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# Department of Health Policy

*IMPROVING HEALTH THROUGH RESEARCH, EDUCATION, & SERVICE*

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PSMG: Systemic Racism and Prevention Science:  
Enhancing Social Justice to Achieve Health Equity

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# Disrupting Systemic Racism: Reimagining the Role of Prevention Science



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This PSMG series is designed to:

1. prompt thoughtful, critical, action-oriented conversations
2. identify ways to re-tool, re-build, and re-envision the role of prevention science
3. elevating prevention science in efforts to address racism and discrimination, using social justice and health equity lenses



PSMG Series presenters were charged sharing with the group:

- 1) How leading theoretical **frameworks** might be updated to carry cultural resonance and historical context beyond what has been promoted by those who have historically been in power;
- 2) How **measurement strategies and tools** may be adapted or developed to accurately and holistically measure social, cultural, and structural mechanisms that impact health;
- 3) How **prevention interventions** might promote health and reduce toxic environments.





# Translating Research into Protective Processes in African American Families: Buffering Effects of Race Related Experiences

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# FUNDING SUPPORT

Centers for Disease Control and Prevention

National Institute of Mental Health

National Institute on Alcohol Abuse and Alcoholism

National Institute of Child Health and Human Development

National Institute of Drug Abuse

Lois Autrey Betts Endowment

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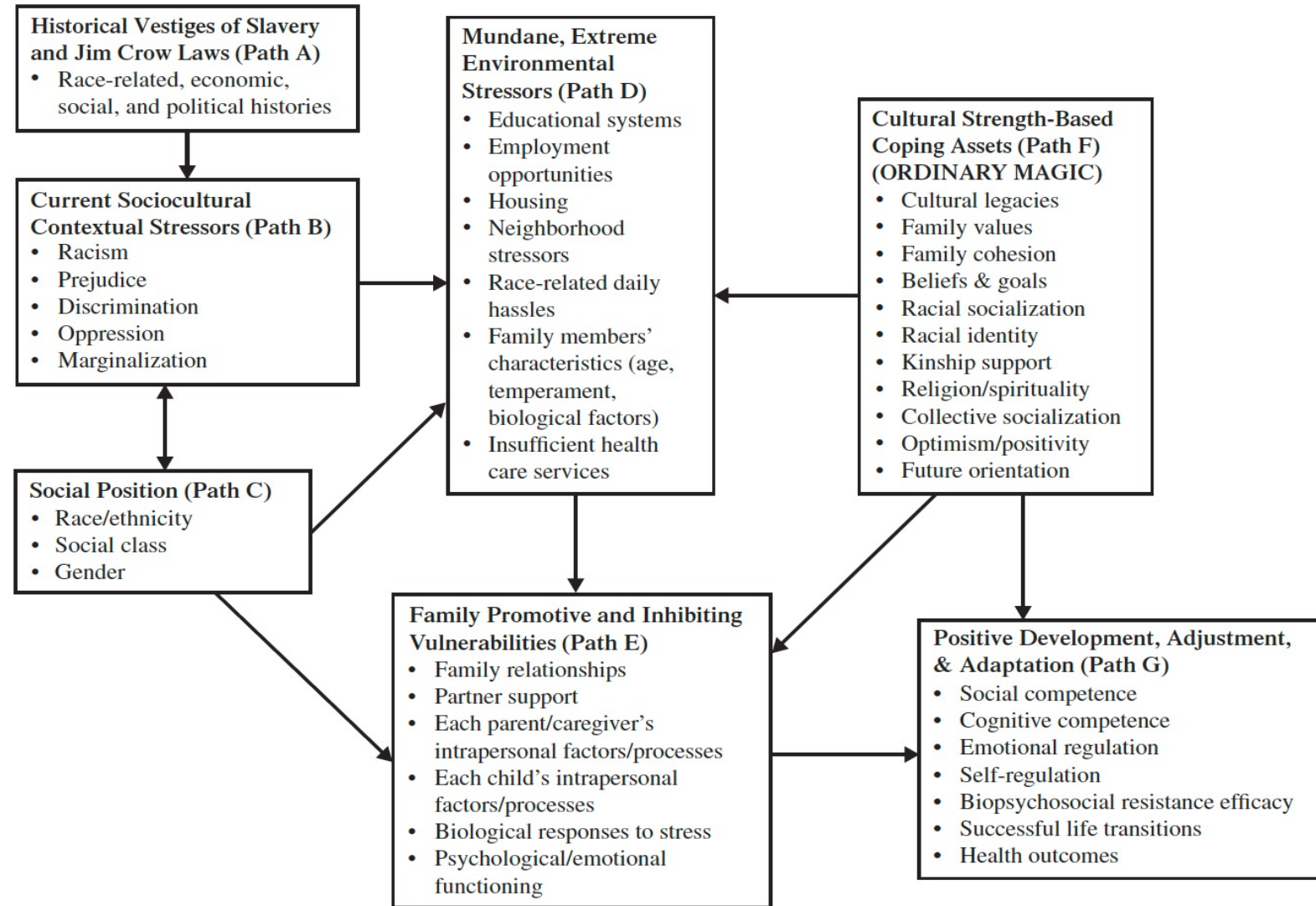
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FIGURE 1. INTEGRATIVE MODEL FOR THE STUDY OF STRESS IN BLACK AMERICAN FAMILIES.

Excavating New Constructs for Family Stress  
 Theories in the Context of Everyday Life  
 Experiences of Black American Families





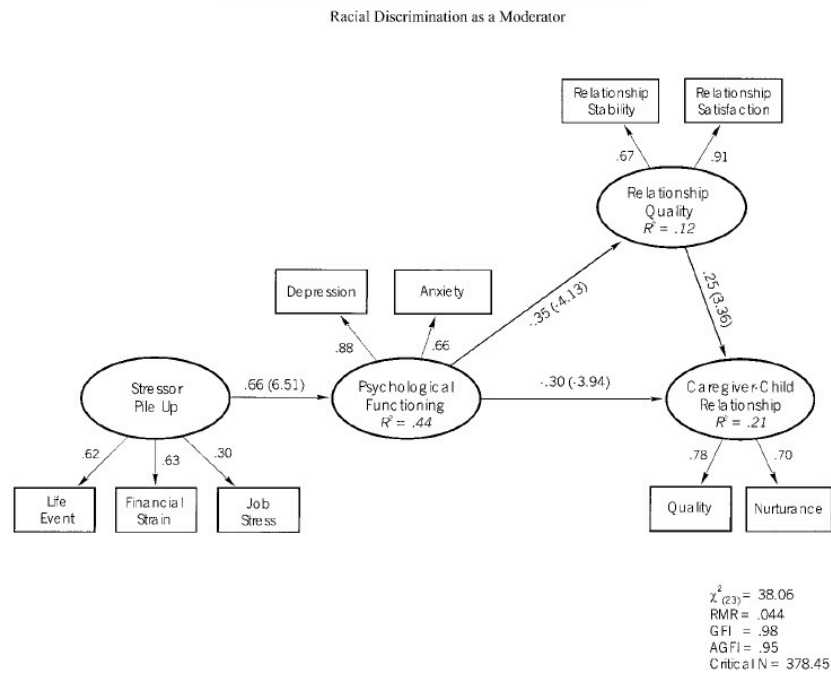
# Data Source

## Family and Community Health Study (FACHS)

- 897 African American families with a 10-11 year old children at time of recruitment
- 33% solo, 39% mother & partner; < 1% mother-grandmother
- Parents' Mean Age: 35.3
- Education: 60.6% high school graduate
- Per capita income: \$6597 (GA), \$6403 (IA)
- Fulltime employment: 72% employed



