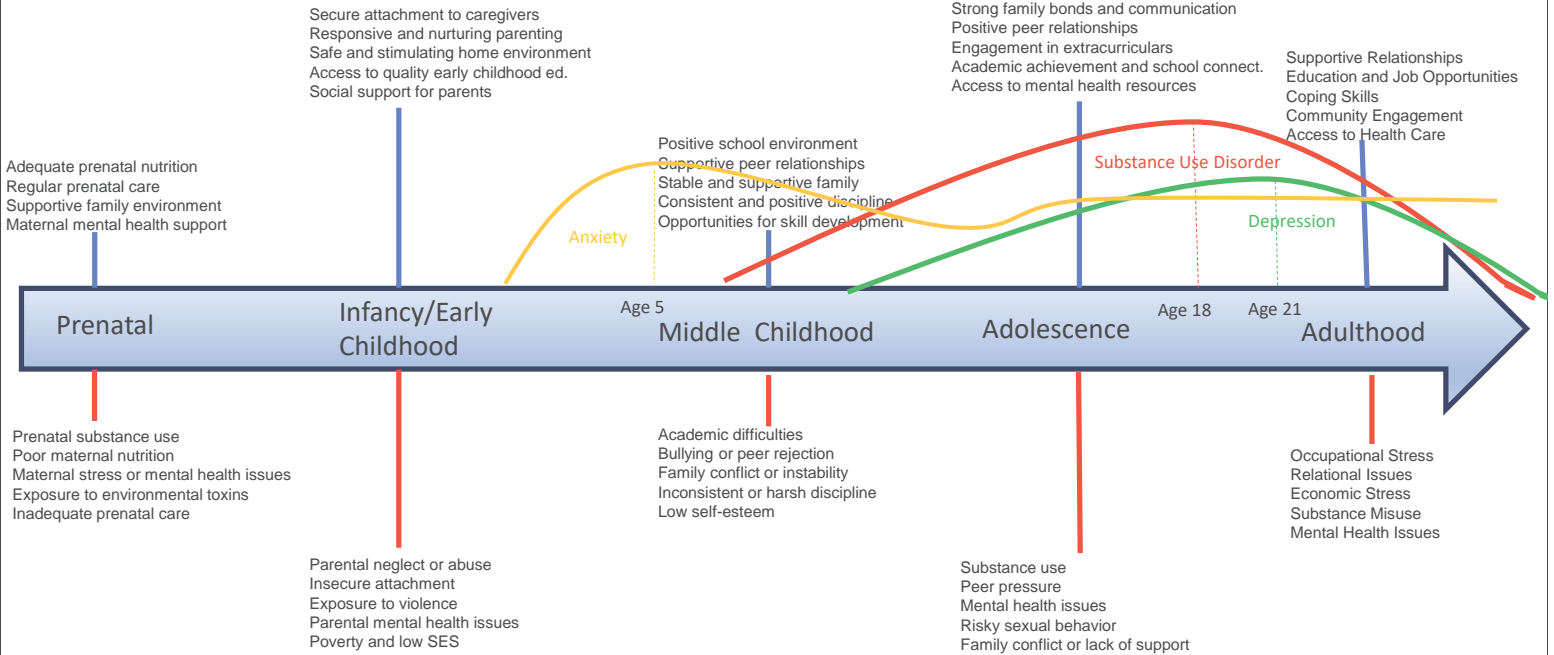
## Multifinality

- The principle that similar initial conditions, or risk and protective factors, can lead to different outcomes.
  - Self-regulation is a risk factor common to substance misuse, violence, risky sexual behavior, among others.
- Implication for prevention – Targeting common risk and protective factors that predict several poor developmental outcomes may be able to prevent multiple downstream health behavior problems.

