A stylized, light brown illustration of a plant with several leaves and a cluster of small, round fruits or berries, positioned on the left side of the slide.

THE CENTER FOR FAMILY RESEARCH PREVENTION PROGRAMS

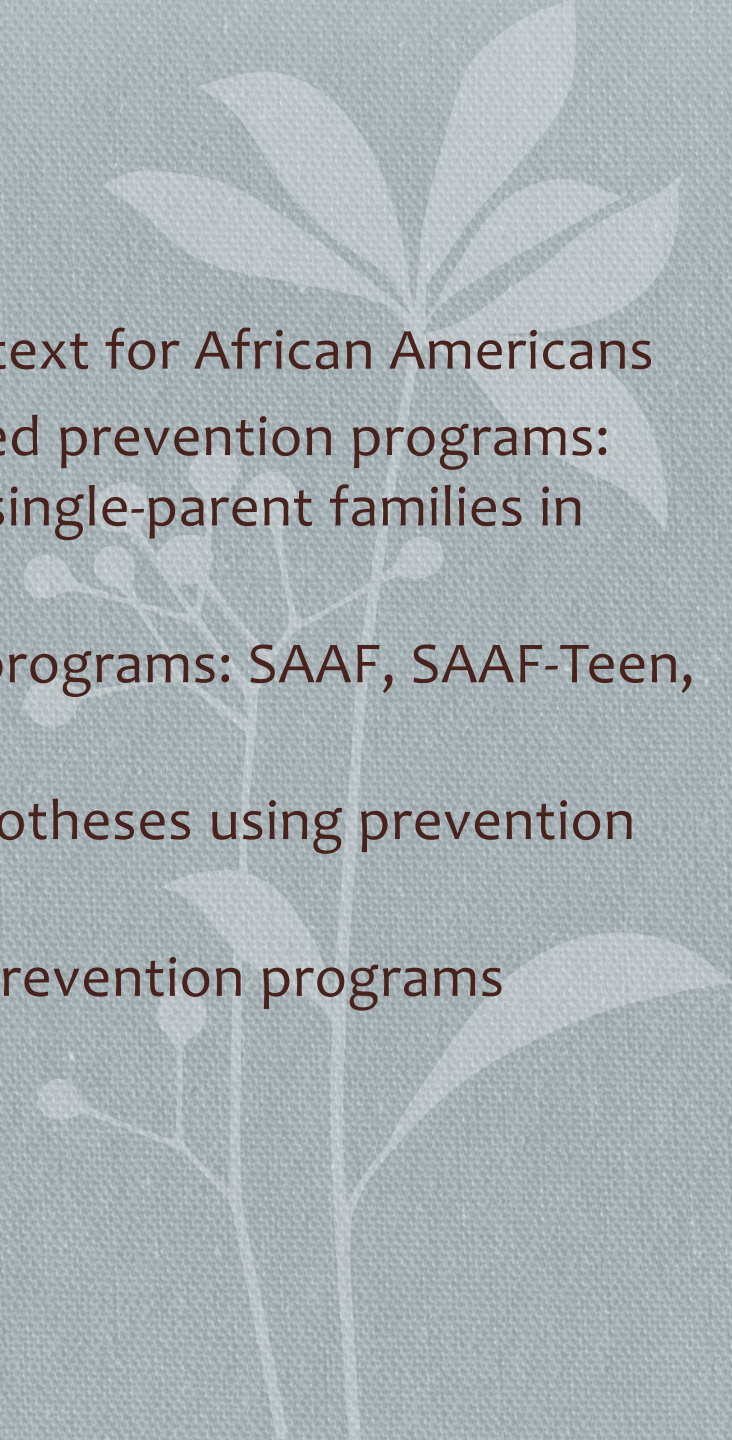
Origins, Expansions, and How
They Continue To Surprise Me

Collaborators:

- Steven R. H. Beach
- Edith Chen
- Yi-fu Chen
- Steven M. Kogan
- Man-Kit Lei
- Gregory E. Miller
- Velma McBride Murry
- Tianyi Yu
- The Professional Staff of the Center for Family Research at the University of Georgia



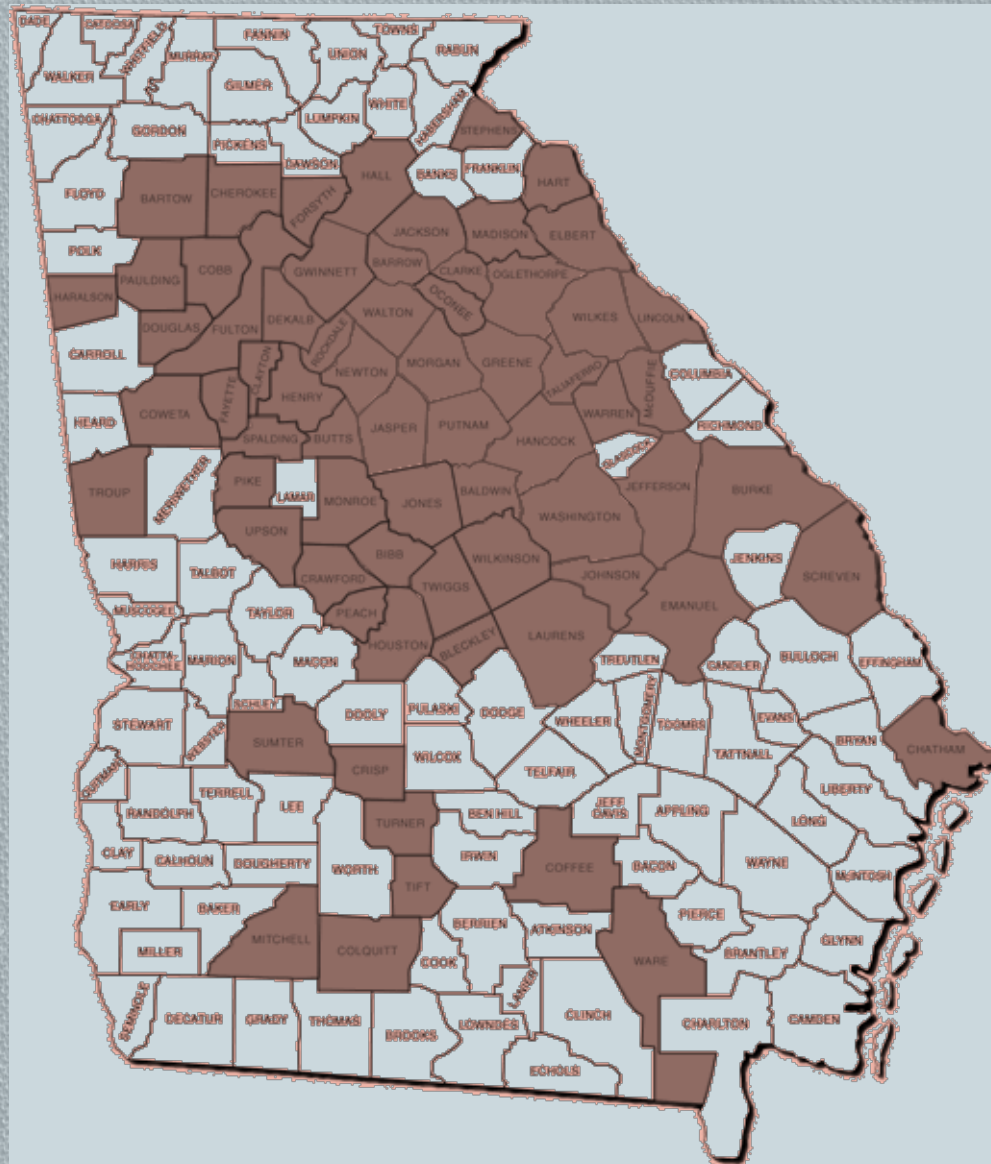
Overview of Topics

- The rural South as a developmental context for African Americans
 - Laying the foundation for family-centered prevention programs: Epidemiological studies of married and single-parent families in rural Georgia
 - Center for Family Research prevention programs: SAAF, SAAF-Teen, and Adults in the Making
 - Testing gene-environment interplay hypotheses using prevention trials
 - The health benefits of family-centered prevention programs
- 
- A decorative graphic of a plant with several large, light-colored leaves and a thin stem with small, round buds, positioned on the right side of the slide.

Counties Comprising the Southeastern “Black Belt”



Where We Conduct Research



Getting Started: Partnership with the Rural African American Community

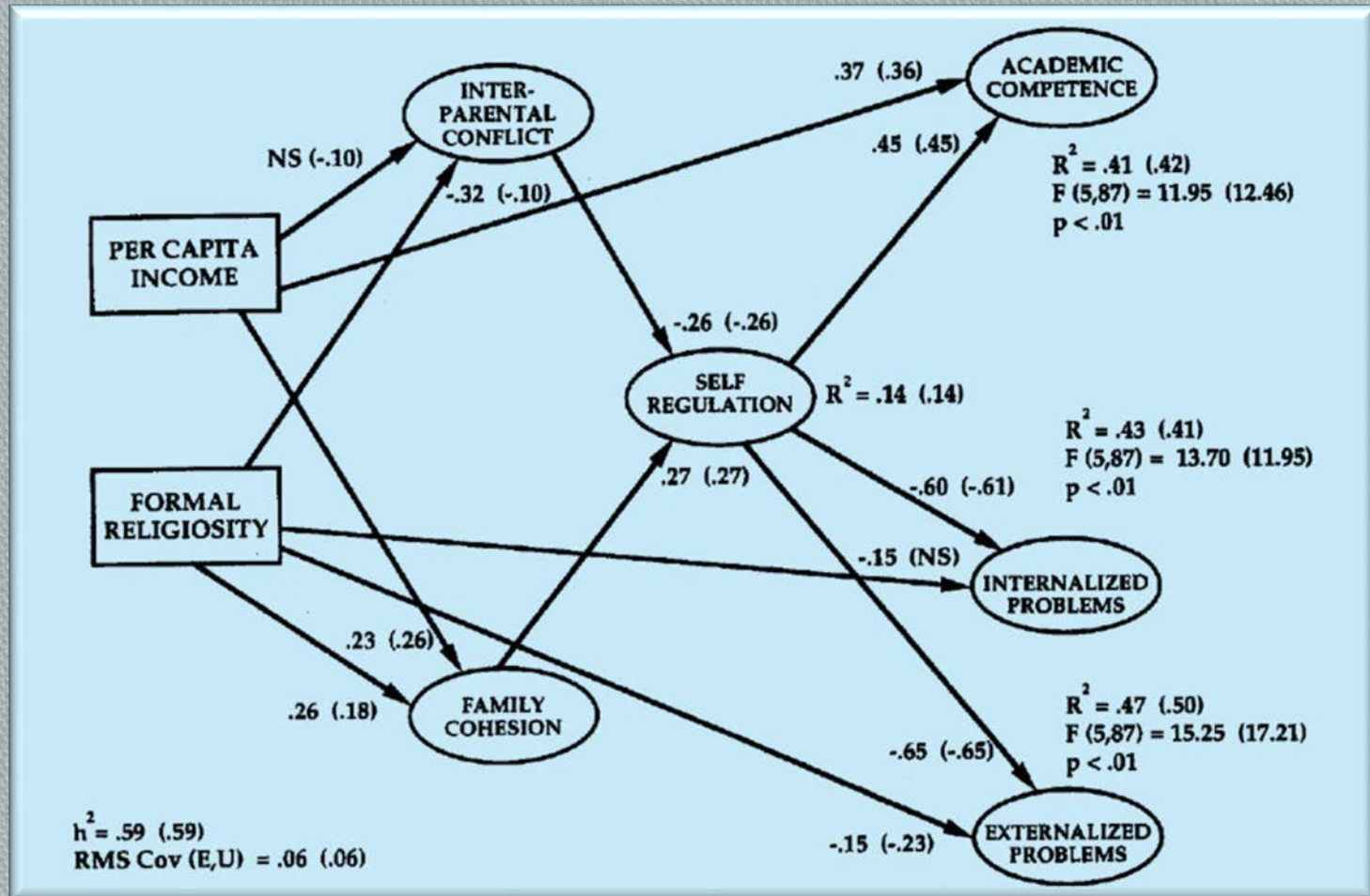
- Focus groups to address:
 - Self-report measurement issues
 - Validity
 - Wording
 - In-home data collection protocols
- Community Liaison Network




A stylized, dark brown illustration of a plant with several long, narrow leaves and clusters of small, round buds or flowers, positioned on the left side of the slide against a dark brown background.

RESEARCH WITH MARRIED-PARENT FAMILIES

Parental Religiosity and Youth Competence

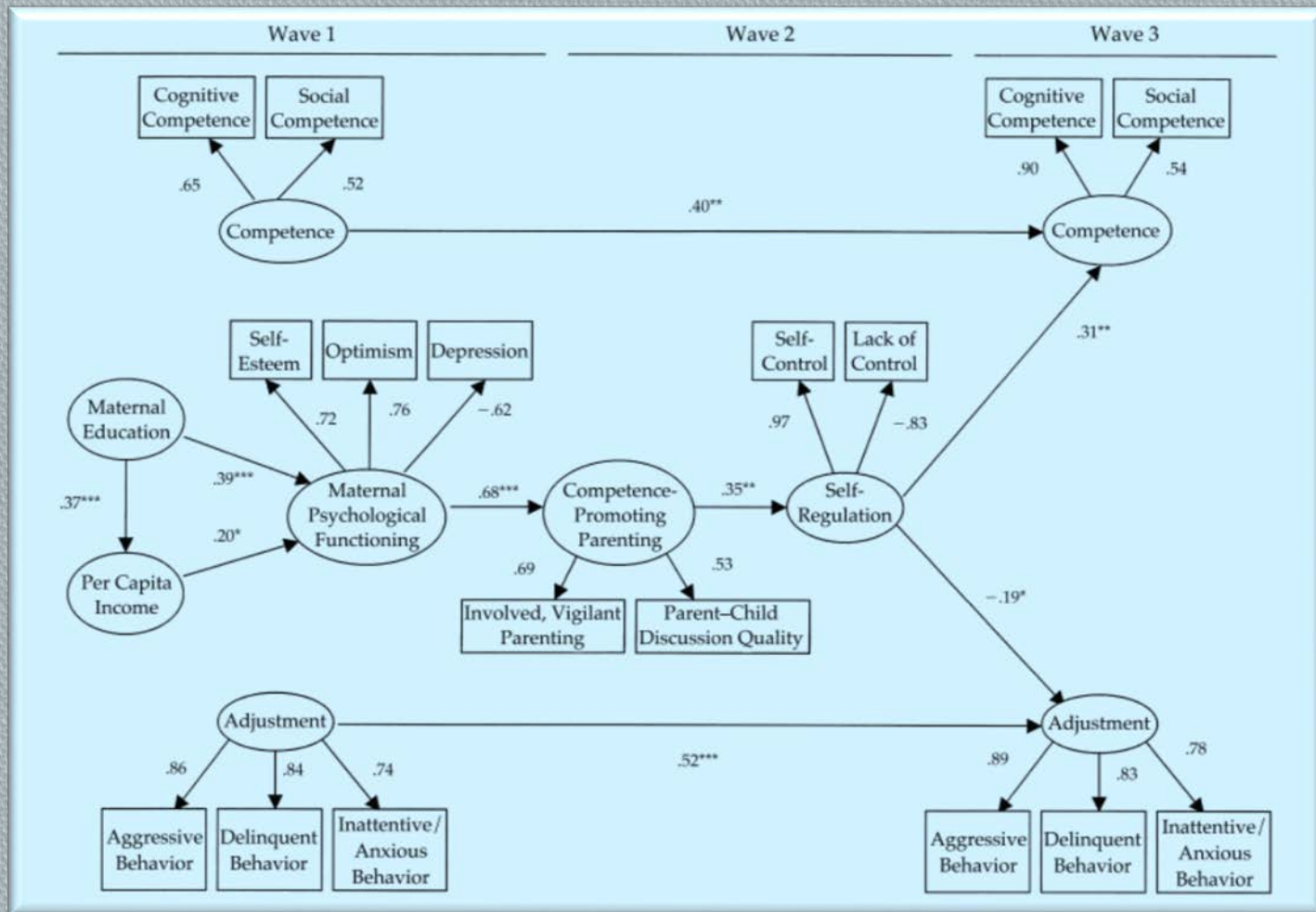


Brody, Stoneman, & Flor. (1996). *Developmental Psychology*, 32, 696-706.

A stylized, dark brown illustration of a plant with several long, narrow leaves and clusters of small, round berries or buds. The plant is positioned on the left side of the slide, extending from the bottom to the top.