FIGURE 1. PARAMETER ESTIMATES FOR PROPOSED MODEL



VELMA MCBRIDE MURRY *University of Georgia*

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GENE H. BRODY *University of Georgia*

CAROLYN E. CUTRONA AND RONALD L. SIMONS\*  
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Racial Discrimination as a Moderator of the Links  
Among Stress, Maternal Psychological Functioning, and  
Family Relationships

TABLE 2. STACKED MODEL ANALYSES COMPARING EACH HYPOTHESIZED RELATIONSHIP OF HIGH AND LOW PERCEIVED DISCRIMINATION GROUPS AGAINST THE BASELINE MODEL

	$\chi^2$	df	$\Delta\chi^2$	$\Delta df$	GFI	CFI	RMR	CN
1. Baseline model (paths constrained to be equal)	84.96	51	—	—	.94	.94	.060	313.46
2. Stressor pileup → Psychological Distress	76.85	48	17.11**	3	.95	.97	.060	373.47
3. Psychological distress → Relationship Quality	75.23	48	9.73**	3	.95	.96	.060	336.93
4. Psychological distress → Relationship Quality	68.59	48	16.37**	3	.95	.97	.060	369.46
5. Relationship quality → Caregiver-Target Relationship	77.82	48	7.14**	3	.95	.95	.060	325.78

\*\* $p < .01$ .