▲ Multifinality



# Protective Factors



# Risk Factors

## Prevention Can Help Keep Your Community from Playing a Game of Perpetual Whack-A-Mole?



# Examples of Prevention Approaches By Developmental Period



Early Life	Childhood	Adolescence
Early Life Home Visiting Programs	School-based SEL Programs	Substance Use Prevention
Pre-Postnatal Maternal Support	Health Ed Programs	Mental Health, Coping, & Resilience Programs
Early Childhood Education	Family-Focused Programs	Family-Focused Programs
Parenting Programs	Mindfulness Programs	LGBTQI+ School Supports

## Examples of Developmentally Timed Prevention Programs

# Prenatal and Infancy Developmental Periods: Nurse Home Visiting Programs

## Nurse Home Visiting Programs



# Middle Childhood: Elementary School Social- Emotional Learning Programs



# What Can Prevention Look Like During Childhood? Social-Emotional Learning



## Brain Development and Executive Function



Been called the brain's "CEO" and "air traffic controller."



Those neuro-cognitive processes involved in self-regulation, problem-solving, and goal-directed health behavior.



Examples: Inhibitory control, attentional control, working memory, and planning.

# Executive Function and Health Outcomes in Children and Adolescents

## Violence and conduct problems

(e.g., Moffitt, 1993; Riggs et al., 2006; Weissberg & Greenberg, 1998).

## Risky Sexual Behavior and HIV+ Seroconversion

(e.g., Riggs et al., 2013; Gonzalez et al., 2005; Raffaelli et al., 2003).

## Mental Health

(e.g., Greenberg, 2001; Zelazo & Muller, 2002).

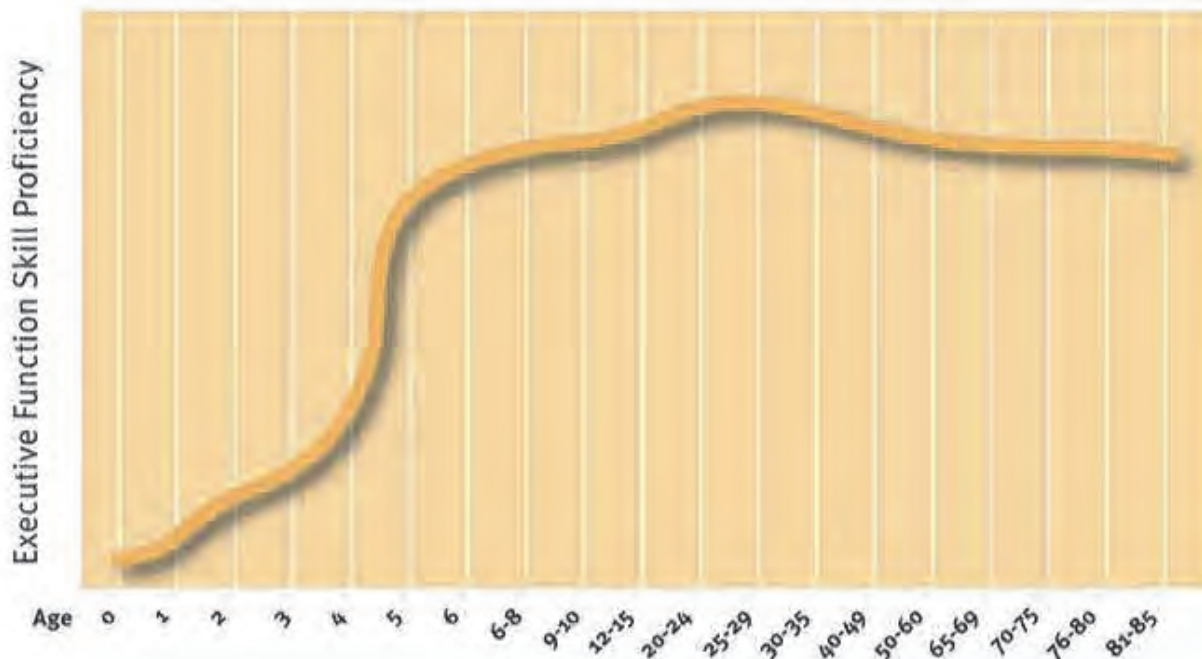
## Drug use

- EF problems and adolescent progression to alcoholism (Giancola & Moss, 1998; Nigg et al., 2004).
- EF problems = increased substance use prevalence as early as 4<sup>th</sup> graders (Riggs et al., 2011).