A SAMPLE OF RESEARCH WITH SINGLE-PARENT FAMILIES

Longitudinal Pathways to Competence and Adjustment



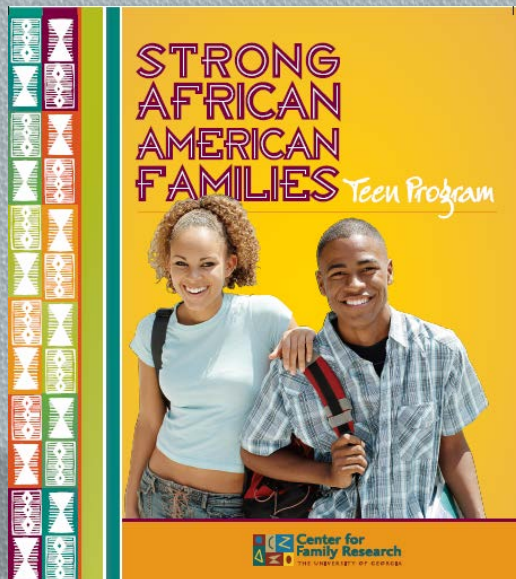
Brody, Murry, Kim, & Brown. (2002). *Child Development*, 73, 1505-1516.



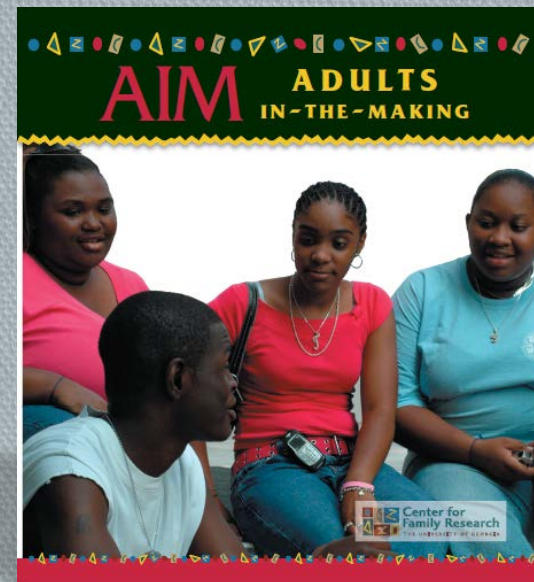
PREVENTIVE INTERVENTIONS



*



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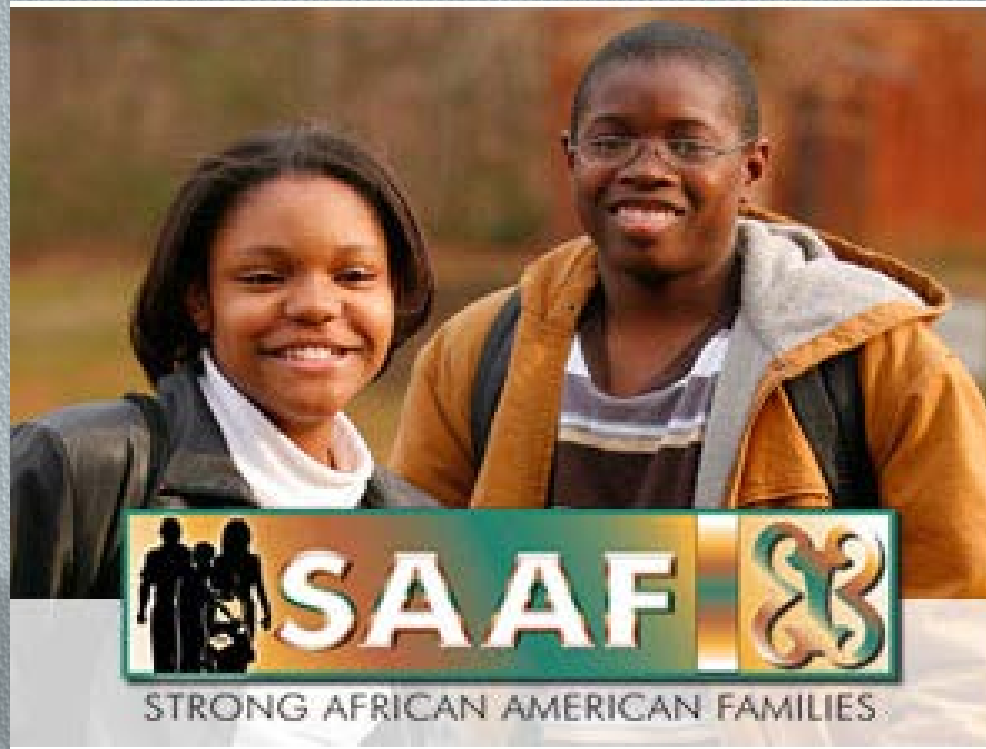


*Brody et al. (2004). *Child Development*, 75(3), 900-917. doi:10.1111/j.1467-8624.2004.00713.x

**Brody et al. (2012). *Pediatrics*, 129(1), 108-115. doi:10.1542/peds.2011-0623

***Brody et al. (2012). *Journal of Consulting and Clinical Psychology*, 80(1), 17-28. doi:10.1037/a0026592

The Strong African American Families (SAAF) Program

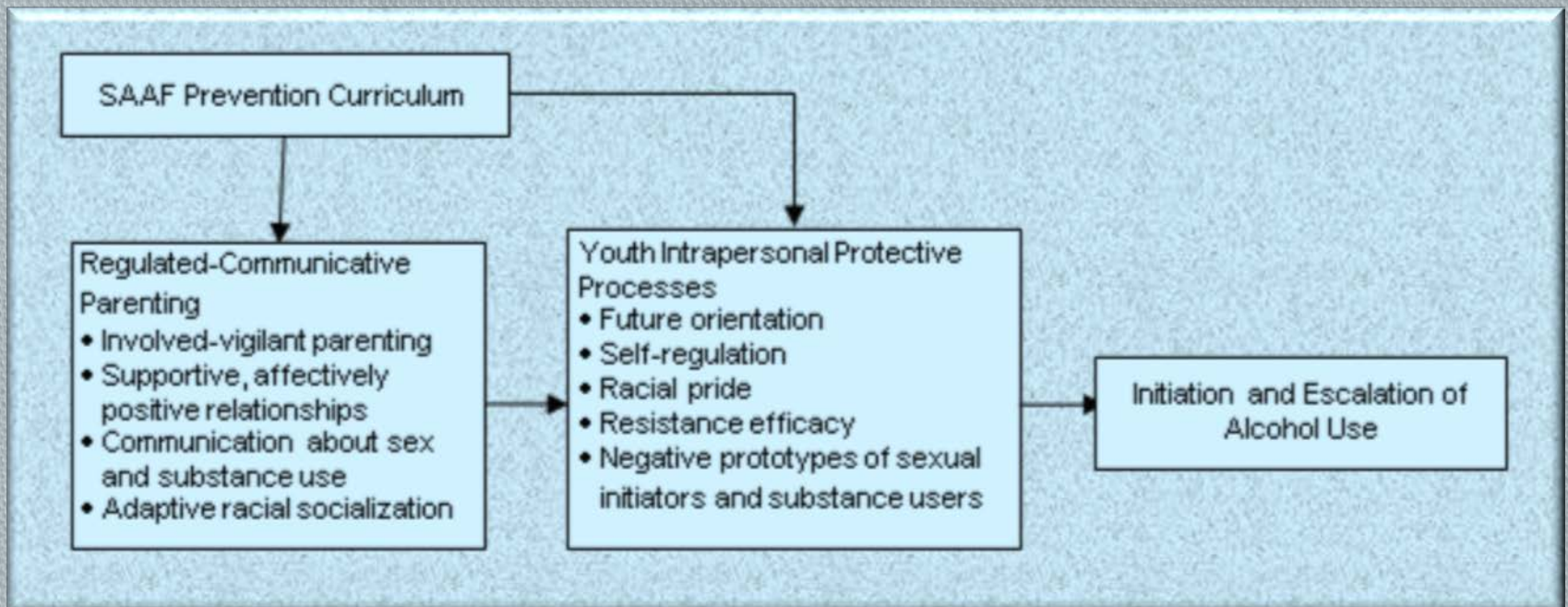


Brody, Murry, Gerrard, Gibbons, Molgaard, McNair, Brown, Wills, Spoth, Luo, Chen, & Neubaum-Carlan. (2004). *Child Development*, 75, 900-917.

The SAAF Program Curriculum Summary

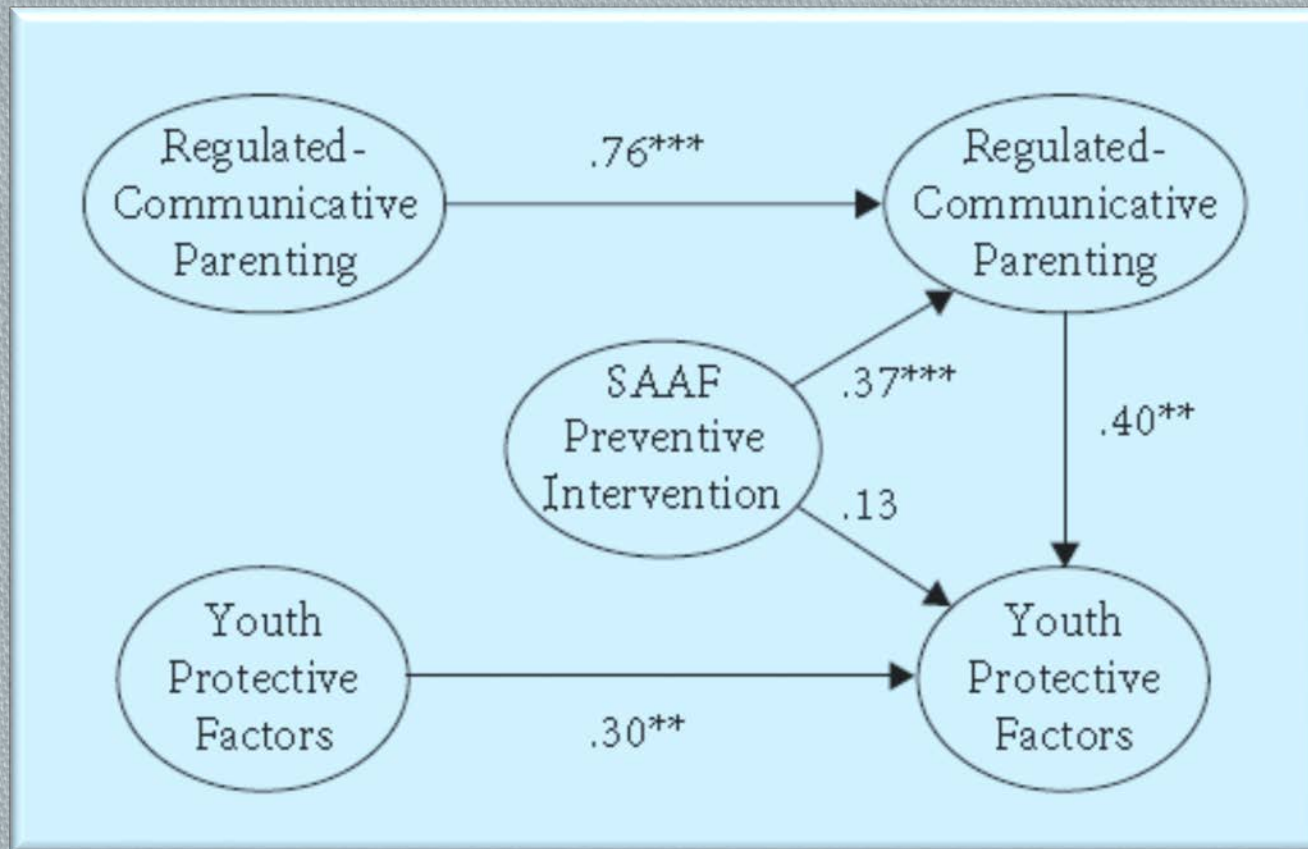
Session	Parent Session Title	Parent-Targeted Behaviors	Youth Session Title	Youth-Targeted Behaviors	Family Session Title	Family-Targeted Behaviors
1	Supporting Our Youth	Identify parental fears and support youth goals and dreams	Goals for the Future	Identify and visualize goals and dreams	Family Support for Youths' Goals	Build nurturing, supportive relationship; enhance parental involvement
2	Making and Enforcing Rules	Develop household rules; enhance consistent discipline and monitoring	Who Am I?	Differentiate self from substance-using peers	Sharing Youth and Family Values	Develop shared understanding of family rules and values
3	Everyday Parenting	Develop everyday routines; respect youth autonomy; reinforce good behavior	Dealing with Temptations for Early Sex	Understand normal adolescent development; encourage abstinence; foster resistance efficacy	Supporting Youth Development and Concerns	Share views about how to reward and praise; communicate about sex; discuss parental stress
4	Helping Youth Succeed in School	Promote school involvement; develop school advocacy skills	Staying True to My Values	Understand peer pressure and risky situations; develop resistance efficacy skills	Understanding Each Other	Identify stress relievers; discuss ways to help each other meet family goals
5	Protecting Against Dangerous Behavior	Understand the prevalence of risk behaviors among youth; learn to be an effective monitor; learn to be an approachable parent	Handling Peer Pressure and Understanding Parents	Learn to handle peer pressure; understand parental concerns; develop appreciation of parents	Parents and Young People Working Together	Develop plans for handling peer pressure and temptation; share expectations and values about risk and friends
6	Encouraging Racial Pride	Identify ways of handling discrimination; learn ways to build positive ethnic/racial pride	Dealing with Unfair Situations	Learn strategies for responding to unfair situations including racism	Strengths of Black Families	Identify the strengths of African American families; build racial pride in family
7	Staying Connected with Youth	Preserve "family time" and connections with youth; learn to manage youth negativity; identify community resources for youth/parents	What is a Good Friend?	Learn qualities of good friends; learn how to support friends; learn how to interactive with positive adolescent role models	Expressing Appreciation	Discuss and identify family strengths; establish a family creed that reflects strength, growth, and competence

SAAF Causative Model



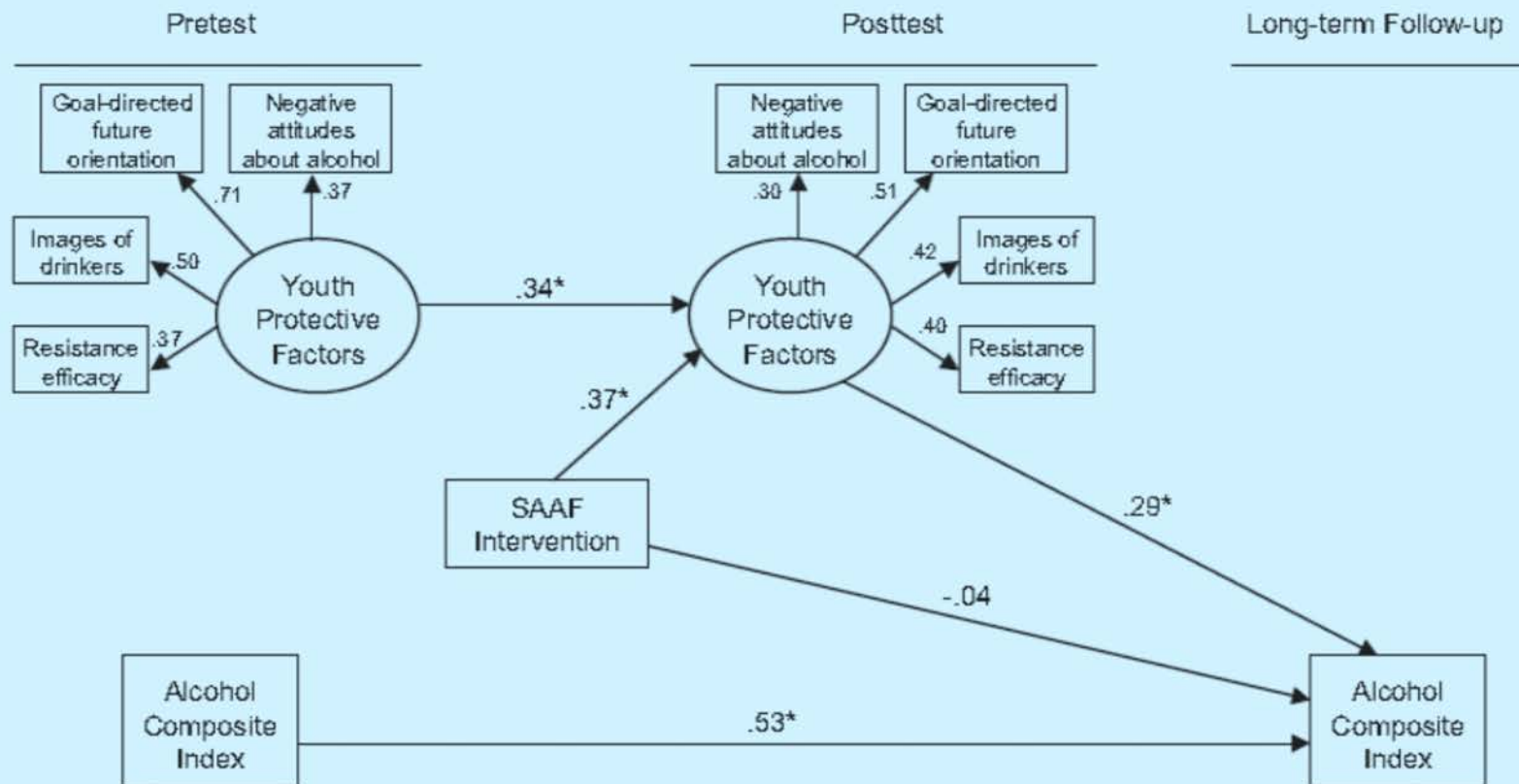
Brody et al. (2004). *Child Development*, 75, 900-917.