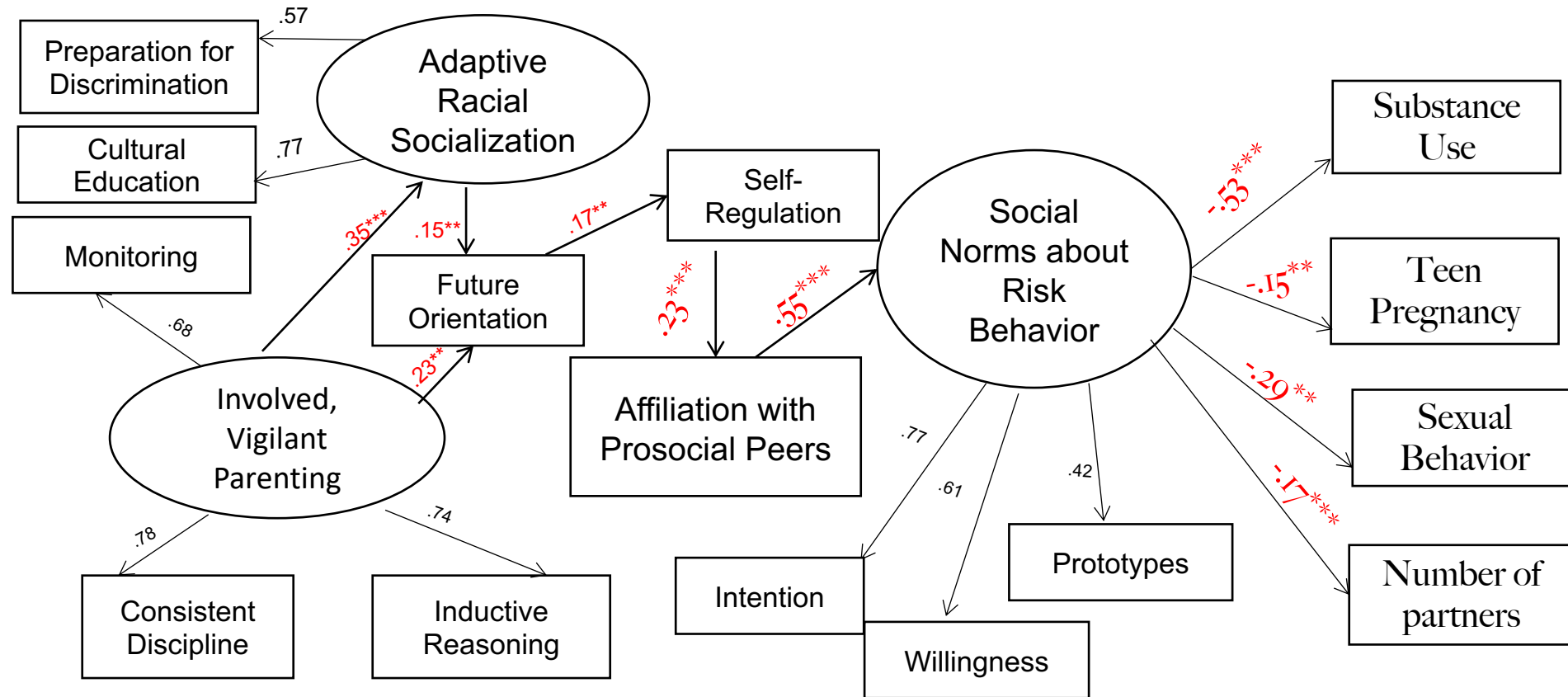


Waves 1 & 2  
Middle Childhood

Wave 3  
Early Adolescent

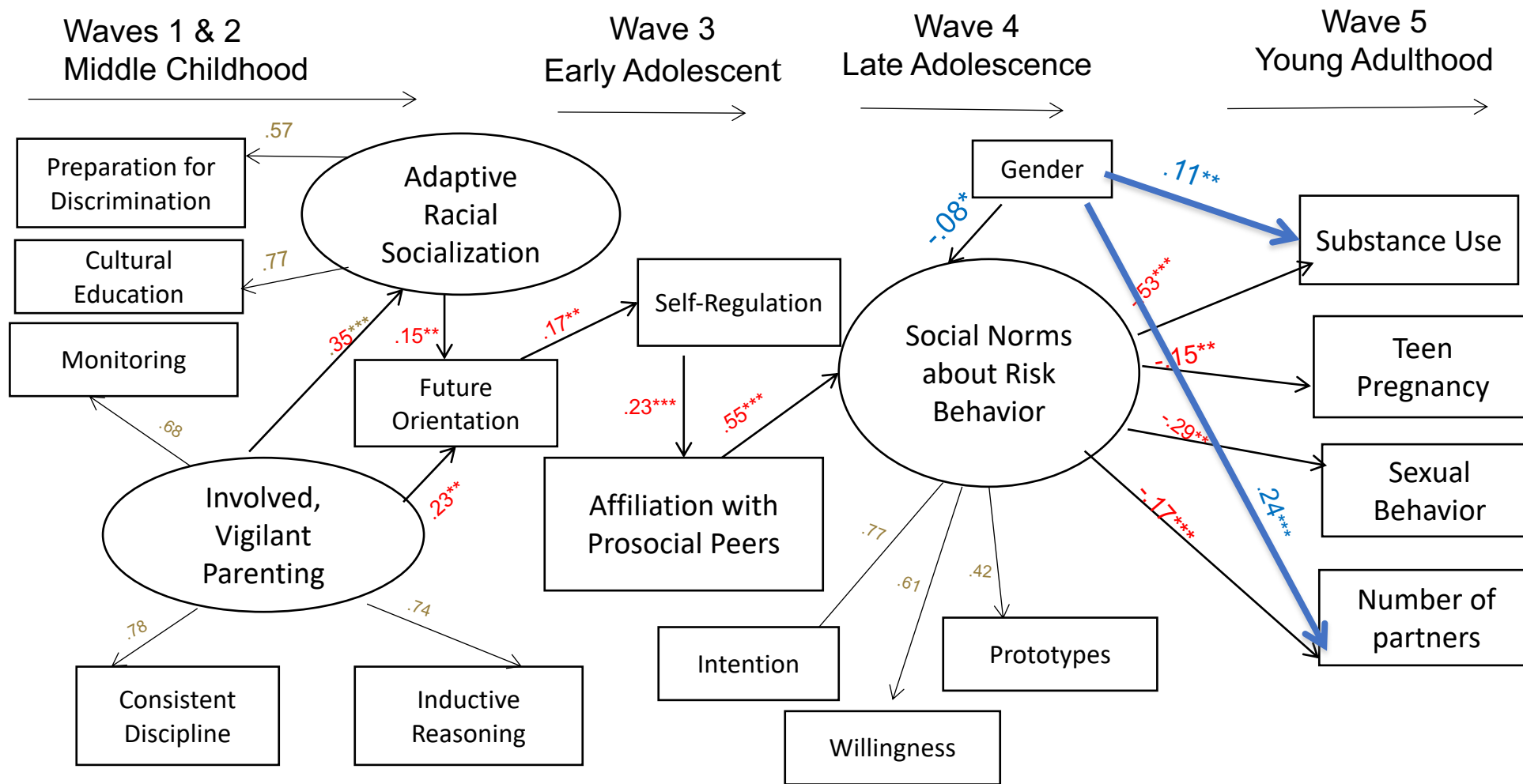
Wave 4  
Late Adolescence

Wave 5  
Young Adulthood



Note. Low risk males ( $N = 331$ );  $\chi^2(121) = 209.69$ ,  $p < .000$ ; comparative fit index (CFI) = .91; root mean square error of approximation (RMSEA) = .047 (.036, .058). †Measure in previous wave controlled. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .





Note. Low risk participants ( $N = 765$ );  $\chi^2(113) = 328.99, p < .000$ ; comparative fit index (CFI) = .92; root mean square error of approximation (RMSEA) = .050 (.044, .056). †Measure in previous wave controlled. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

## Profile Analyses for Trajectories of High and Low Risk African American Females and Males

	High Risk Female (N=37; 8.24%)		Low Risk Female (N=412; 91.76%)		t/F (p)	High Risk Male (N=25; 6.61%)		Low Risk Male N=353; 93.39%		t/F (p)		
	Mean	Std. Dev.	Mean	Std. Dev.		Mean	Std. Dev.	Mean	Std. Dev.			
<b><i>Involved-vigilant parenting</i></b>												
Monitoring	15.50	3.59	16.63	3.12	-2.01	(-0.02)	13.05	4.59	15.76	3.32	-3.54	(<.001)
Consistent discipline	11.76	2.40	12.23	2.58	-1.01	(-0.15)	12.05	3.19	12.49	2.30	-0.83	(-0.20)
Inductive reasoning	11.74	4.32	13.23	4.03	-2.06	(-0.02)	13.19	4.77	13.33	3.77	-0.17	(-0.43)
<b><i>Youth intrapersonal factors</i></b>												
Self-regulation	31.86	3.47	32.68	4.21	1.23	(-0.27)	29.94	5.56	33.05	3.79	8.00	(<.005)
Affiliation with prosocial peers	14.77	2.99	14.34	3.10	0.47	(-0.49)	16.38	3.52	14.09	3.09	0.62	(-0.43)
<b><i>Social norms about risk behavior</i></b>												
Intention	1.75	4.13	-0.06	4.10	2.50	(<.01)	4.04	4.91	-0.36	3.67	4.72	(<.001)
Willingness	1.18	4.44	-0.33	3.54	2.36	(<.01)	3.84	5.74	0.05	3.38	4.30	(<.001)
Prototypes	1.04	9.87	0.15	11.04	0.46	(-0.68)	4.94	8.58	5.02	10.23	-0.03	(-0.49)
<b><i>Risky outcomes</i></b>												
Substance use	4.68	3.84	3.10	3.67	2.39	(<.01)	6.75	4.63	4.08	3.85	2.34	(<.01)
Sexual behavior	4.62	1.58	4.20	1.82	1.31	(-0.90)	4.00	2.00	4.12	1.74	-0.23	(-0.41)
Teen pregnancy	1.45	0.77	0.61	0.77	5.79	(<.01)	1.44	0.88	0.62	0.73	3.32	(<.001)
Number of Sexual partners	0.21	0.64	0.20	0.56	0.04	(-0.52)	0.92	1.93	0.67	1.24	0.67	(-0.75)



# Reducing Disparities through Family-Centered Programs

- “Strong families can prevent adverse outcomes for youth and parents (Berkel et al., 2011; Brody et al., 2010; Hops et al., 2001; Murry et al., 2012)



# Family-Centered Delivery System for Prevention

- Families are considered the most fundamental, proximal social system for children's development
- Thus, family-based programs can serve as a longitudinal & developmentally appropriate intervention for children
- Family-based programs that are culturally tailored may be an appropriate venue to address health disparities



# Mechanisms of Change in Family-Centered Programs

- Enhance family processes and relationships that promote strength and resilience
- Evince positive changes in family functioning, that in turn, decrease manifestation of health problems among children and parents.





# Translating Basic Research to Practice

## Longitudinal, Developmental

- Contextual pathways to psychological adjustment among rural African American children and youth



## Prevention/Intervention

- Strong African American Families Program (SAAF)
- Pathways for African Americans Success (PAAS)©