## Weight Gain, Food Intake, Physical Activity, and Sedentary Behavior

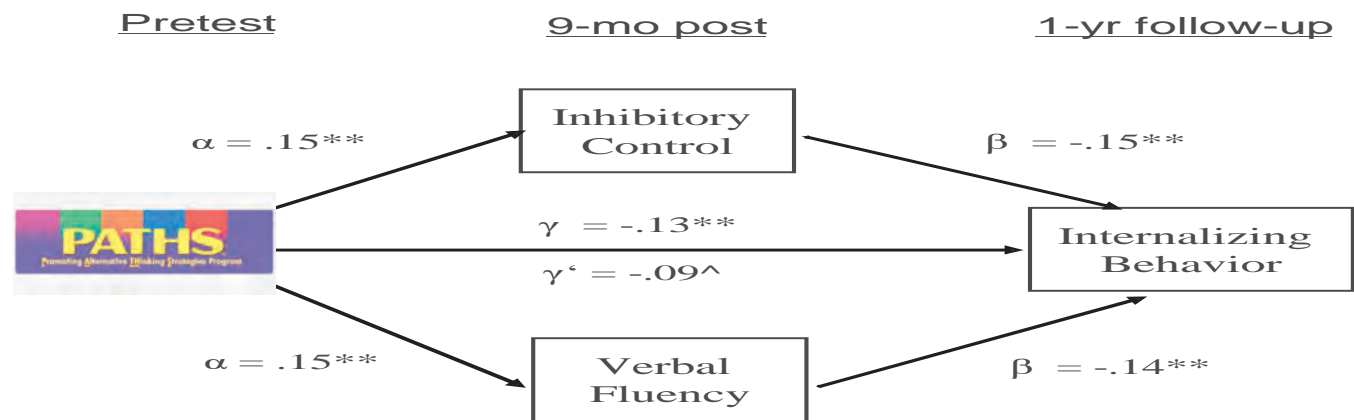
- (Nederkoorn et al., 2006; Riggs et al., 2010; Riggs et al., 2012).

## Executive Function Skills Build Into the Early Adult Years



Source: Weintraub et al. (Submitted for Publication)

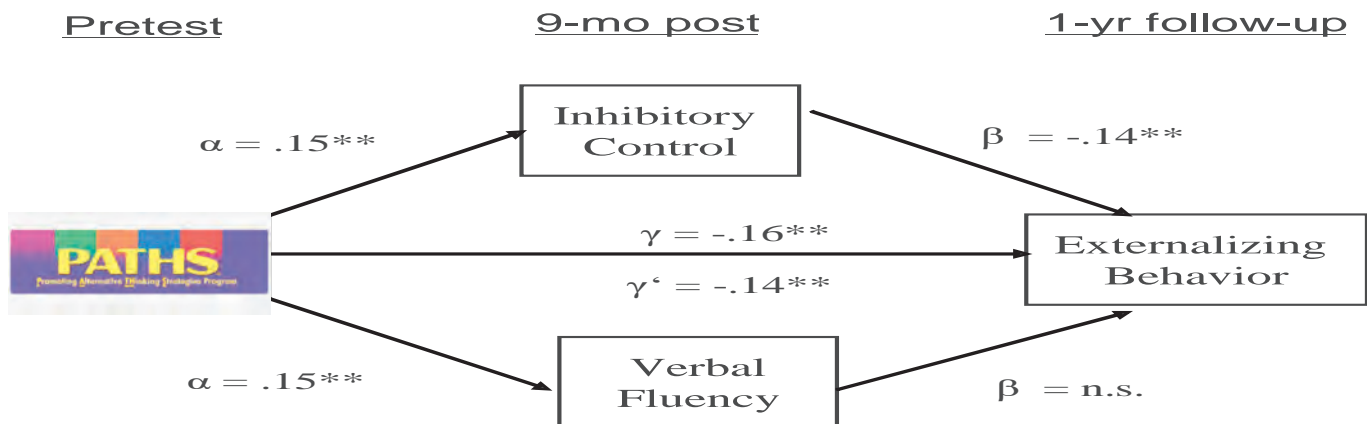
# SEL PROGRAMS CAN PROMOTE NEURO-COGNITIVE FUNCTIONING