Testing SAAF's Causative Model



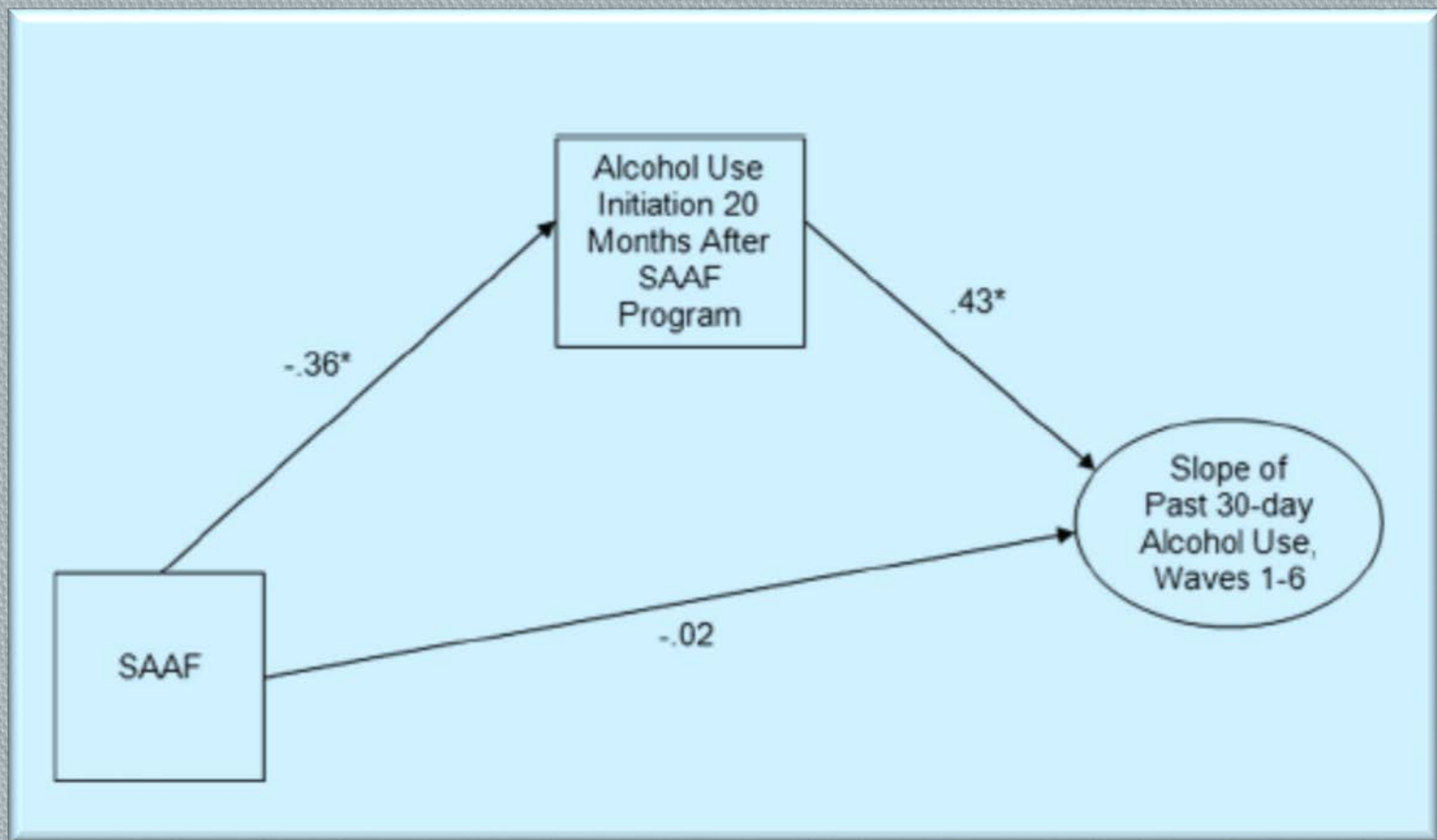
Brody et al. (2004). *Child Development*, 75, 900-917.

SAAF's Long-Term Effects and Tests of a Mediational Model



Brody, Murry, Kogan, Gerrard, Gibbons, Molgaard, Brown, Anderson, Chen, Luo, & Wills. (2006). *Journal of Consulting and Clinical Psychology*, 74, 356-366.

Five-Year Long-Term Effects and the Importance of Delaying Initiation of Alcohol Use



Brody, Chen, Kogan, Murry, & Brown. (2010). *Journal of Consulting and Clinical Psychology*, 78, 281-285.

HOT OFF THE PRESS! SAAF Affects Cotinine Levels at Age 20

Daily News

Vol. 20 Issue 9

Monday, February 28, 2011

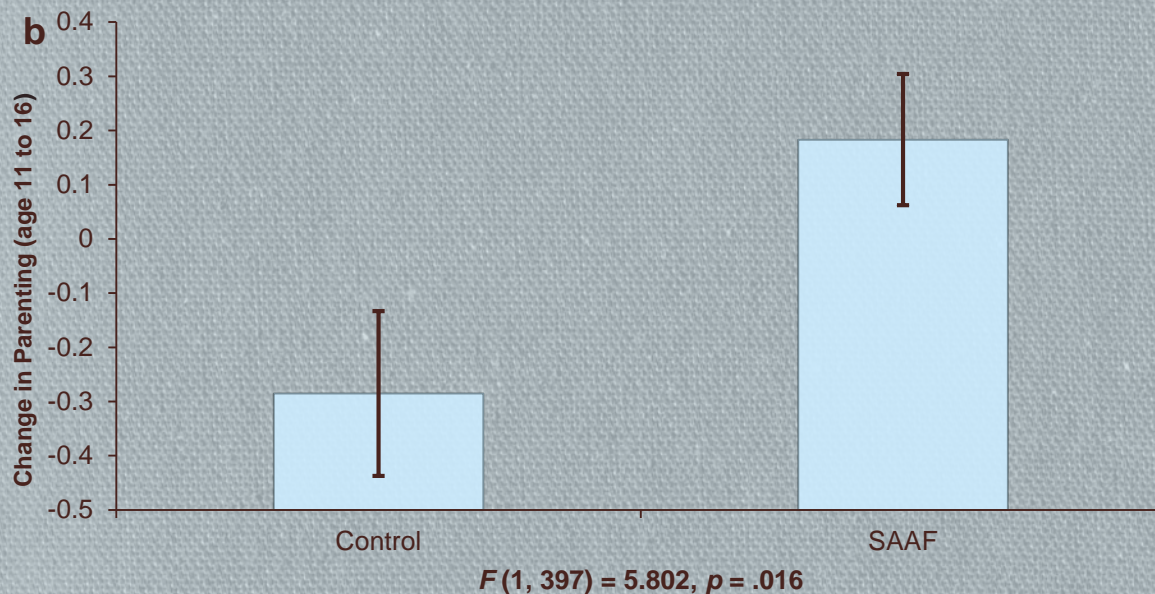
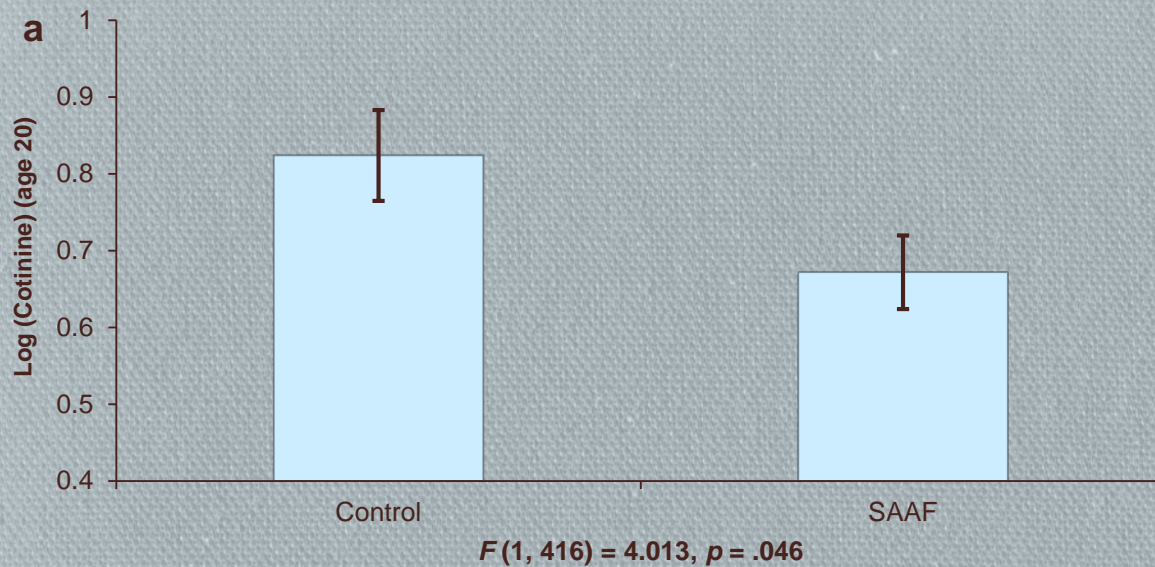
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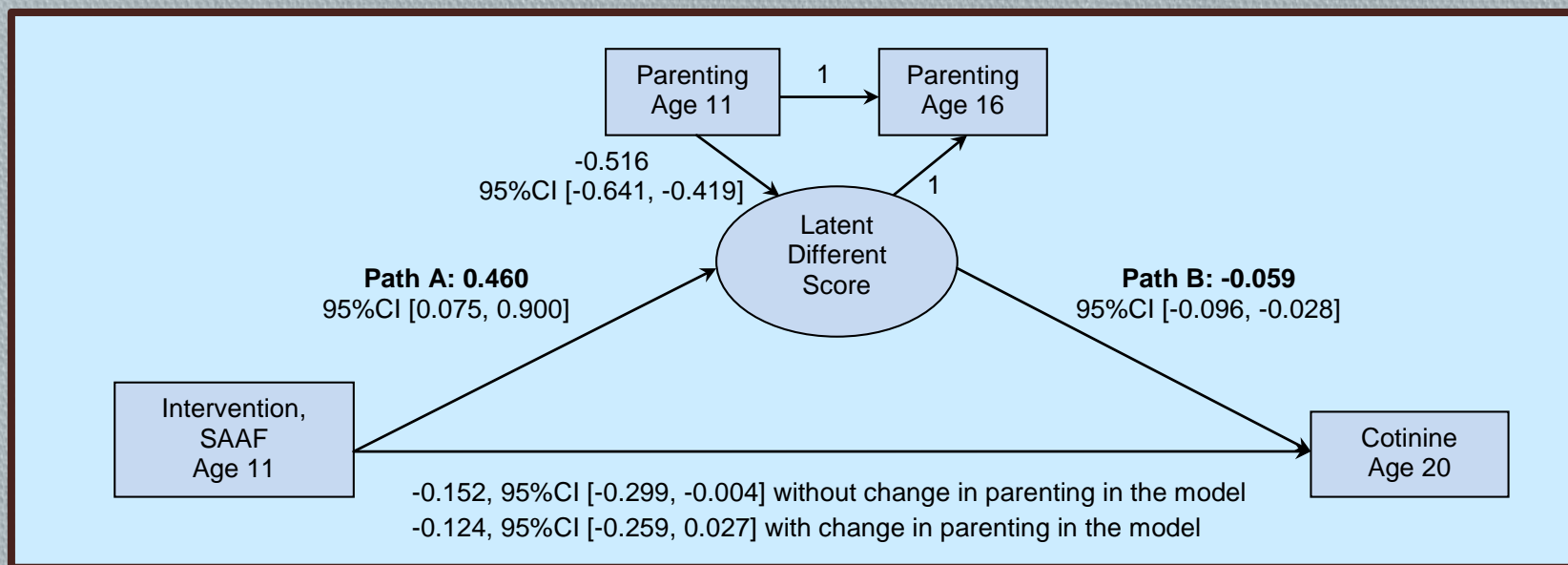


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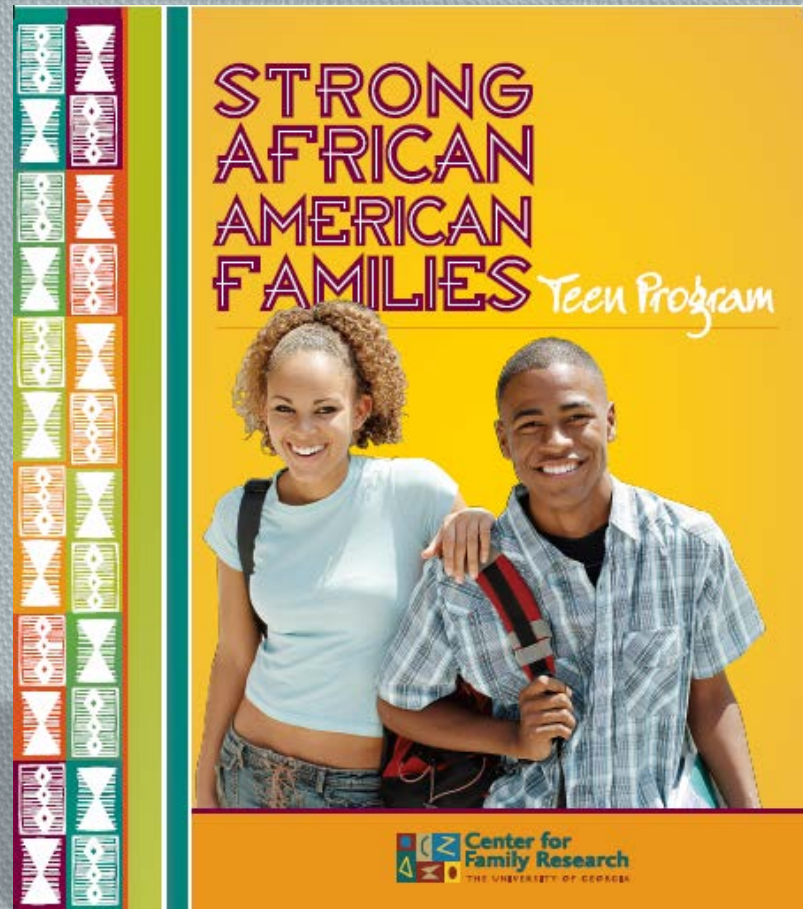


Means of (a) cotinine levels at age 20 and (b) change in intervention targeted parenting from age 11 to age 16 for the control and SAAF groups. Error bars = ± 1 standard error.



A mediation model of intervention status, changes in parenting from age 11 to age 16, and cotinine levels at age 20. Family socioeconomic-related risk, gender, youth smoking status at age 11, and youth college status and parent and friend smoking status at age 20 were controlled (not shown). Unstandardized coefficients with 95% confident intervals (CI) are presented. $N = 424$.