# Conceptual Model for the Development and Implementation of Family-Centered Prevention Programs for African Americans

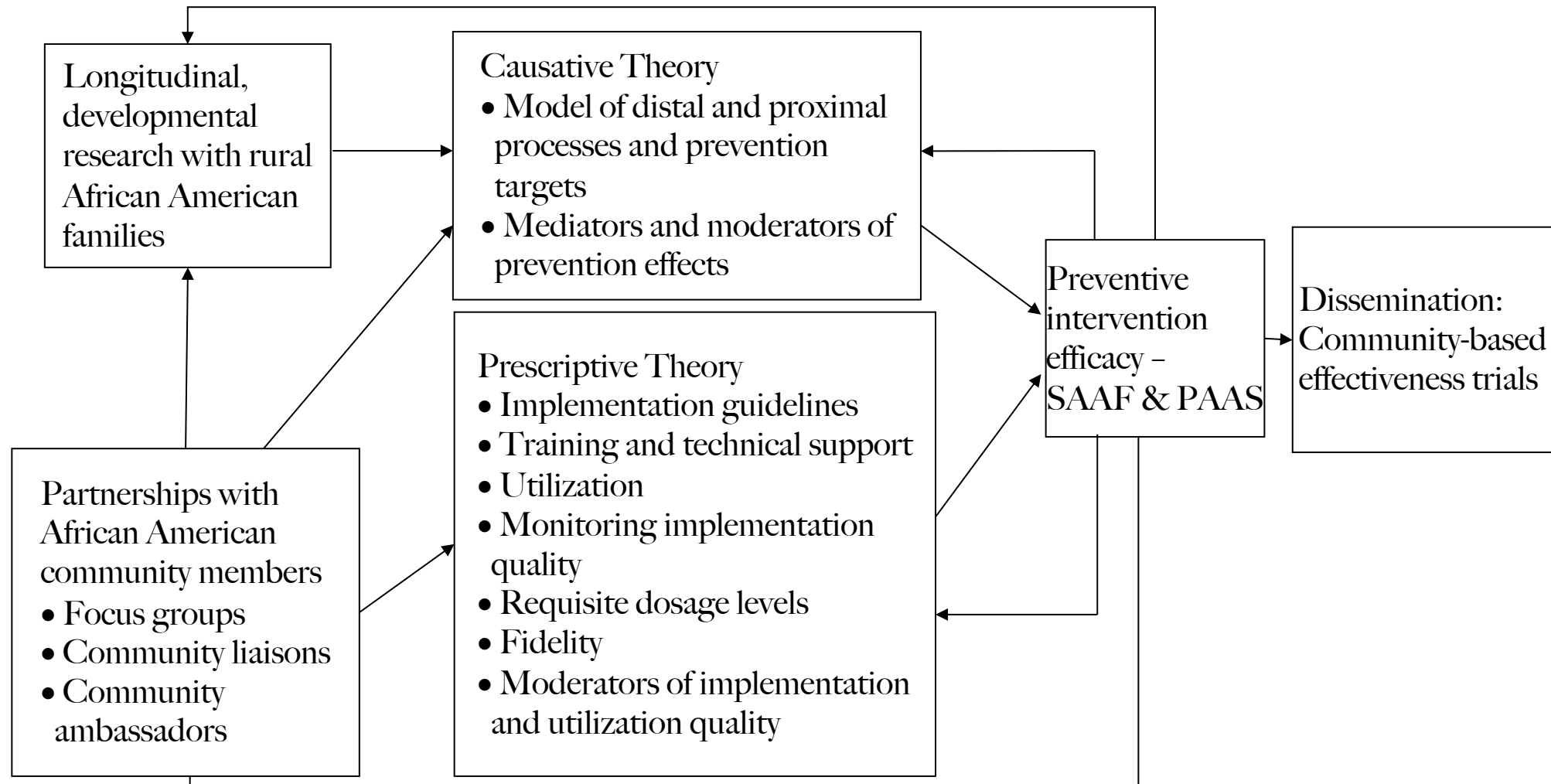
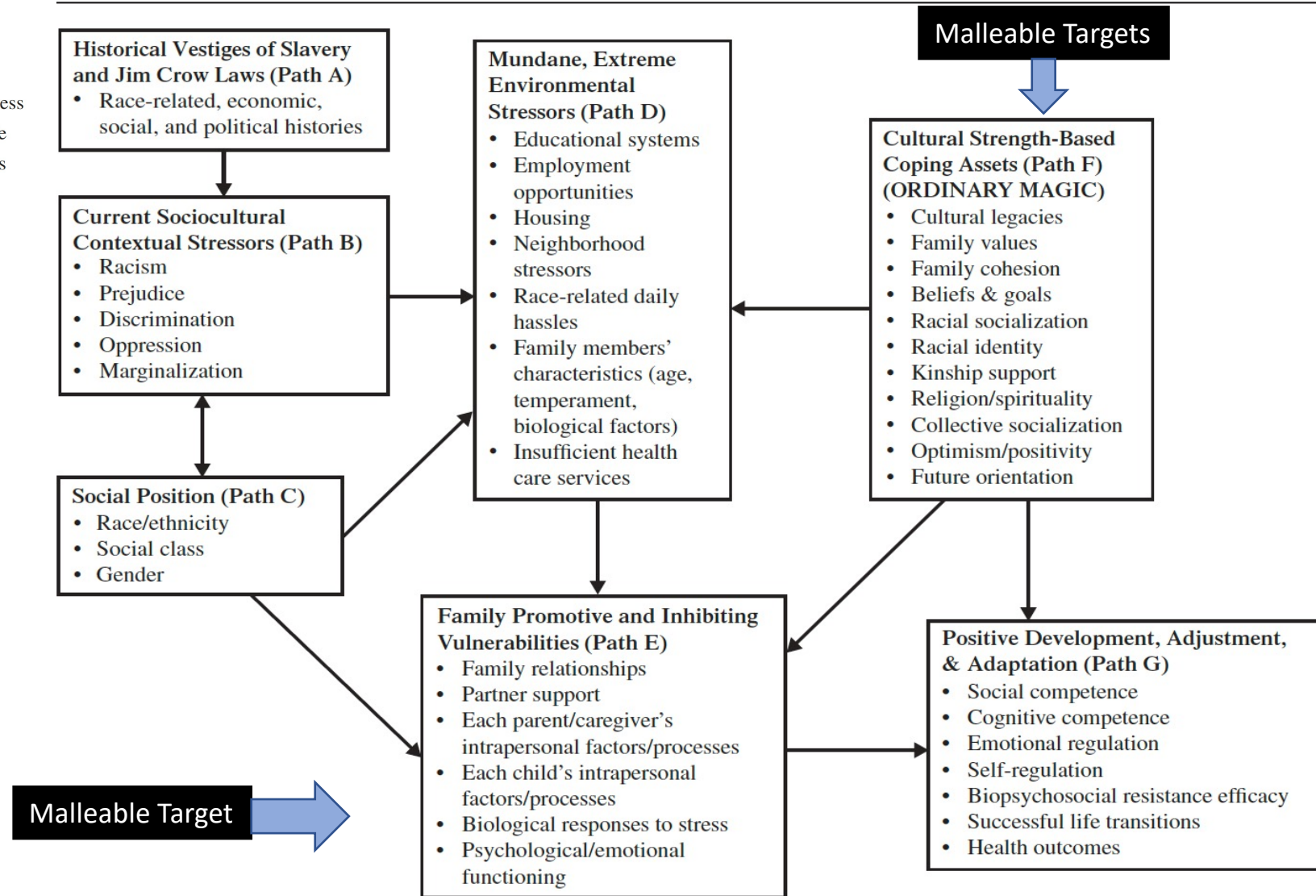
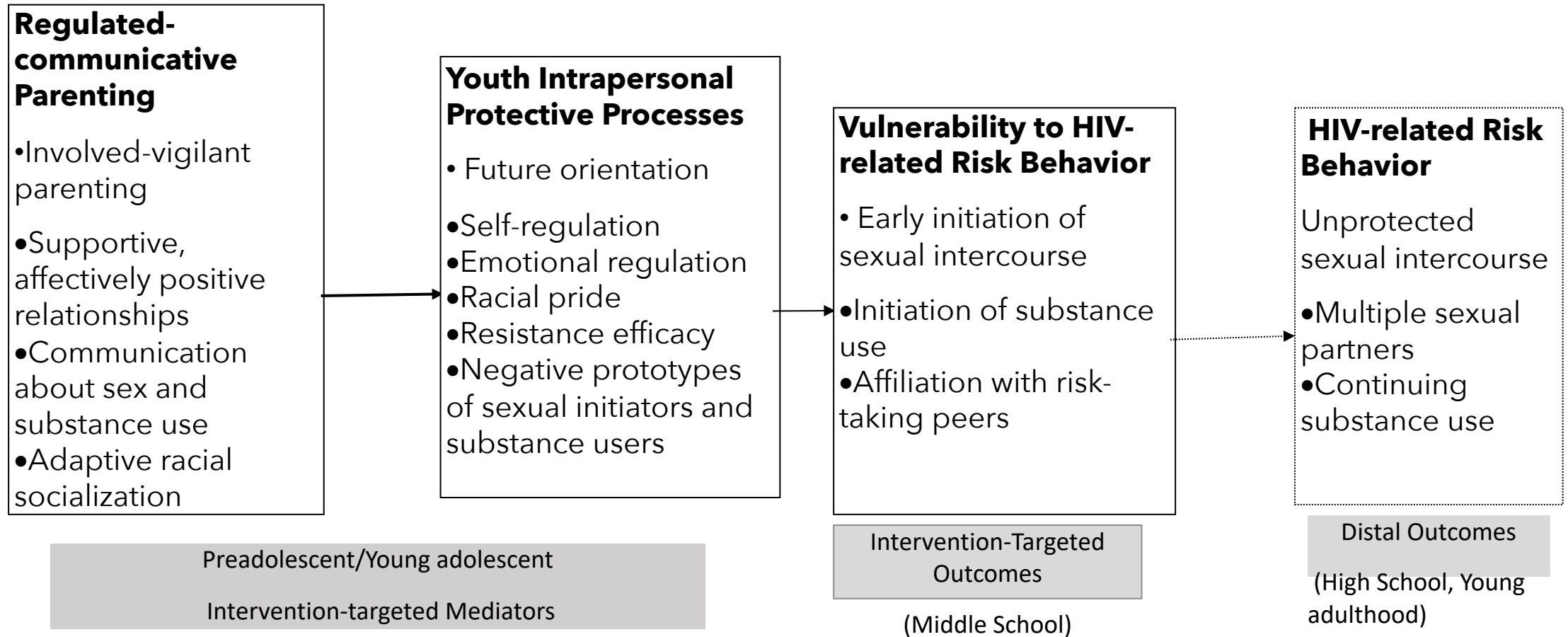


FIGURE 1. INTEGRATIVE MODEL FOR THE STUDY OF STRESS IN BLACK AMERICAN FAMILIES.