$\wedge = p < .10$ ;  $** = p < .01$ ;  $*** = p < .001$

Riggs, Greenberg, Kusche, & Pentz (2006)

# SEL PROGRAMS CAN PROMOTE NEURO-COGNITIVE FUNCTIONING



\*\*  $p < .01$

Riggs, Greenberg, Kusche, & Pentz (2006)



# Adolescence: Outcome-Specific Prevention in Schools and Families

## What Does Prevention Look Like in Middle and High School



# What Does Prevention Look Like? Family-Focused Prevention

- The Strengthening Families Program: For Parents and Youth 10-14 (SFP 10-14) is delivered in seven parent, youth, and family sessions.
- The program is taught by trained facilitators with 7-10 families over seven weeks.
- Often taught with Botvin's LST as part of a two-context approach.



IOWA STATE UNIVERSITY  
Extension and Outreach

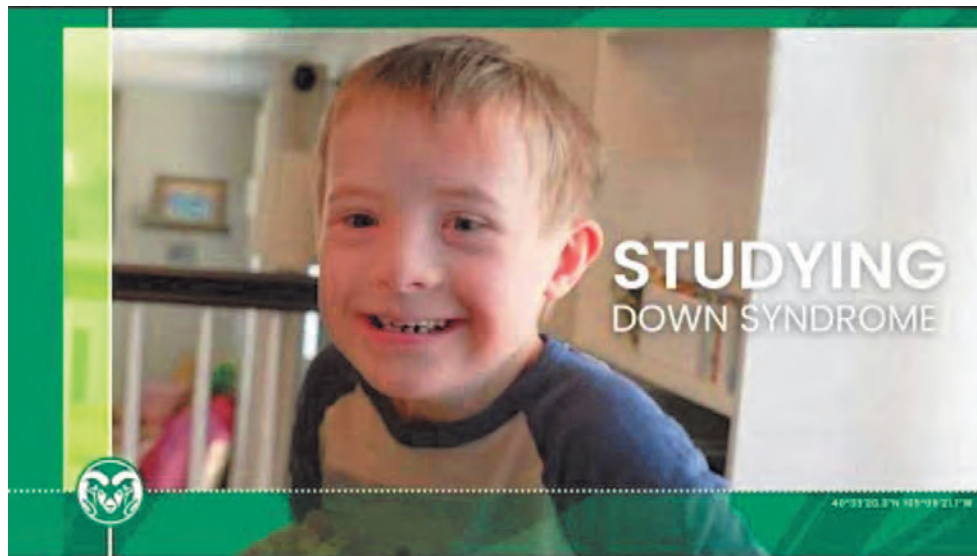
Adulthood and Healthy Aging:  
Typical and Non-traditional  
Developmental Trajectories and  
Transitions

# Healthy Aging: Non-Traditional Developmental Transitions



Interventions for Individuals  
Whose Chronological  
Development Differs from Their  
Mental and Cognitive  
Development

# Developmental Research for Young People with Neurogenetic Conditions



**EXPO**  
EXECUTIVE FUNCTION  
PLAY OPPORTUNITIES  
YOUR GUIDE TO  
EXECUTIVE FUNCTION PLAY  
OPPORTUNITIES (EXPO)





## BLOCK 2: WORKING MEMORY

Choose 2 - 3 activities below to play with your child this week!