The Strong African American Families–Teen (SAAF–T) Program

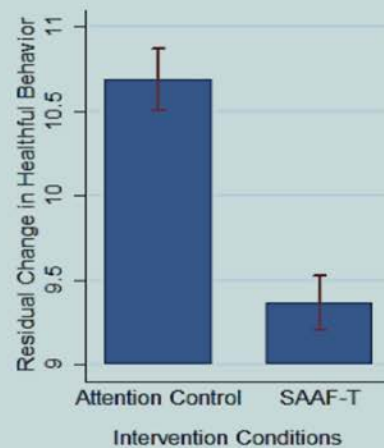
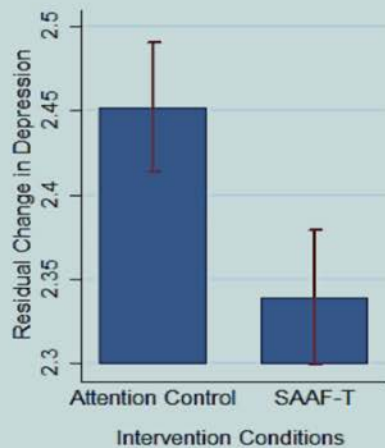
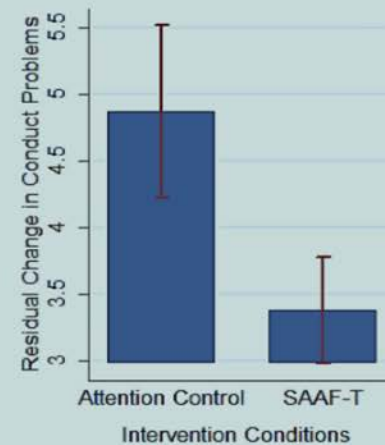
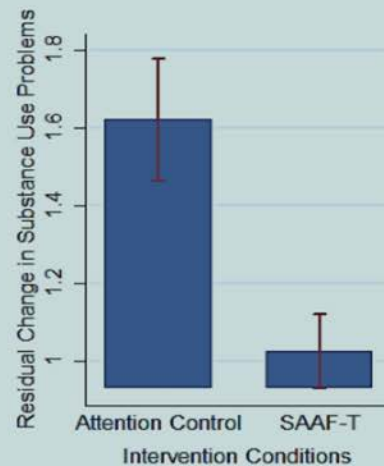
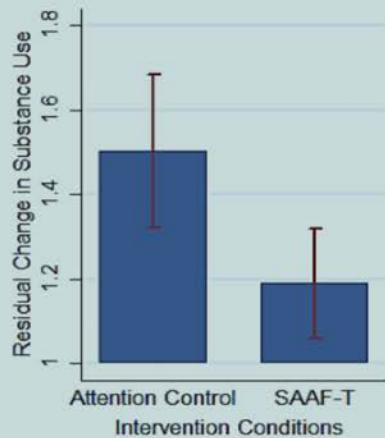


Brody, Chen, Kogan, Yu, Molgaard, DiClemente, & Wingood. (2012). *Pediatrics*, 129, 108-115.

The SAAF–T Program Curriculum Summary

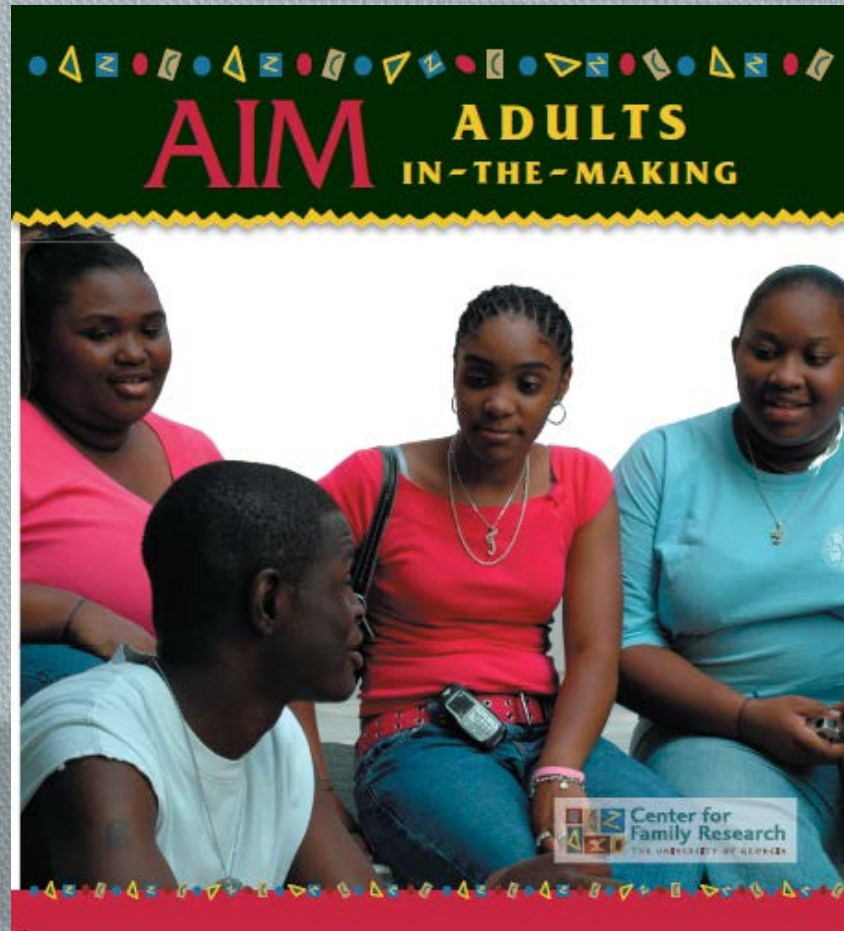
Session	Parent Session Title	Parent-Targeted Behaviors	Teen Session Title	Teen-Targeted Behavior	Family Session Title	Family-Targeted Behavior
1	Parenting Teenagers	Understand the changes teens experience as they get older and learn effective ways of being strict and caring	Likes, Choices, and Goals	Identify likes and skills and learn how these things relate to possible future careers	Strong African American Families	Identify contributions of local African Americans and the ways each family member can contribute
2	Helping Teens Move Toward Adulthood	Encourage appropriate independence in teens and their responsibility in the family and in the community	Money, Jobs, and the Future	Learn the costs associated with living independently and the salaries of various jobs	Getting Along Away from Home and at Home	Understand what causes stress among family members and discuss ways of handling discrimination
3	Parents' Involvement in School	Promote school involvement; develop school advocacy skills; practice a role play for meeting with the teacher	Job Choices, Pay, and Education	Understand that choices about education may impact future job options as well as salary Discuss peer pressure and develop resistance efficacy skills	Getting Ahead in the World	Practice solving everyday problems at home Discuss post high school educational opportunities
4	Helping Teens with Peer Pressure and Temptation	Understand the various pressures and temptations that teens face and learn ways to support teens involvement in risky/ dangerous behaviors. Discuss benefits to teens of getting information on safer sexual behavior.	Choices and Consequences About Sex	Understand the health related and personal consequences of sexual involvement Develop interpersonal skills to maintain decisions about abstinence	Teens and Peer Pressure	Identify situations in which teens experience peer pressure Practice helping teens resist peer pressure
4b (optional)			Safe Choices and Sex	Learn to communicate effectively with partner about condom use; learn how to use a condom properly		
5	Helping Teens Succeed in School	Discuss ways of encouraging teens to remain in school	My Goals for the Future and Barriers to Goals	Identify goals for future life and understand possible barriers to reaching those goals	Appreciating Each Other and Reaching Goals	Encourage family members to express appreciation and support for each other

SAAF-T Efficacy Effects



Brody, Chen, Kogan, Yu, Molgaard, DiClemente, & Wingood. (2012). *Pediatrics*, 129, 108-115.

The Adults in the Making (AIM) Program

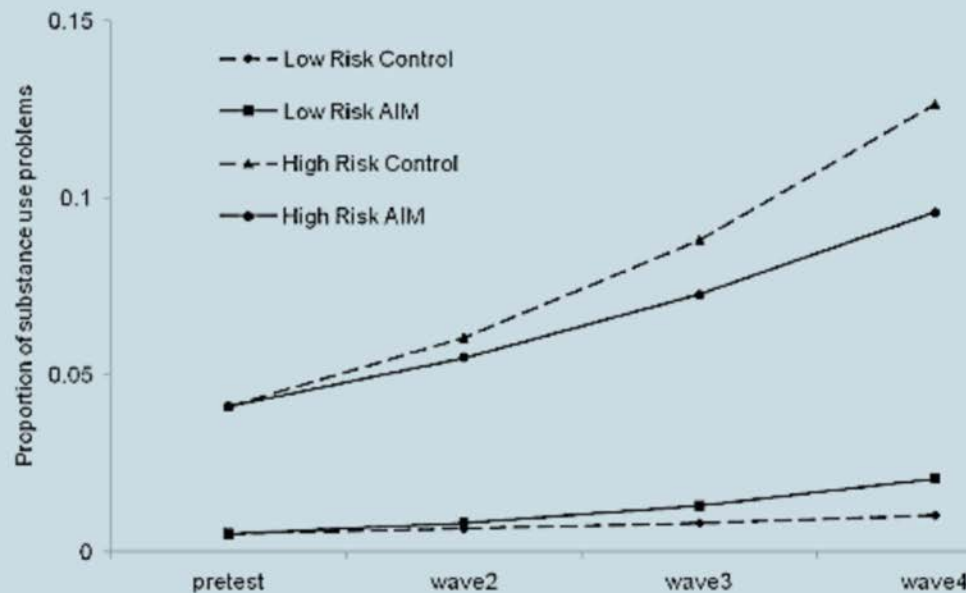
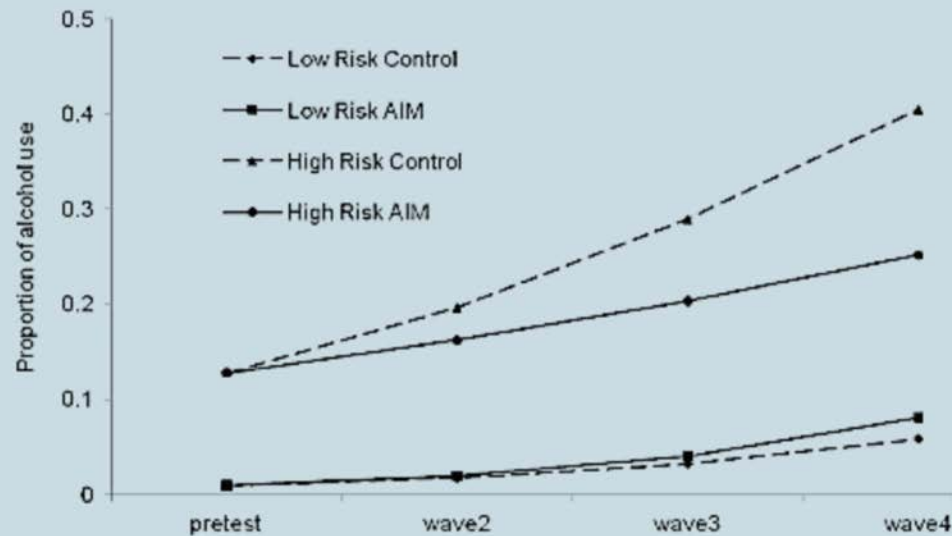


Brody, Yu, Chen, Kogan, & Smith. (2012). *Journal of Consulting and Clinical Psychology*, 80, 17-28.

The AIM Program Curriculum Summary

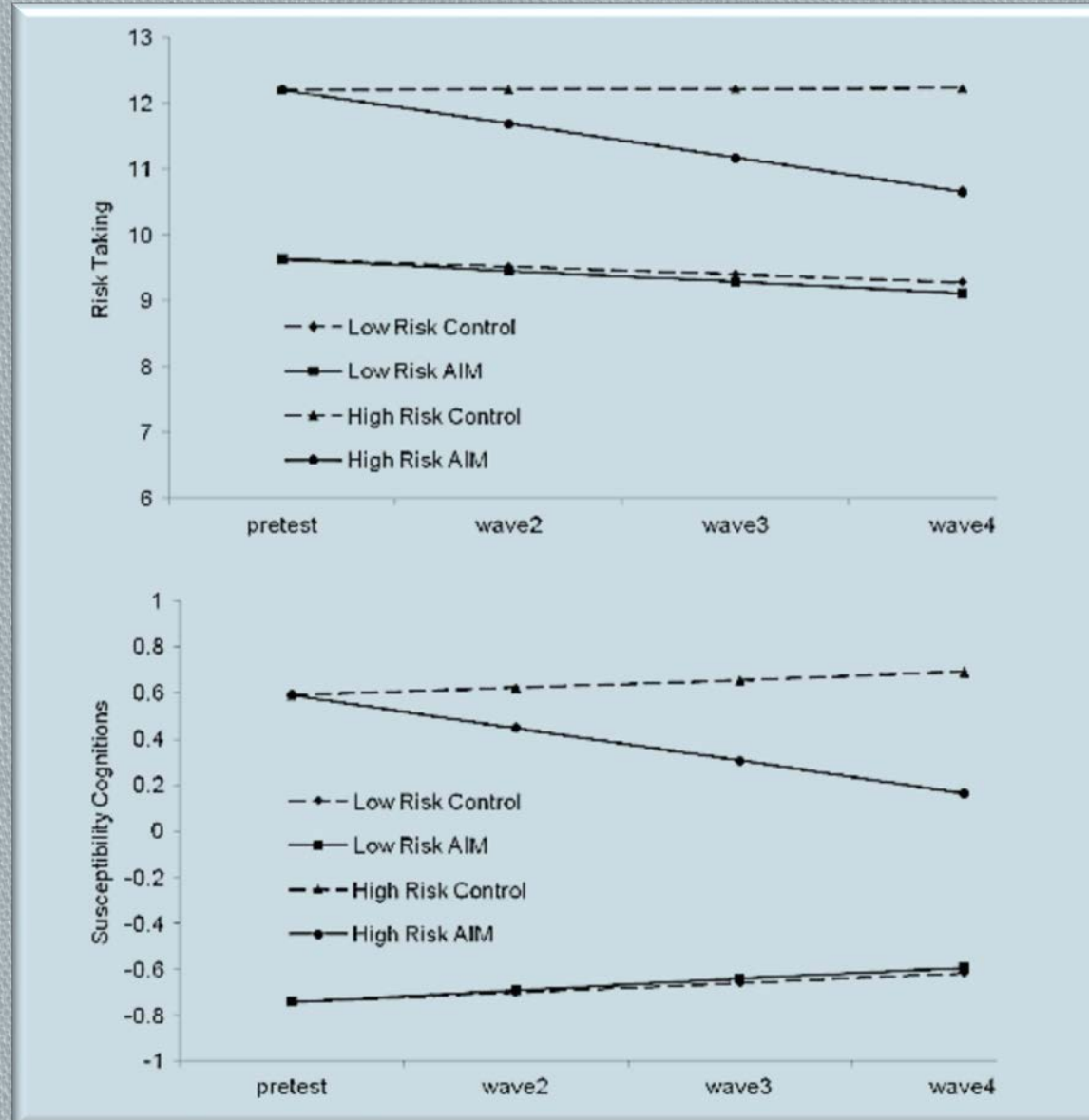
Session	Parent Session Title	Parent-Targeted Behaviors	Teen Session Title	Teen-Targeted Behaviors	Family Session Title	Family-Targeted Behaviors
1	Embracing the Future	Discuss changes in family relationships as teens become adults	Creating My Future	Identify interests, talents and passion and describe a vision of their future	We Are the Future	Encourage nurturing, supportive communication around teen's goals
2	Helping my Teen Along Life's Road	Encourage more independence and responsibility in teens Identify resources for specific problems/goals	My Future: How Do I Get There?	Identify a specific goal and the steps and potential roadblocks	Planning and Packing for Success	Discuss the elements of success and identify the strengths and qualities of teen that will lead to success
3	Getting Along with an Adult Child	Discuss and practice strategies for problem solving with older teens	Learning To Be an Adult	Understand the connectedness between wants, feelings, and actions/behaviors	Everyday Survival Skills	Discuss staying connected as teens become adults Discuss budgeting and problem solving
4	Handling Hardship	Discuss discrimination that young people are likely to face and ways of responding to discrimination	Handling Hardship	Identify hardships and challenges that may impact goals – including discrimination	Dealing with Real Life	Identify ways to deal with stress and respond to racial discrimination
5	Providing Direction When Kids Get Off Course	Identify risks that older teens take and discuss the importance of communication and setting expectations	Choices that Can Change My Direction	Identify how poor decision making can adversely impact goals	Avoiding Dead Ends	Explore things to consider before engaging in risky behaviors and discuss ways to resist peer pressure
6	Celebrating Change	Identify ways to ensure teens are prepared for adulthood and discuss how their own lives will change	Making Plans B Through Z	Learn strategies for increasing resilience in the face of difficulties	Choosing Success	Discuss ways to “choose” success despite obstacles that arise