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# SAAF/PAAS Causative Model



# Content of SAAF/PAAS

## Caregiver sessions (1hr)

- nurturance, monitoring, control, and consistent non-punitive discipline
- establishing clear expectations regarding alcohol use
- strategies for communicating about sex
- strategies for adaptive racial socialization

## ■ Youth sessions (1hr)

- importance of having and abiding by household rules
- negative attitudes regarding the use of alcohol and other drugs
- similarities and differences between themselves and peers who use alcohol
- resistance efficacy
- adaptive behavioral strategies to use when encountering racism

- Joint family sessions (1hr)
  - communication skills and activities aimed at increasing family cohesion and children's positive involvement with their families



# Prevention/Intervention Targets with Rural African American Populations

## Strong African American Families and Pathways for African American Success Programs

Promotes

- Involved, vigilant parenting
- Family relationship quality
- Racial socialization
- Youth future orientation self-regulation, resistance efficacy, academic and social competence
- Inhibits
  - Conduct disorders and depressive symptoms
  - Alcohol/other substance use
  - Early-onset sexual activity and other sexual risk taking practices



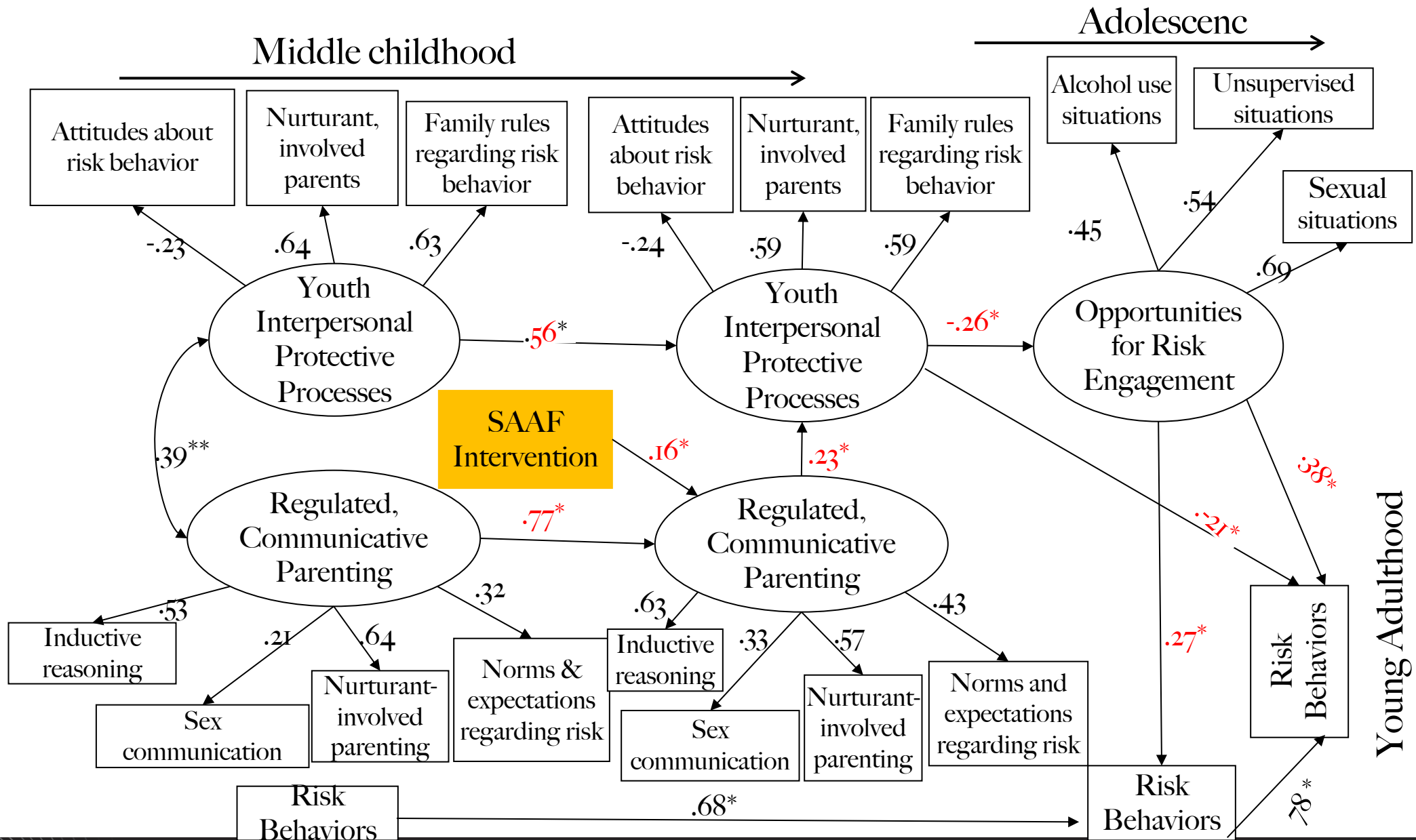
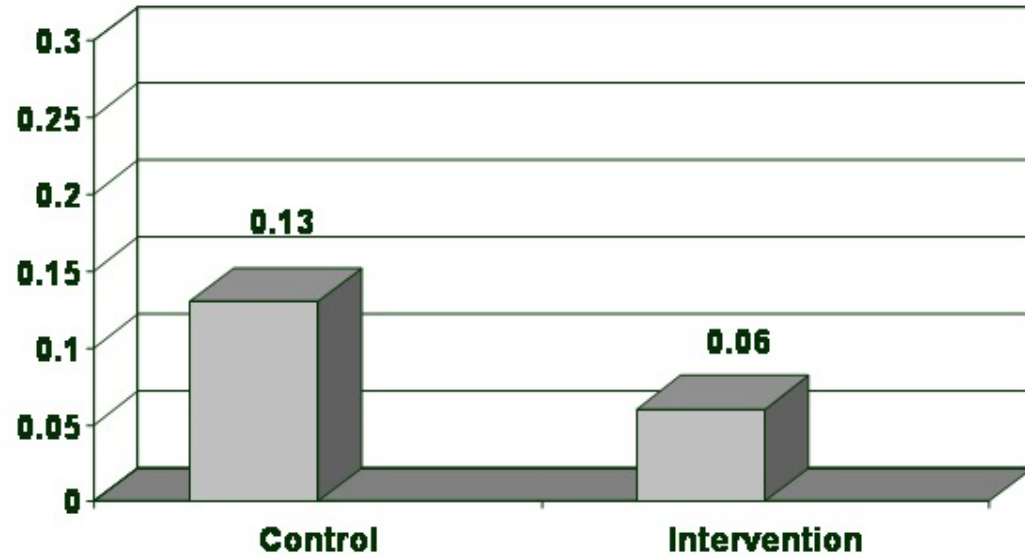
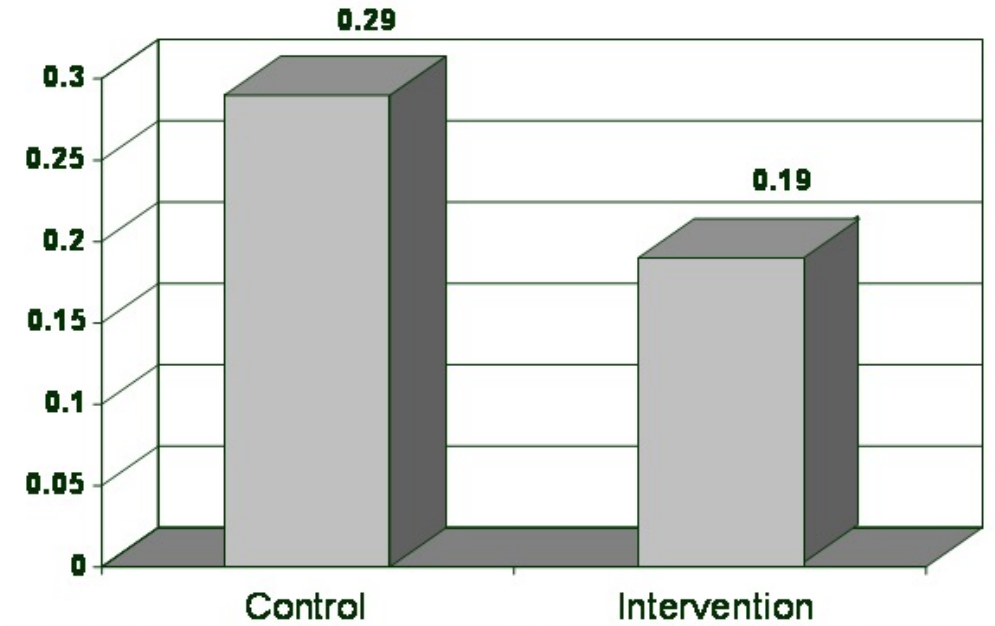