### DRUM BEATS



**CONTEXT:** bedtime

**SETTING:** bedroom or living room

**MATERIALS:** pillows (one for each person)

**ACTION:**

1. Have each person sit with a pillow on their lap (siblings can join in!).
2. Say, "Time to play drums! I'll play one, then you play one!"
3. Hit the pillow 2 times and then ask your child to repeat the sounds.
4. Say, "Great job! Let's do it again. Follow me!"

**TIPS:**

- If your child responds to your instructions, smile and say, "Great job! Let's keep playing!"
- If your child doesn't respond to your instructions, say, "Okay, my turn! Watch me..." Play a simple beat again, then say, "Now your turn!"
- If your child expresses an interest in leading the game, let them lead a round and then copy their beats.

### DRUM BEATS LEVELS



- Stick to simple 1-2 tap beats at approximately one-second intervals.



- Increase beats to be 3-4 taps in length.
- Add in speed variations to your drum beats (e.g., make 2 quick beats then pause briefly and do 1 more beat).



- Increase beats to be 4-5 taps in length.
- Add a pause before repeating the drum beat (e.g., after you make the taps, count out loud "1, 2, 3!" Then ask your child to repeat the beat).
- Consider changing the action or tapping on different parts of the pillow (e.g., tap/squeeze the corner or rotate the pillow once).

**GOAL:** Remember and repeat an action.

## CSU Ram Scholars: Developmentally-Timed Career and Technical Education



# Selecting Developmentally-Timed Evidence-Based Preventive Interventions

**Blueprints**  
FOR HEALTHY YOUTH DEVELOPMENT

[FIND PROGRAMS](#) [BLUEPRINTS CERTIFICATION](#) [FAQS](#) [ABOUT BLUEPRINTS](#)

## Program Search

This interactive search enables you to identify Blueprints-certified interventions based on specific criteria and then browse through a wide range of interventions that match those criteria. Select only a few criteria of importance, as the number of interventions may be reduced by selecting multiple items ACROSS categories, or increased by selecting multiple items WITHIN categories.

Model and Model Plus programs are listed separately from Promising programs. This is because only Model and Model Plus programs have demonstrated efficacy for changing outcomes over time and are recommended for large-scale implementation. Promising programs show promise of efficacy, but require follow-up research before being recommended for large-scale adoption.

## In Closing

- To fully understand how to influence human behavior, we must understand how that behavior has developed over time.
  - Developmental theory uses years of prevention research to help us understand how and when to intervene.
- Preventive interventions can target developmentally-timed risk and protective factors (e.g., brain development).
  - These prevention efforts are implemented in social contexts critical for this development.
- Registries of evidence-based developmentally-timed preventive interventions can help communities find research-proven programs that can fit communities' unique context and culture.



HUMAN DEVELOPMENT  
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970-491-2684



# ADDITIONAL RESOURCES

## Resource

**Colorado State University Prevention Research Center.** The Center has 4 divisions and resources are offered in each of these areas: Healthy Schools, Intellectual and Developmental Disabilities, Healthy Aging, and Community-University Partnerships.

<https://www.chhs.colostate.edu/prc/>

**Blueprints for Healthy Youth Development** is a national registry that can be used to select developmentally timed evidence-based preventive interventions.

<https://www.blueprintsprograms.org/>

**ADAPT's Prevention Intervention Resource Center** provides a comprehensive listing of evidence-based program registries with direct access links.

<https://www.hidta.org/adapt/prevention-intervention-resource-center/>



# UPCOMING EVENTS

**11.13.24**

3:00-4:30pm  
ET

## **The Role of Parenting in Substance Use Prevention**

This webinar will be led by Dr. Robert LaChausse who will provide an overview of the best available evidence for how parents can support substance use prevention. Upon completion of the webinar, participants will be able to:

1. Summarize the role of parents and caregivers in preventing substance use.
2. Explain the importance of positive parenting practices in preventing substance use.
3. Describe specific evidence-based preventive interventions parents can support and the expected outcomes of these interventions.

**[Register HERE](#)**