AIM Efficacy Data

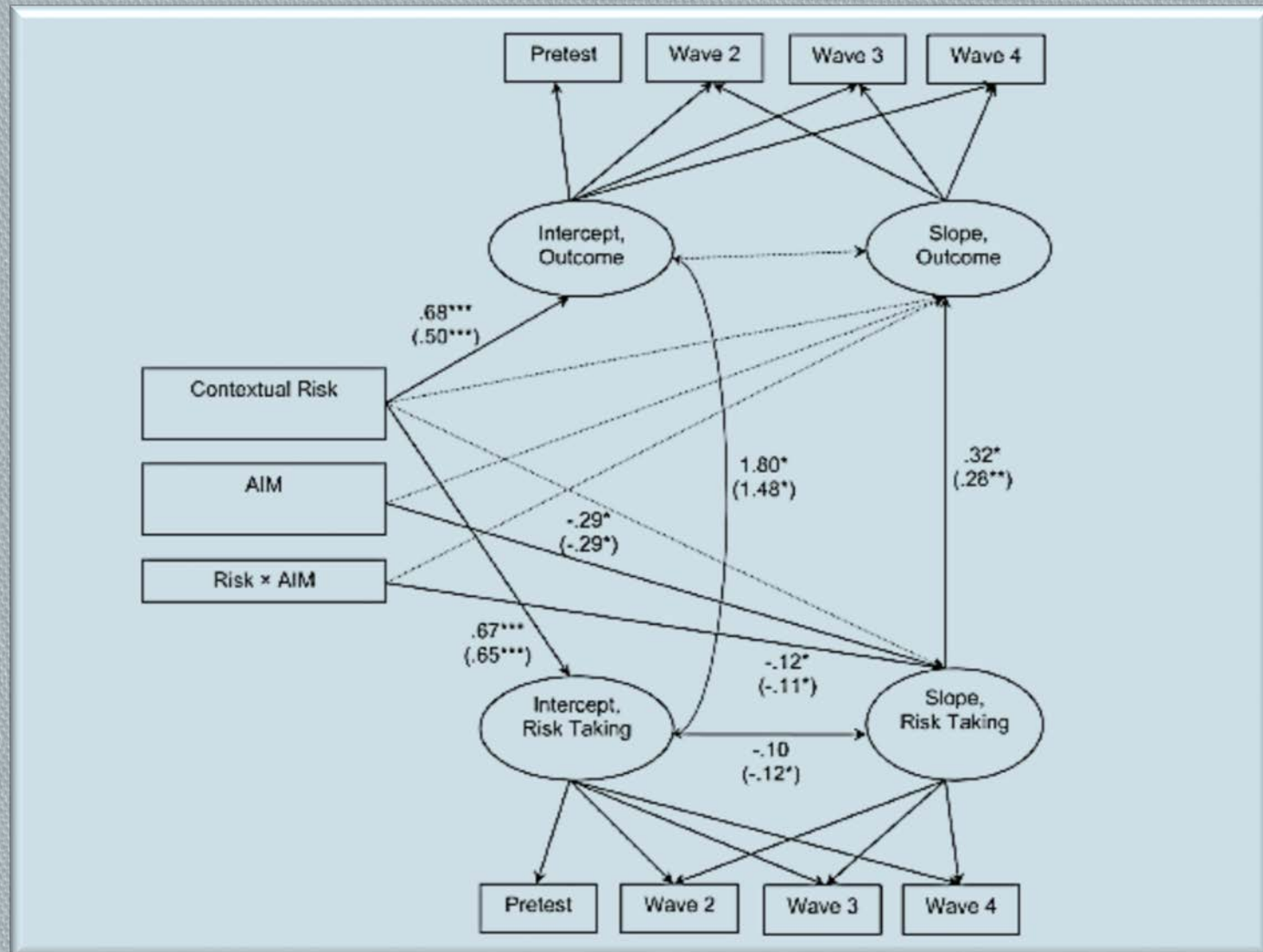


Brody, Yu, Chen,
Kogan, & Smith. (2012).
*Journal of Consulting
and Clinical Psychology*,
80, 17-28.

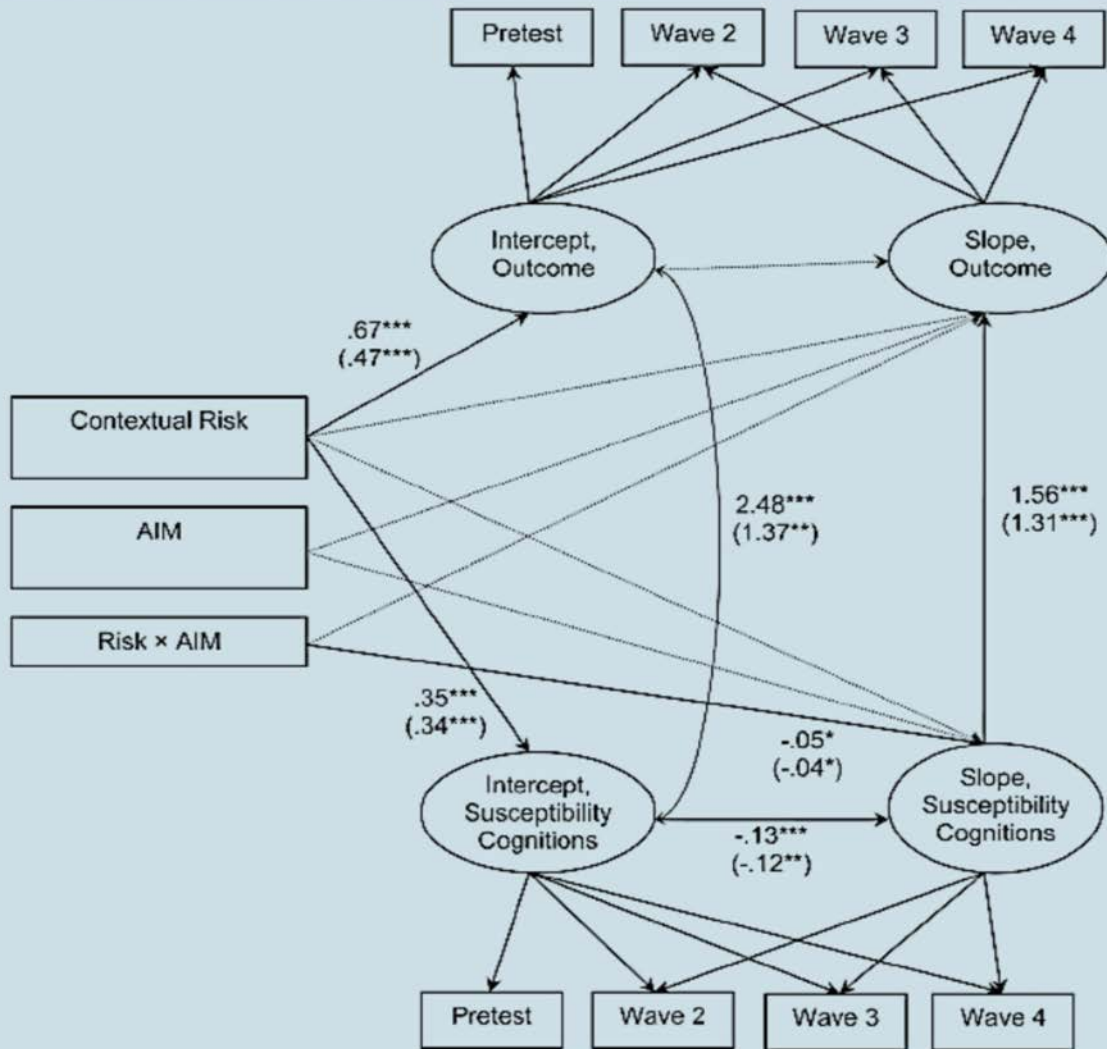
AIM Efficacy Data




AIM Efficacy Data



AIM Efficacy Data



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INCORPORATING GENETICS INTO PREVENTION RESEARCH

Why Use Randomized Prevention Trials to Test Gene-Environment Interplay Hypotheses?

- Causal status of environmental factors can be determined effectively
- Random assignment rules out rival explanations for environmental effects
 - Gene-environment correlations
 - Maturation
 - Repeated testing
 - Regression to the mean
- Power to detect $G \times E$ interactions is increased five fold over epidemiological designs

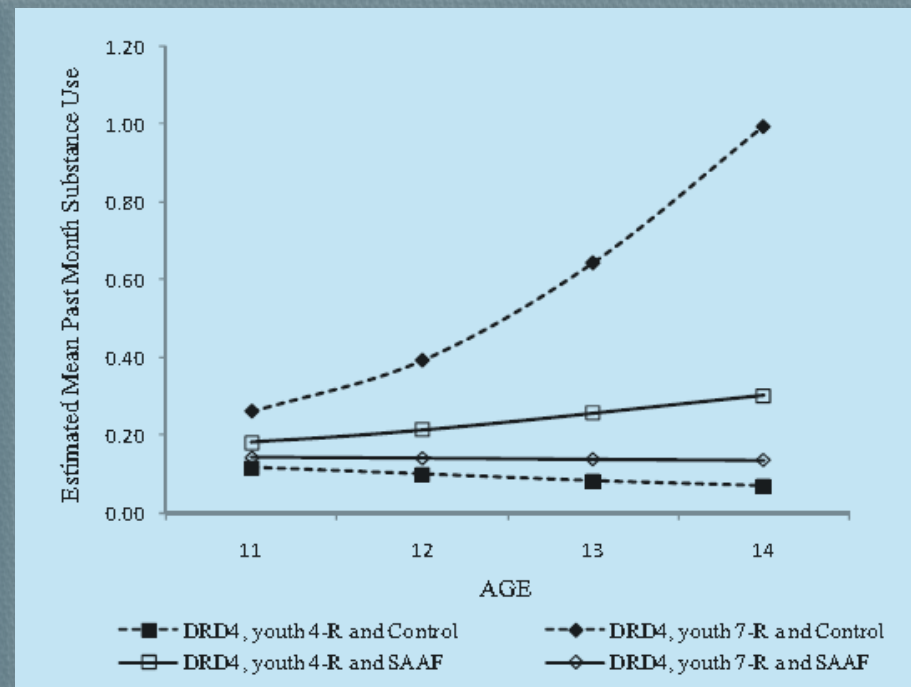
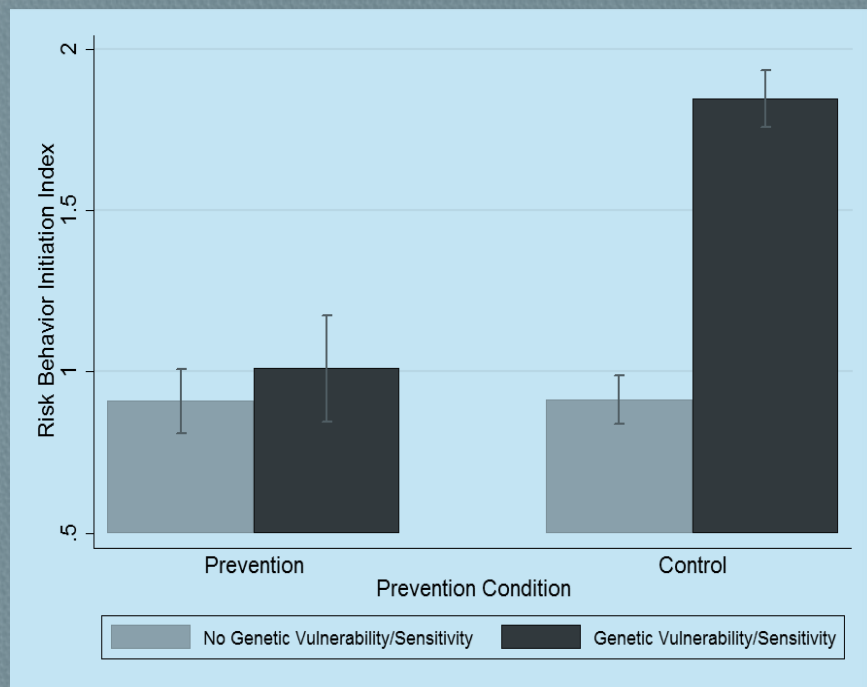
First- and Second-Generation Gene-Prevention Program Interplay Research

- First-Generation Research
 - Descriptive
 - Documents whether genetic status conditions response to preventive interventions
 - If so, for whom?
 - Gender
 - Developmental stage
 - Racial/ethnic group
 - Which prevention outcomes?
 - Which genes?
- Second-Generation Research
 - Designed to explain
 - $G \times E$ findings in general
 - Gene-prevention program interactions in particular
 - We expect to detect mediational pathways through which gene \times prevention interactions operate

Some First-Generation Findings

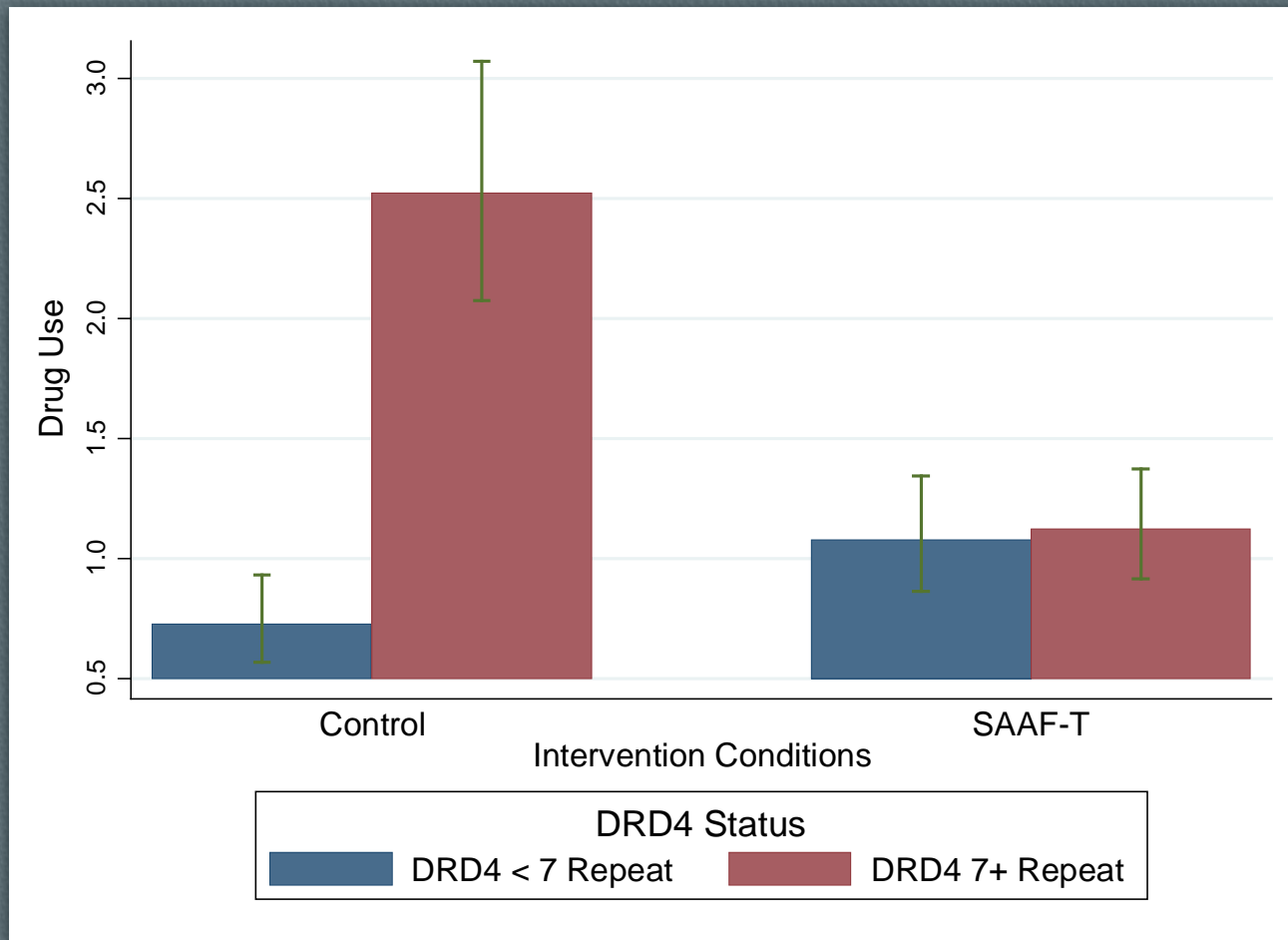
- Brody, Beach, Philibert, Chen, & Murry. (2009). *Child Development*, 80, 645-661.