Figure 2. New User Proportions for Alcohol Use at Posttest by Experimental Condition.



Z-score for testing proportions: 2.23 with  $p < .05$ . Relative reduction rate: 56.41

Figure 3. New User Proportions for Alcohol Use at Long-term Follow-up by Experimental Condition.



Z-score for testing proportions: 2.16 with  $p < .05$ . Relative reduction rate: 36.93



# Overall Findings

- SAAF program targeted malleable, proximal parenting processes in the youths' immediate family contexts that were hypothesized to facilitate increase youths willingness to avoid risky situation, even when there were risk opportunities available to them. Risk opportunity avoidance had immediate and long-term positive consequences for youth, preventing HIV related risk engaging behaviors.
- Evidence of program sustainability 6 years post-program exposure, few incidences of unprotected sex, more monogamous relationships, less evidence of substance and drug use compared to the control group.





# Transporting SAAF in Technology Delivery Platform

## PATHWAYS FOR AFRICAN AMERICAN SUCCESS (PAAS) PROGRAM

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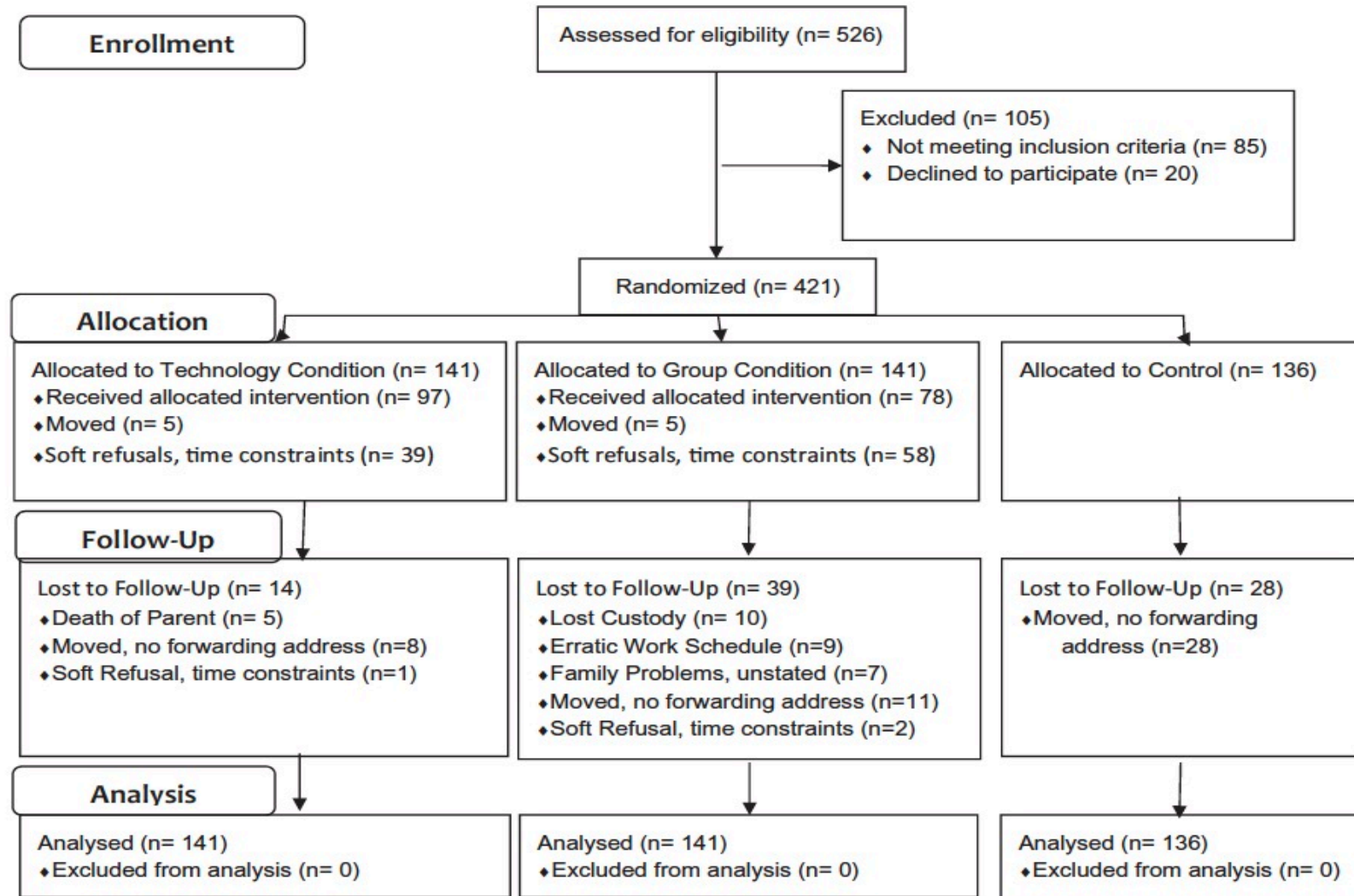


Figure 1. Consort flow diagram.