- Beach, Brody, Lei, & Philibert. (2010). *Journal of Family Psychology*, 24, 513-521.

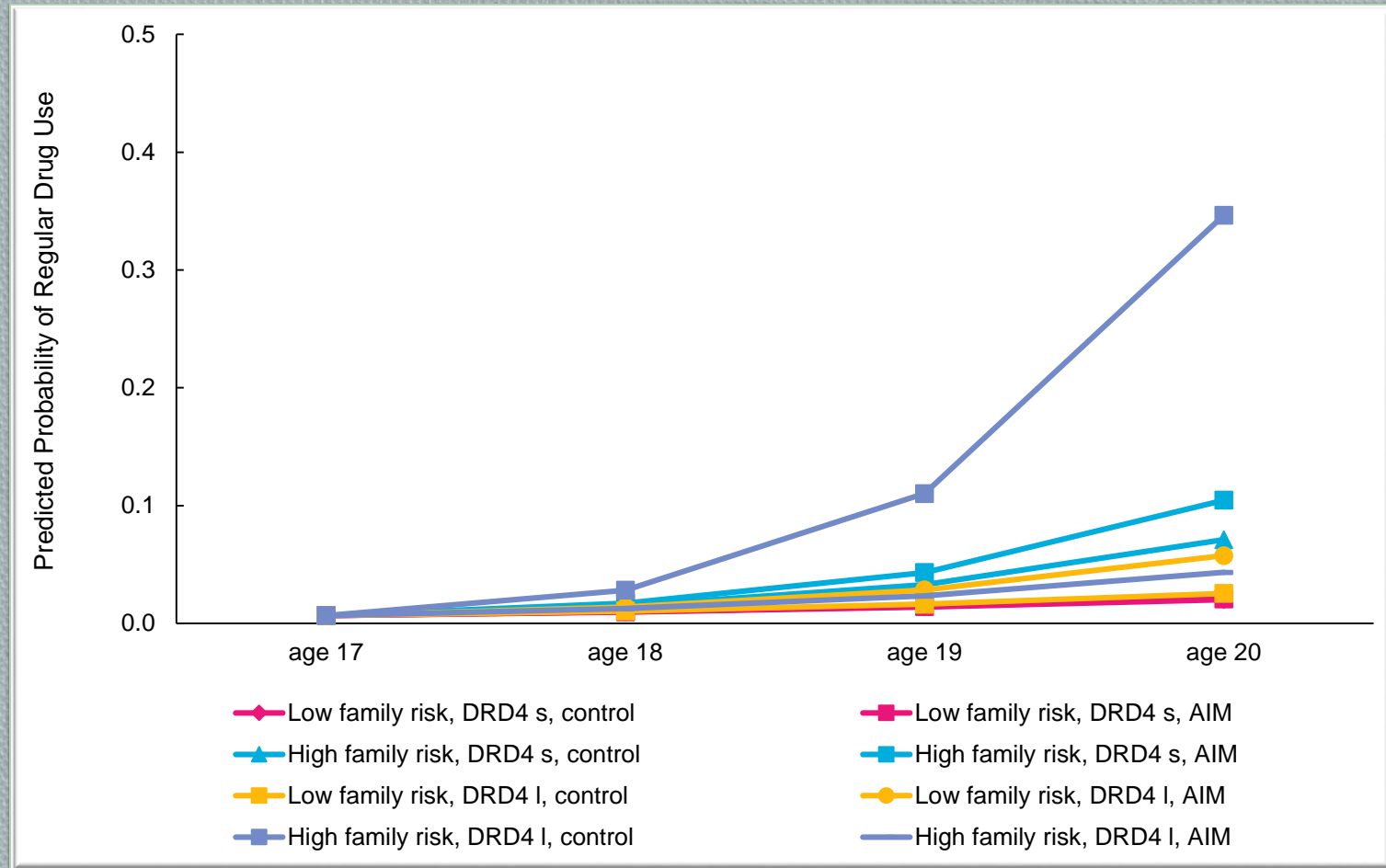


SAAF program: 11 years (pretest); 12 yrs. (posttest); 14 yrs. (long-term follow-up)

Brody et al. (2014). *Health Psychology*, 33, 182-191.



Brody, Yu, & Beach. (2015). *Development and Psychopathology*, 27, 37-49.



A Multilocus Genetic Profile and Response to Prevention

Brody, Chen, & Beach (2013).
Journal of Child Psychology and Psychiatry, 54, 863-871.

1. Do common variations in differential susceptibility genes—dopaminergic DRD2, ANKK1, DRD4 and GABAergic GABRG1, GABRA2—forecast increases in alcohol use across 2 years?
2. Can participation in efficacious prevention programming ameliorate the risk that dopaminergic and GABAergic genes confer for increases in youth alcohol use?
3. Does a differential susceptibility cascade exist such that youths who carry more susceptibility genes benefit most from prevention programming?

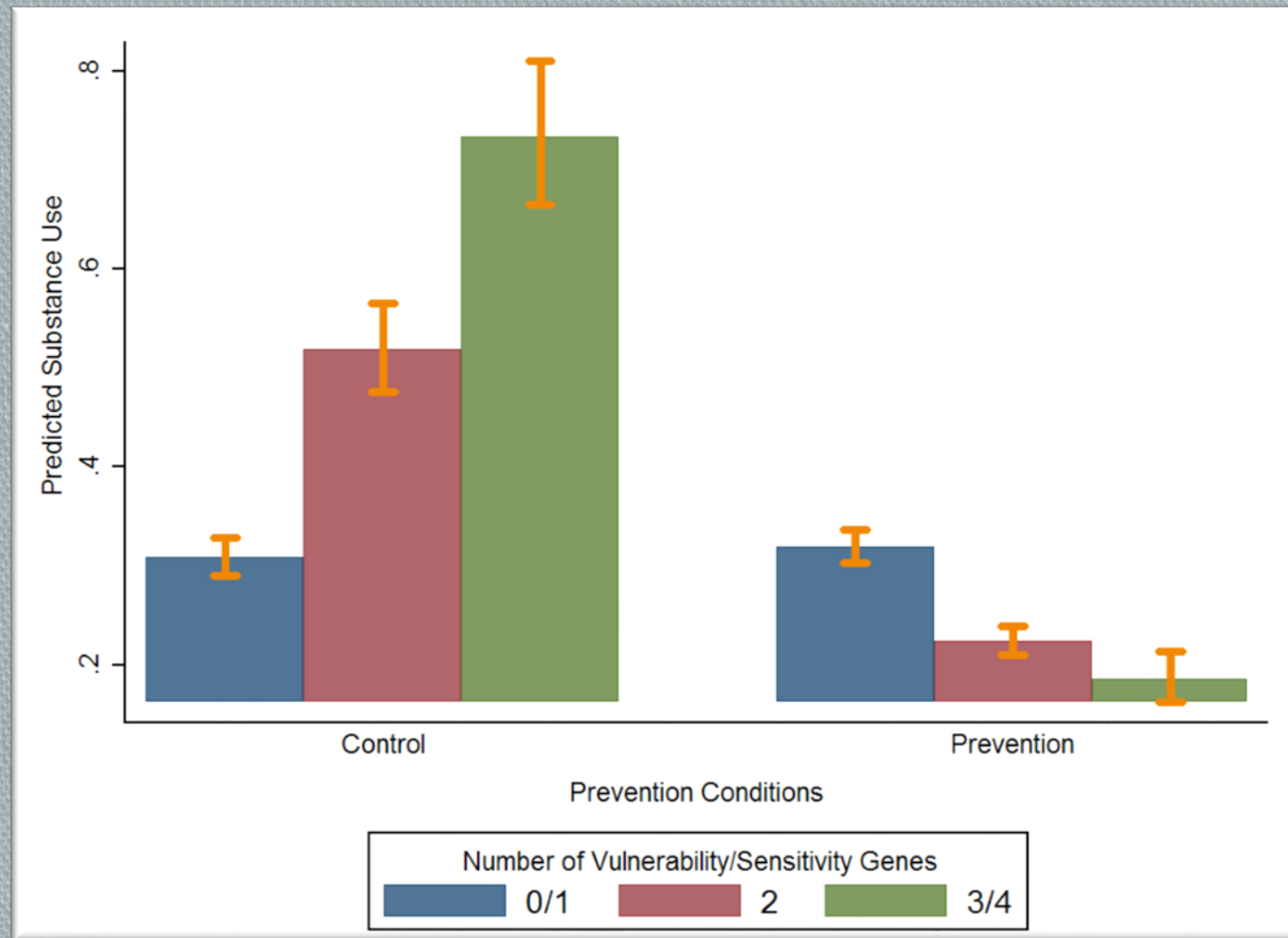
Do Dopaminergic and GABAergic Genes Forecast Increases in Alcohol Use across 2 Years?

- Each gene forecast increases in alcohol use among youths in the control conditions.
 - DRD2: $\beta = .61, p < .001$
 - ANKK1: $\beta = .62, p < .01$
 - DRD4: $\beta = .30, p < .04$
 - GABRG1, Block 1: $\beta = 1.04, p < .001$
 - GABRG1, Block 2: $\beta = .36, p < .05$
 - GABRA2, Block 1: $\beta = .38, p < .01$

Can Participation in Efficacious Prevention Programming Ameliorate Genetic Risk?

- Gene \times prevention amelioration effects emerged for *all* genes.
- After applying the False Discovery Rate,
 - 3 of the 6 interaction effects remained significant
 - GABRG1, Block 2
 - GABRA2, Block 2
 - DRD2

Control and Intervention Groups



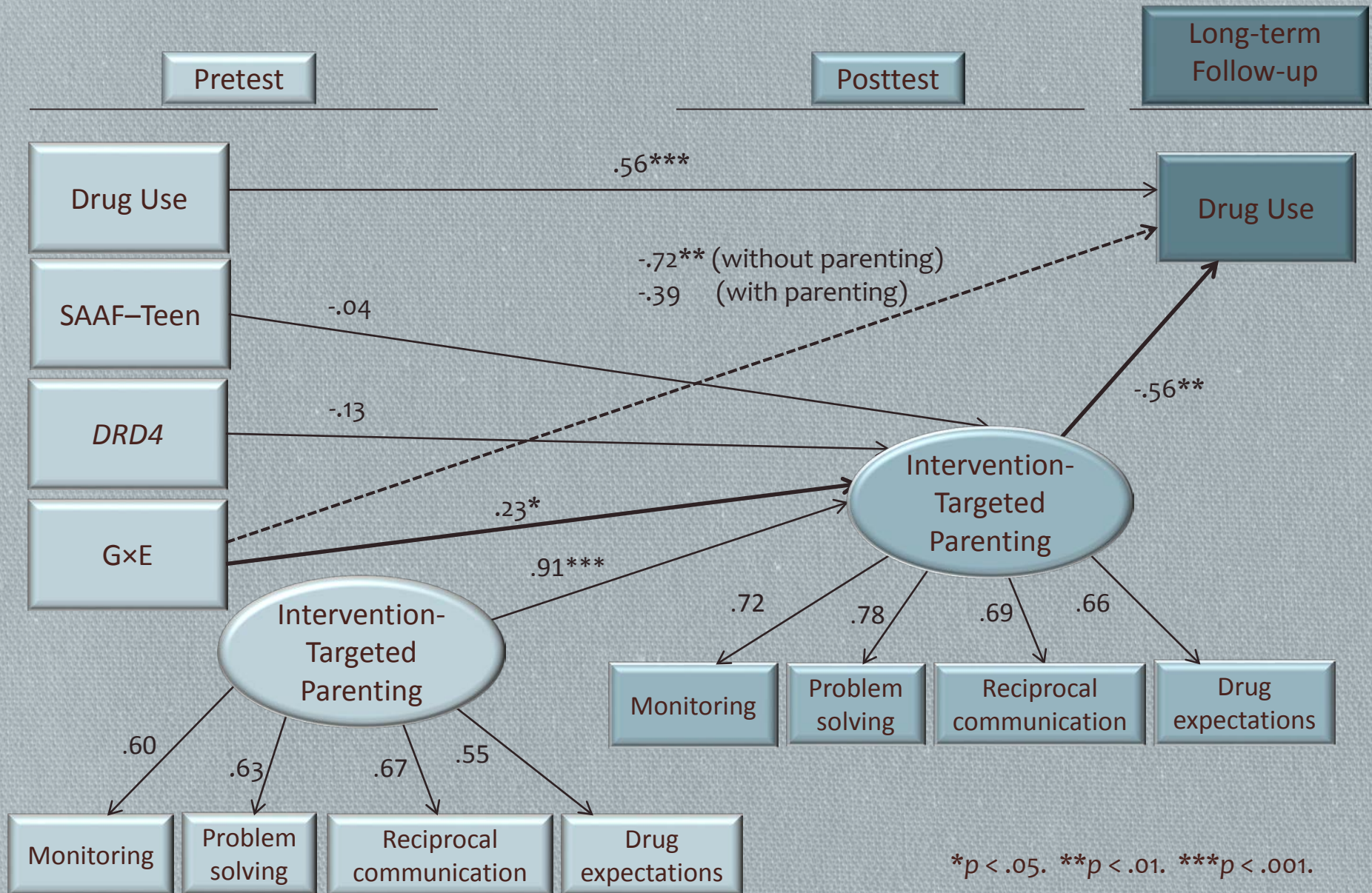
Summary of Multilocus Findings

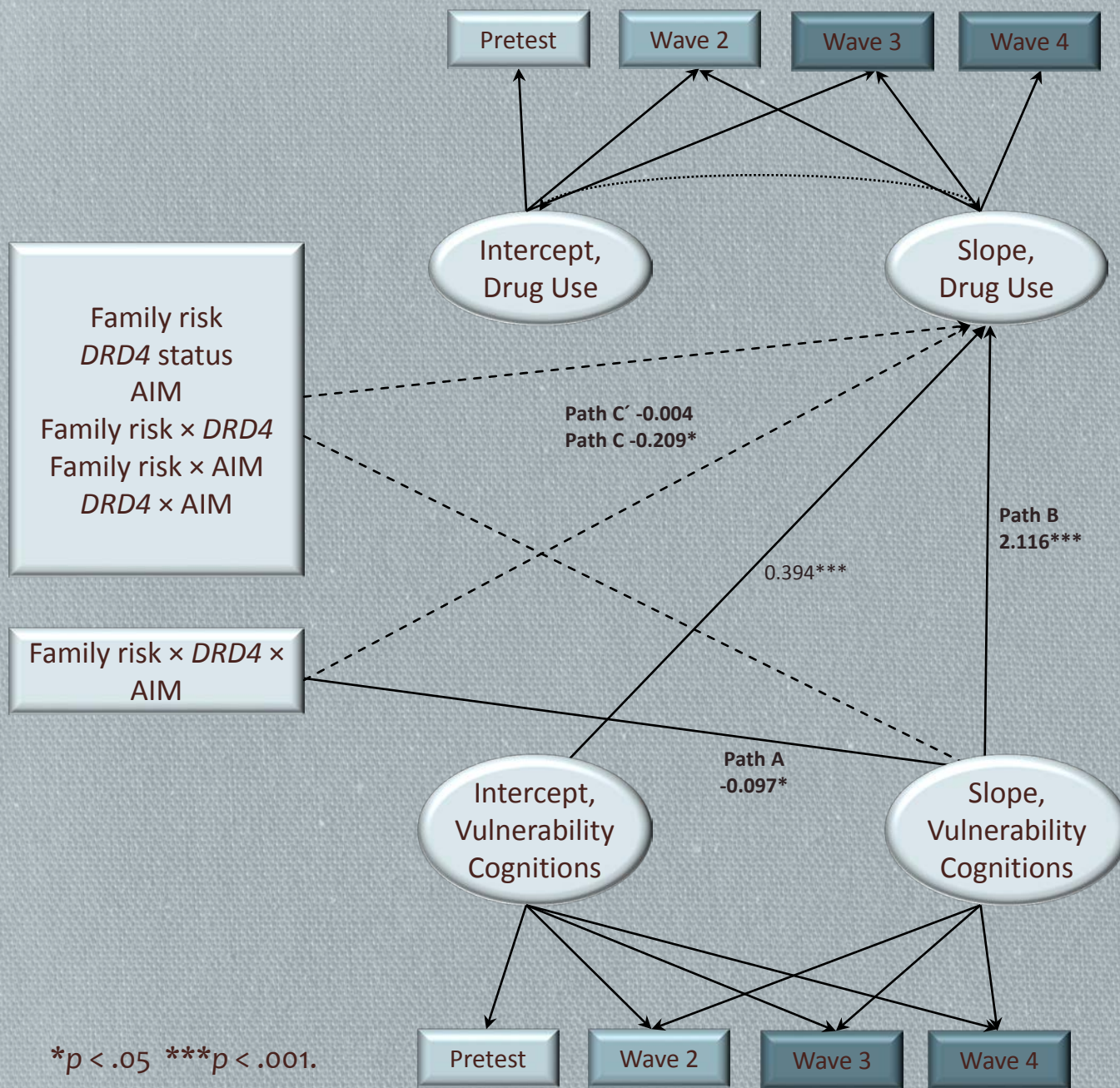
- Dopaminergic and GABAergic candidate genes forecast increases in alcohol use across 2 years.
- Youths assigned to control conditions who carried those genes displayed greater increases in alcohol use than did
 - Youths assigned to a prevention condition who carried the genes;
 - Youths assigned to either a prevention or control condition who did not carry the genes.
- Participation in a prevention program ameliorated risk conferred by multiple genes, in a manner that reflected a differential susceptibility cascade.

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SOME SECOND- GENERATION G x PREVENTION FINDINGS


Mediated Moderation Model of SAAF-T × DRD4 and Drug Use Through Intervention-Targeted Parenting. Brody et al. (2014). *Health Psychology*, 33, 182-191.





Brody, Yu, & Beach.
(2015). *Development and Psychopathology*,
27, 37-49.

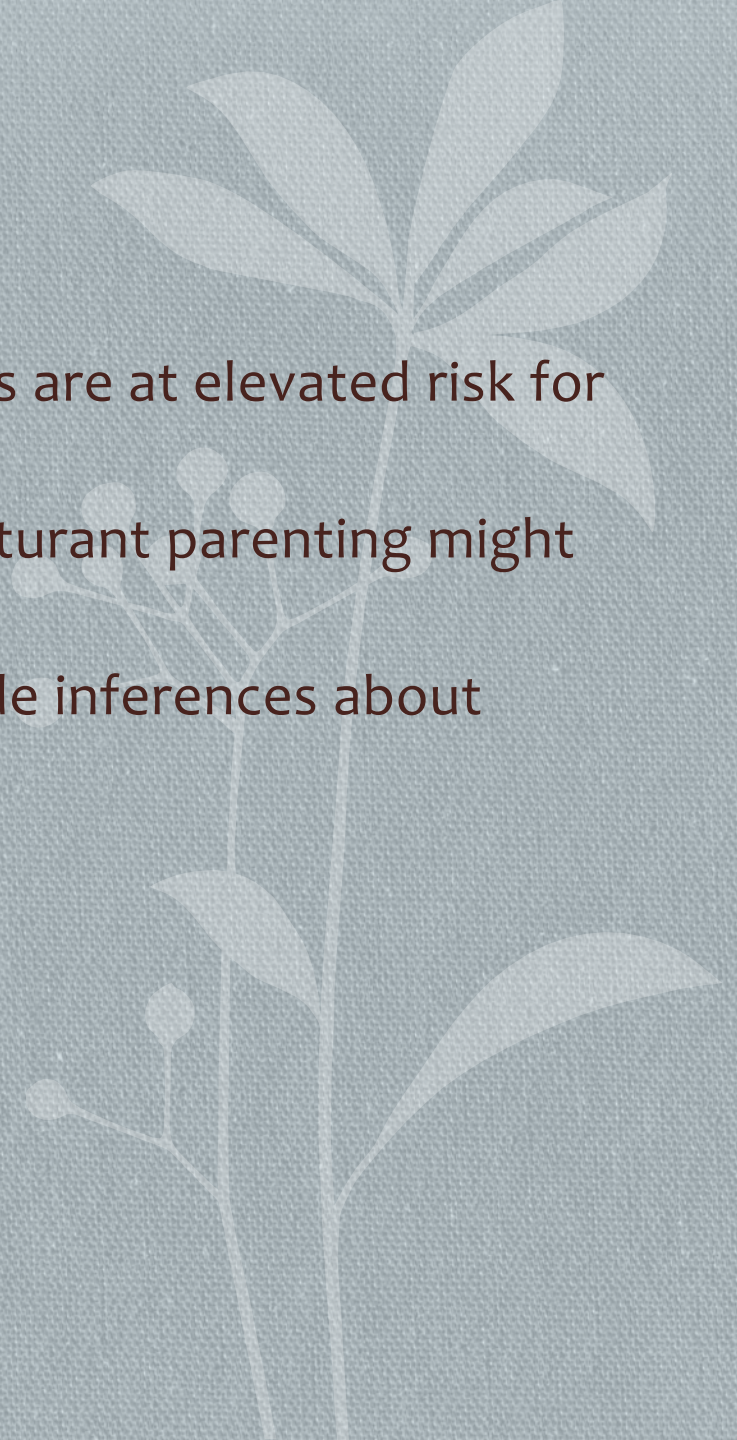
* $p < .05$ *** $p < .001$.

A stylized, dark brown illustration of a plant with several leaves and small, round berries or buds, positioned on the left side of the slide against a dark brown background.

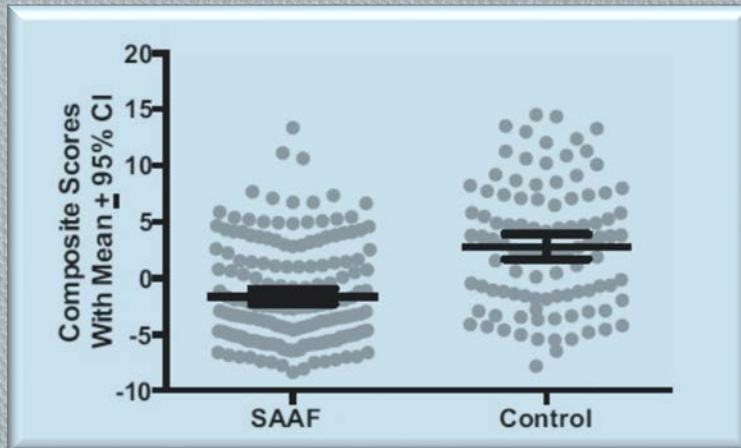
THE HEALTH BENEFITS OF FAMILY-CENTERED DRUG USE PREVENTION PROGRAMS

Background

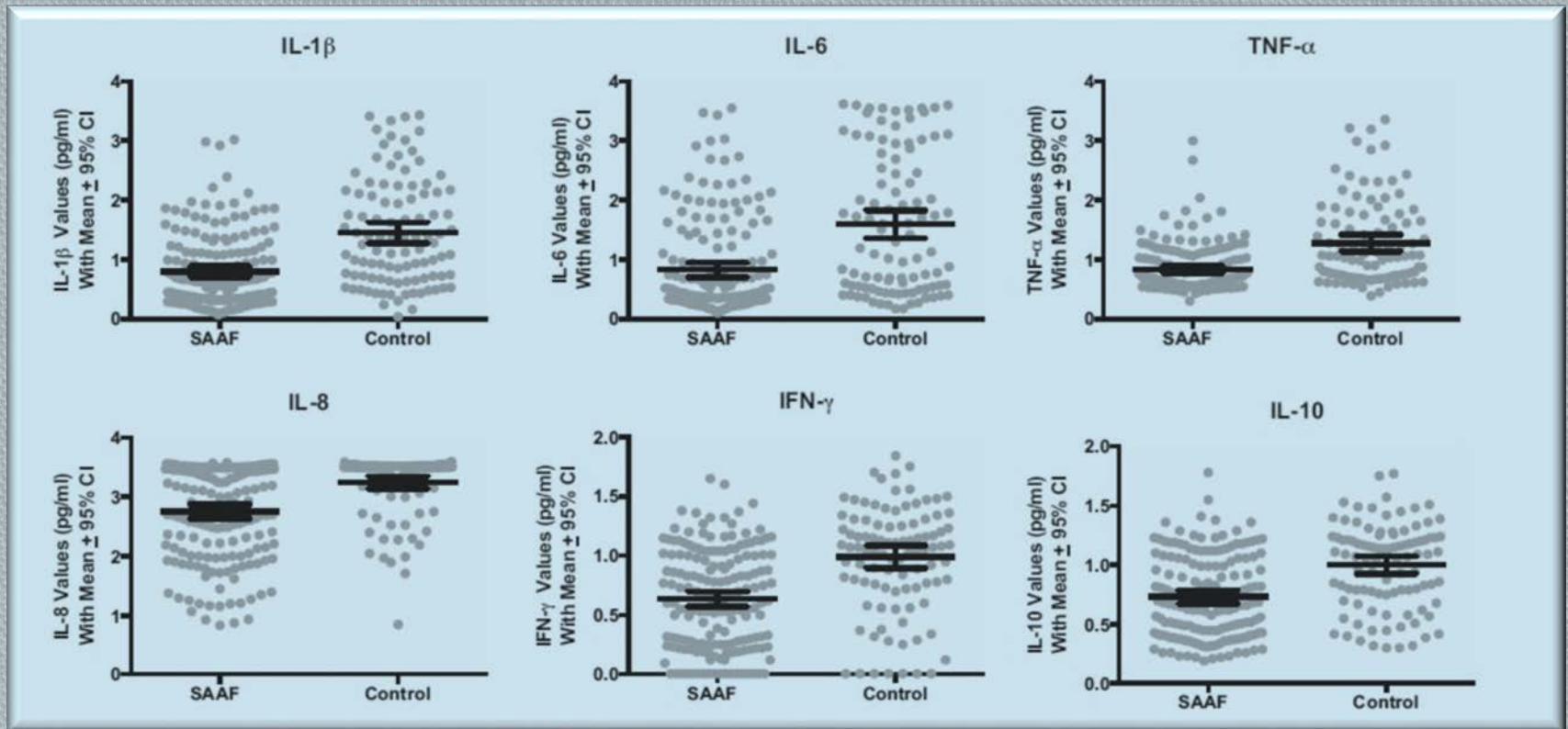
- Children living in low-SES circumstances are at elevated risk for health problems across the life span.
- Observational studies suggest that nurturant parenting might influence some of those health risks.
- Observational research designs preclude inferences about causality and clinical utility.



SAAF Effects on Cytokine Levels at Age 19

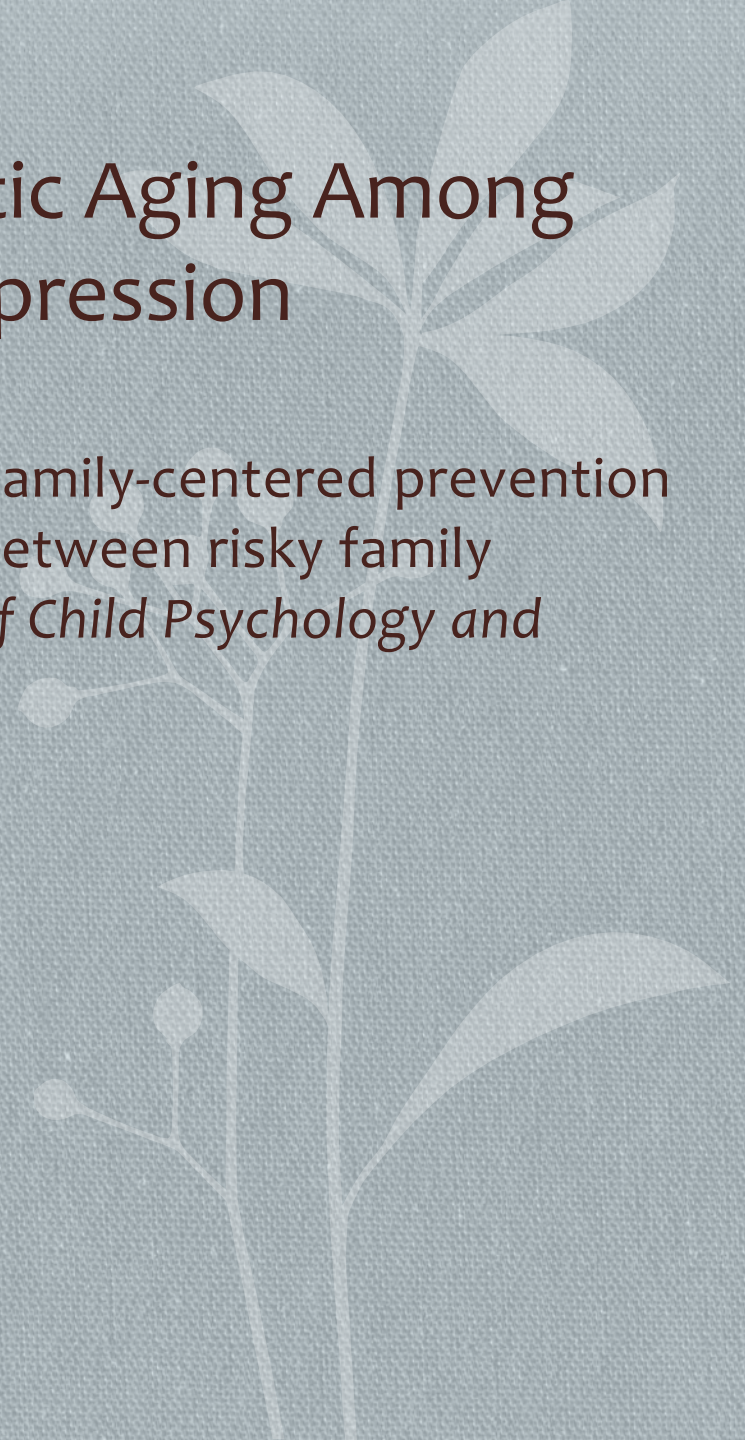


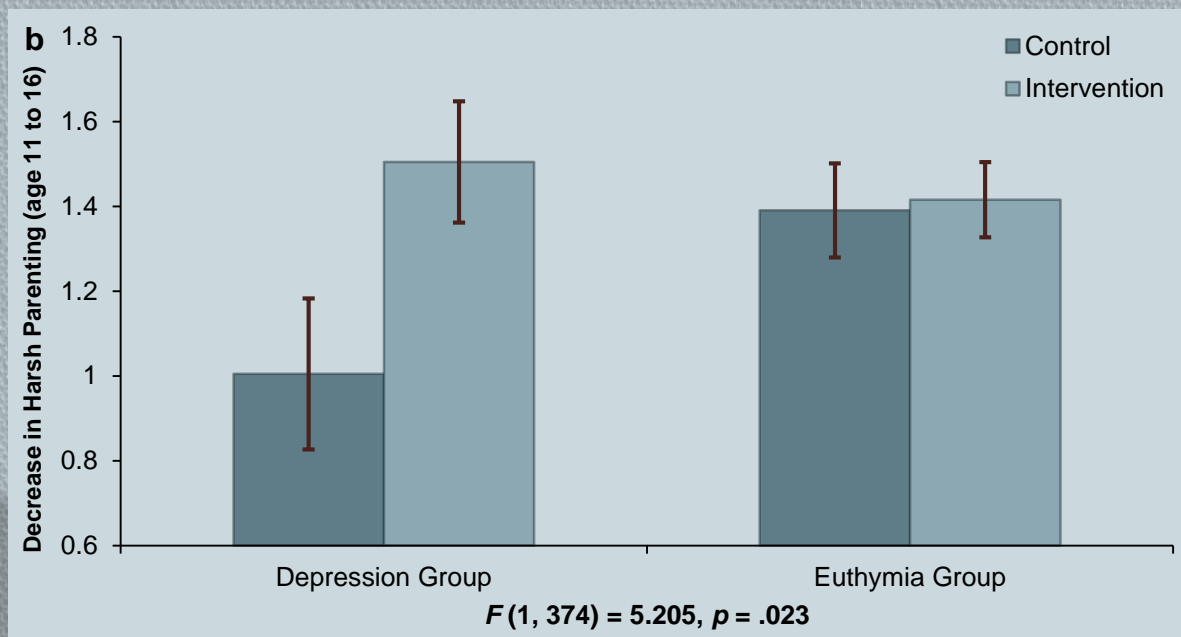
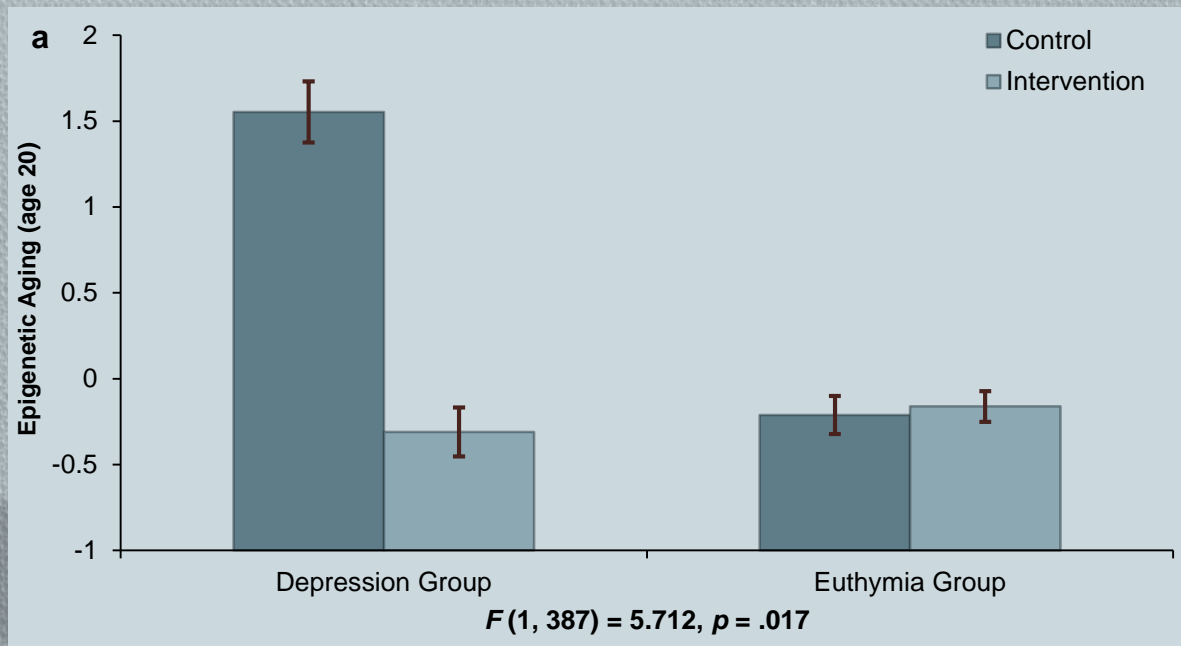
Miller, Brody, Yu, & Chen. (2014). A family-oriented psychosocial intervention reduces inflammation in low-SES African American youth. *PNAS*, 111, 11287-11292.