Table 1

## Overview of Session Content in the PAAS Program

Session	Parent Program Component	Parent-Targeted Behaviors	Youth Program Component	Youth-Targeted Behavior	Family Program Component	Family-Targeted Behavior
1	Supportive Parenting	Importance of supportive parenting for youth development Normative developmental patterns of pre- adolescent and adolescent; Parental goals and expectations Effective ways to support youth goals and dreams	Future Orientation	Identify and visualize goals and dreams	Supporting our youth	Build nurturing, supportive relationships; Enhance parental involvement
2	Establishing Family Rules and Routines Nurturing Involved Parenting	Understand the values of having specific house rules; appropriate and effective punishment for misbehavior	Self- discovery & Autonomy	Identify positive self-qualities and capacities; Clarifying values and social norms; Importance of youth family involvement; Association between being responsible and autonomy and privilege-granting by parents	Family values	Share family rules and chores; Discuss family values; Create a family shield of values
3	Adaptive Racial Socialization and Encouraging Racial Pride	Identifying and managing racial discrimination Preparation for racial bias and promoting racial pride	Dealing with unfair situations	Identifying and clarifying reasons for differential treatment; Active coping strategies to manage unfair and difficult situations in various settings	Encouraging racial pride	Learn strategies of handling difficult situations; Identify special strengths of African American families
4	Linking school and academic performance to goals, dreams to youths' future orientation	Understand the importance of success in school; Learn ways to help youth succeed in school; Learn effective ways to be an advocate for your child in school settings	Being cool & smart	Understanding the differences between passive, aggressive, and assertive behaviors; Adaptive responses, that are smart and cool	Positive, affectionate family relations	Identify each other's stressors; Reinforce ways to help each other to reach family goals and relieve stress
5	Protecting against dangerous behavior	Understand risk prevalence, overall, and for your community; Importance of being an "Askable" parent	Resisting peer pressure	Identify peer pressure; compare risk engagers from non-risk engagers Dealing with temptation Prosocial peer affiliation	Caregivers and young people working together to protect youth from risk behaviors	Develop family plan for handling peer pressure and temptation; Share expectations and values about risk and friendship
6	Parental protections that reduce high risk behaviors	Learn how to effectively monitor youth; Understand the prevalence of sexual activity among pre-teens; Establish expectations about sex	Dealing with sexual and substance and drug use temptations	Identify reasons young people get involved in sex; identifying and avoiding dangerous situations Connecting risk, temptations, dreams, goals, school, and future orientation	Our family plan and pledge for positive youth development	Share expectations, dreams, and hopes; Discuss and identify family strengths; Establish a family creed that reflects strength, growth, and competence



# *PAAS Delivery Platforms*

## **Self-directed technology condition:**

Technology Intervention Assistants set up laptops at designated community centers, such as churches, youth centers, and libraries. TIAs directed participants to an available laptop, provided any necessary technical assistance, and remained in viewing sight to oversee session completion.

## **Facilitator-led small group condition:**

Three African-American community members (e.g., one for parent sessions and two for youth sessions) implemented the manualized PAAS curriculum. Twelve groups of roughly 12 families per group met weekly, engaged in organized role-playing activities and guided discussions with time allotted to ask questions.

## **Home mailed literature control condition:**

Families received a weekly mailing of PAAS topical-related brochures and pamphlets, wherein the differences lie only in the delivery method.







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Original article

# The Pathways for African American Success: Does Delivery Platform Matter in the Prevention of HIV Risk Vulnerability Among Youth?



Velma McBride Murry, Ph.D.<sup>a,\*</sup>, Heather Hensman Kettrey, Ph.D.<sup>b</sup>, Cady Berkel, Ph.D.<sup>c</sup>,  
and Misha N. Inniss-Thompson, M.S.<sup>a</sup>

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**Table 2**Cohen's *d* unadjusted effect sizes at 6-mo post-test by condition

	Technology versus control		Group versus control		Technology versus group	
	<i>d</i>	95% CI	<i>d</i>	95% CI	<i>d</i>	95% CI
Parent targeted outcomes						
Articulated Norms/Expectations about Risk Engagement	.29* ←	.03, .55	.08	-.19, .36	.22	-.05, .48
Open, Supportive, Family Communication	.20	-.08, .47	.31* ←	.02, .61	-.11	-.39, .17
Frequency of conversation	.26* ←	.00, .52	.39* ←	.11, .66	-.13	-.40, .13
Discussion quality	.05	-.23, .33	.30* ←	.01, .59	-.25	-.53, .03
Conflicted ineffective communication	-.14	-.42, .13	.02	-.27, .31	-.17	-.45, .11
Youth targeted outcomes						
Articulated Norms/Expectations about Risk Engagement	.18	-.08, .44	.27* ←	.00, .55	-.10	-.37, .16
Open, Supportive Family Communication	.28	-.04, .61	.01	-.32, .35	.26	-.06, .57
Frequency of conversation	.21	-.05, .47	.18	-.09, .45	.03	-.24, .29
Discussion quality	.28	-.05, .61	.07	-.27, .40	.22	-.10, .54
Conflicted ineffective communication	-.01	-.33, .32	.18	-.16, .51	-.18	-.50, .14
Risk engagement intentions	-.36* ←	-.61, -.10	.03	-.24, .30	-.36* ←	-.63, -.10

CI = confidence interval.

\* =  $p < .05$

Journal of Pediatric Psychology, 44(3), 2019, 375-387  
 doi: 10.1093/pepsy/ps001  
 Advance Access Publication Date: 14 February 2019  
 Original Research Article



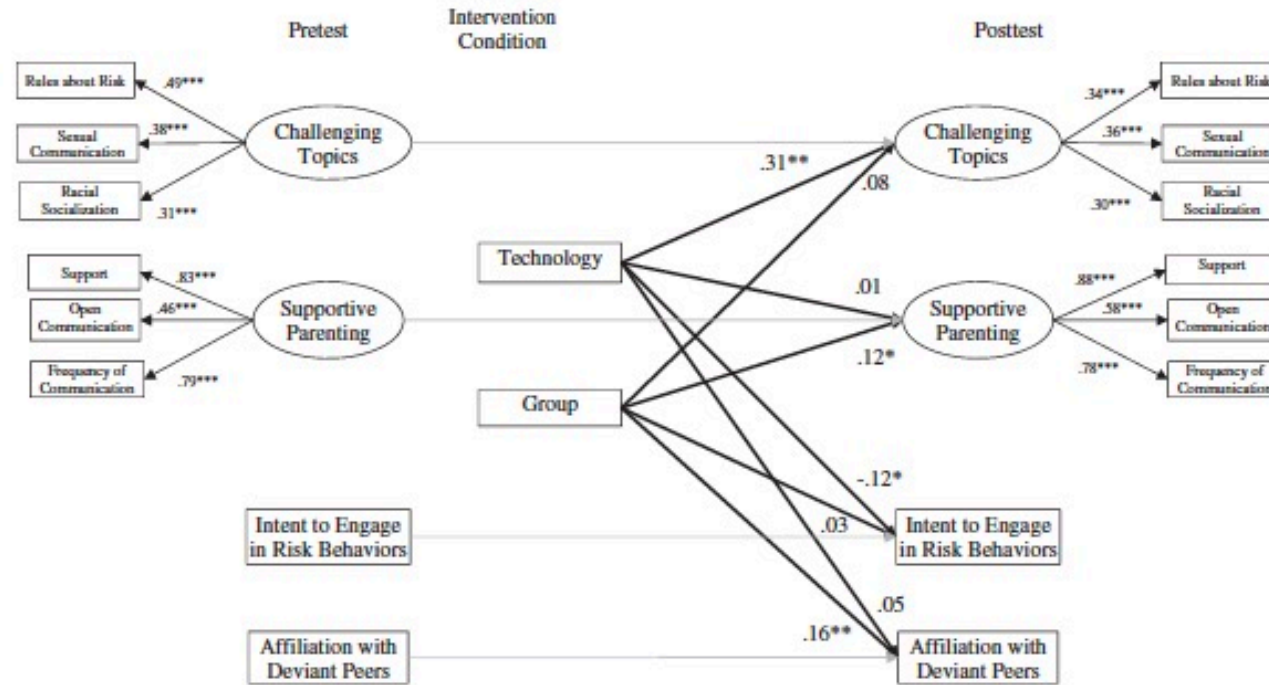
**Pathways for African American Success: Results of Three-Arm Randomized Trial to Test the Effects of Technology-Based Delivery for Rural African American Families**

Velma McBride Murry,<sup>1</sup> PhD, Cady Berkel,<sup>2</sup> PhD, Misha N. Inniss-Thompson,<sup>1</sup> MS, and Marlena L. Debreaux,<sup>1</sup> MA

<sup>1</sup>Human and Organizational Development, Vanderbilt University Peabody College of Education and Human Development and <sup>2</sup>REACH Institute, Arizona State University College of Liberal Arts and Sciences

All correspondence concerning this article should be addressed to Velma Murry, PhD, 203 Appleton Place, Vanderbilt University, Nashville, TN 37203. E-mail: velma.murry@vanderbilt.edu

Received May 2, 2018; revisions received January 3, 2019; accepted January 3, 2019



Notes: \*\*\*p<.001; \*\*p<.01; \*p<.05

**Figure 2.** The influence of delivery format on Intent to Treat (ITT) improvements in parenting and youth risk factors.