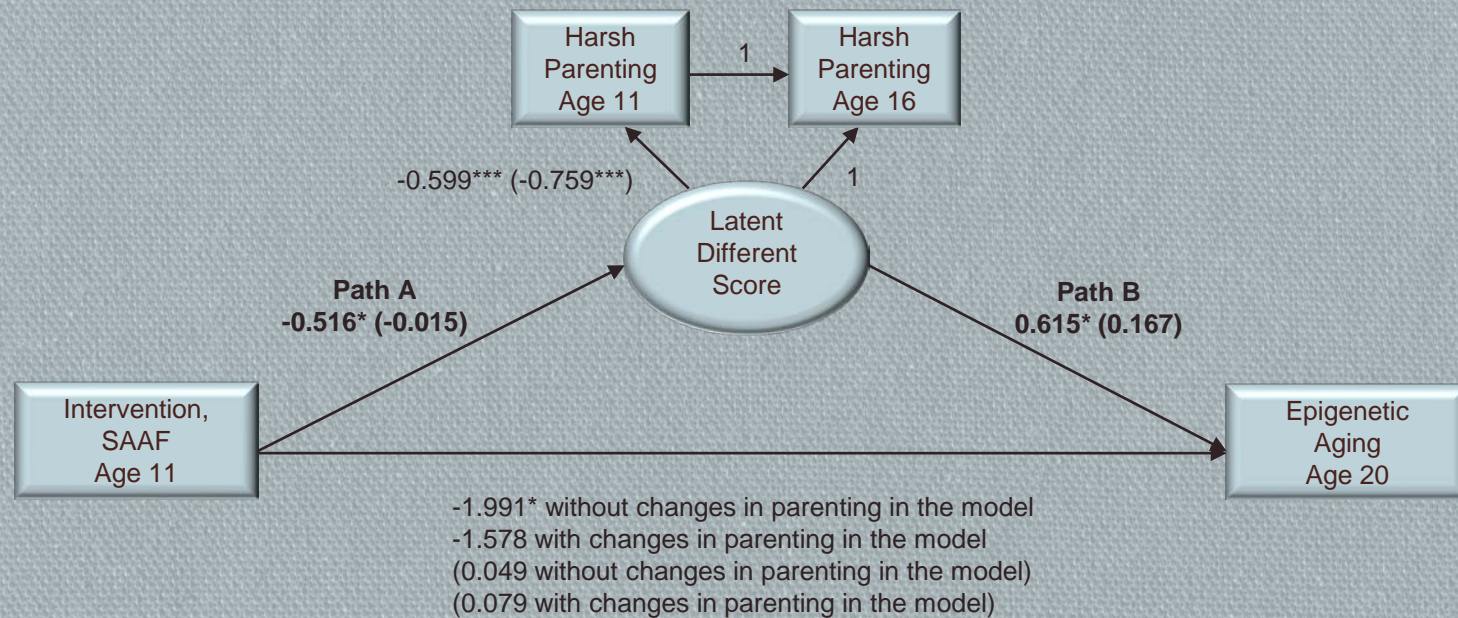


Prevention Reduces Epigenetic Aging Among Offspring of Parents With Depression

Brody, Yu, Chen, Beach, & Miller. (2016). Family-centered prevention ameliorates the longitudinal association between risky family processes and epigenetic aging. *Journal of Child Psychology and Psychiatry*, 57, 566-574.



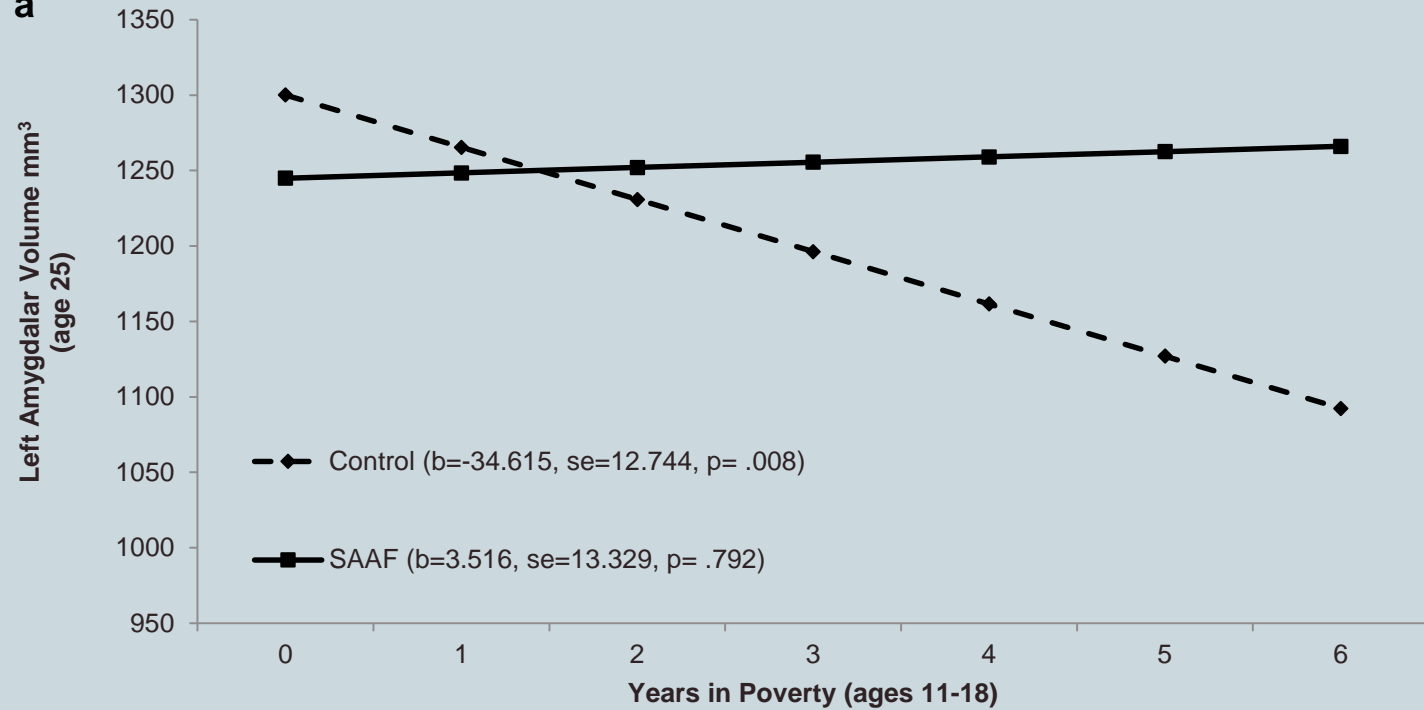




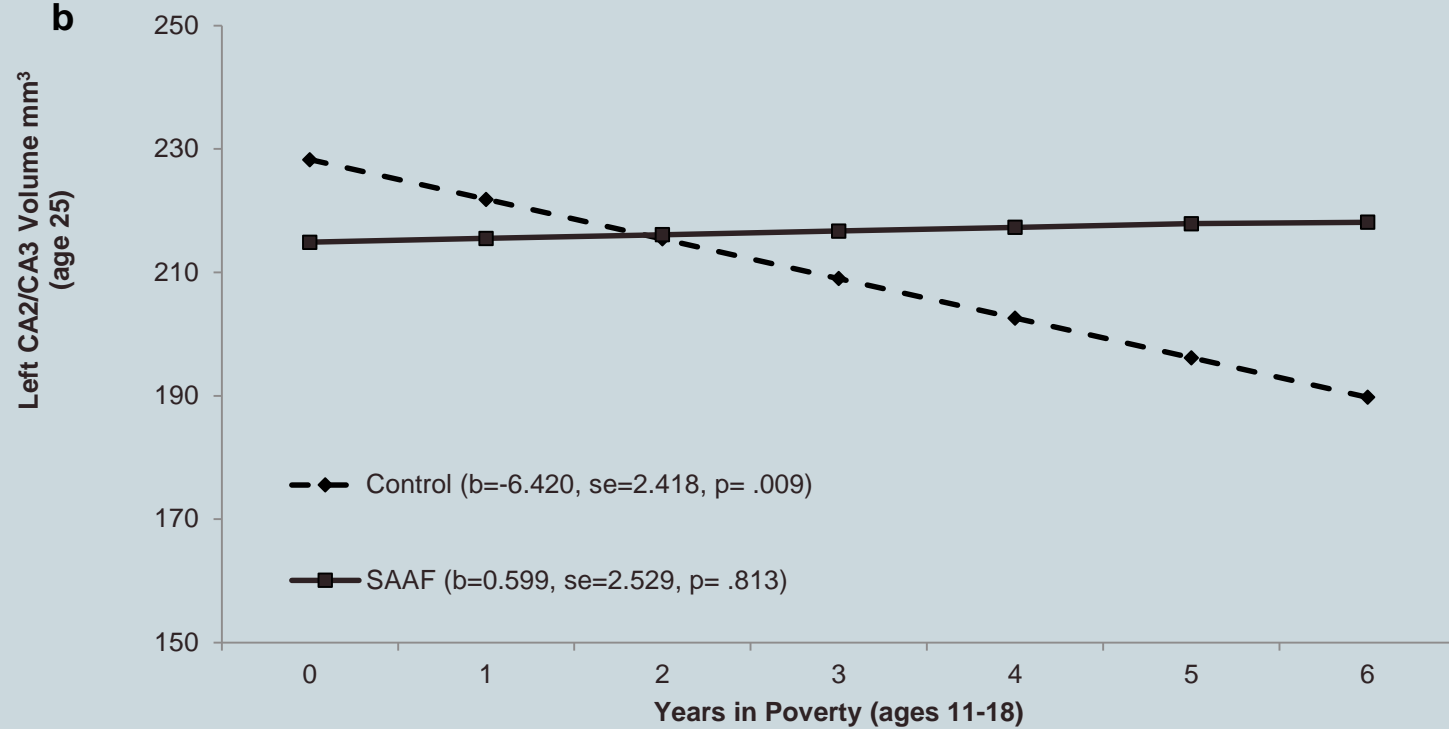
Ameliorating the Longitudinal Association of Exposure to Poverty During Adolescence with Hippocampal and Amygdalar Volumes in Adulthood

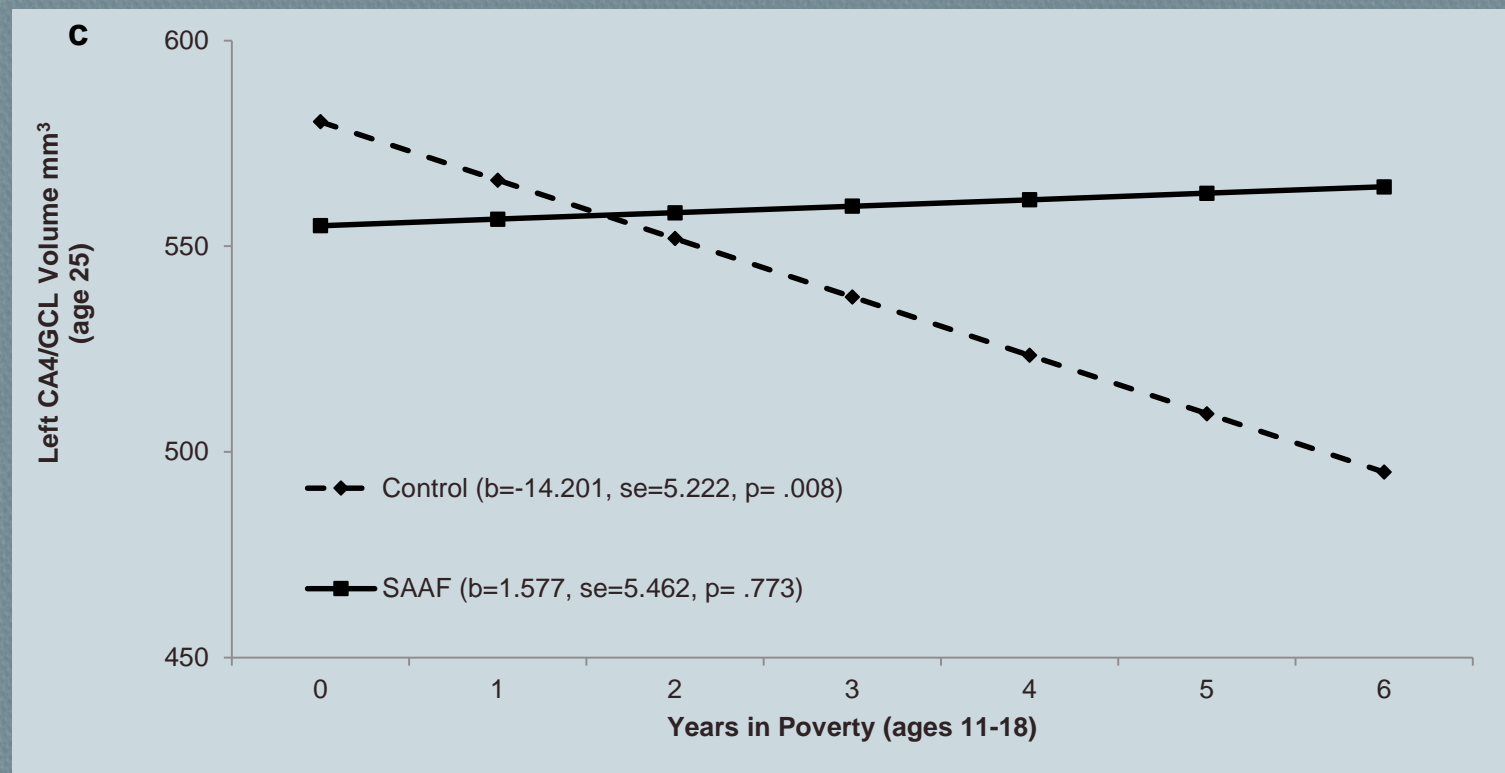
Brody, Gray, Yu, Barton, Beach, Galván, MacKillop, Windle, Chen, Miller, & Sweet. (in press). Family-centered prevention ameliorates the longitudinal association of poverty with hippocampal and amygdalar volumes in adulthood. *JAMA Pediatrics*.

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The prevention science program at the Center for Family Research has demonstrated:

- The benefits of longitudinal, epidemiological research with the targeted population for prevention program development
- The efficacy of developmentally appropriate family-centered prevention programs for rural African Americans
- The utility of randomized prevention trials as a platform for testing developmental hypotheses
- The potentially important role that implementation of programs that cultivate resilience through strengthening family relationships can have in improving public health and reducing health disparities

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- National Institute on Drug Abuse
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