# The Pathways for African American Success Program: Mitigating the Negative Consequences of Discrimination

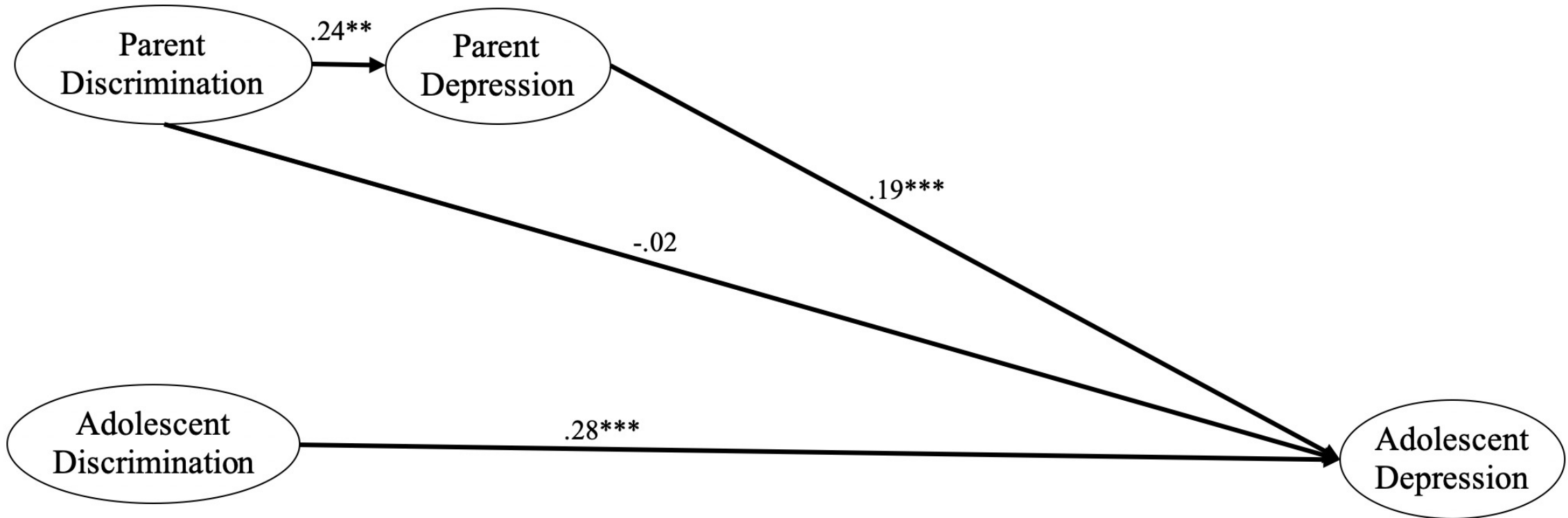
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Figure 2. Linkages between Discrimination and Adolescent Depression at Pretest



Notes:  $\chi^2(1) = 0.80$ ;  $p = .37$ ; \*\*\* $p \leq .001$ ; \*\* $p \leq .01$ ; \* $p \leq .05$

Figure 1. Conceptual Model

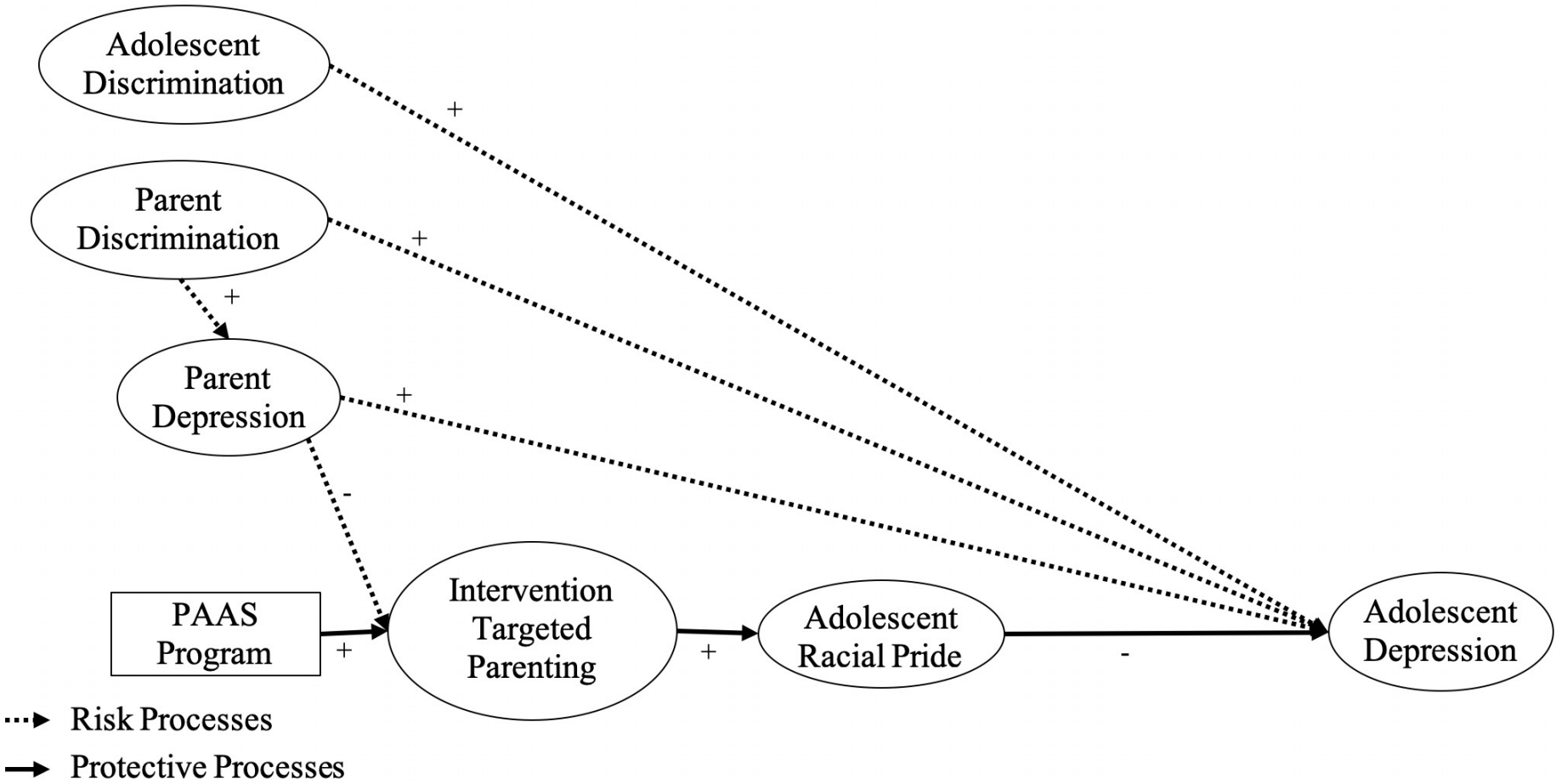
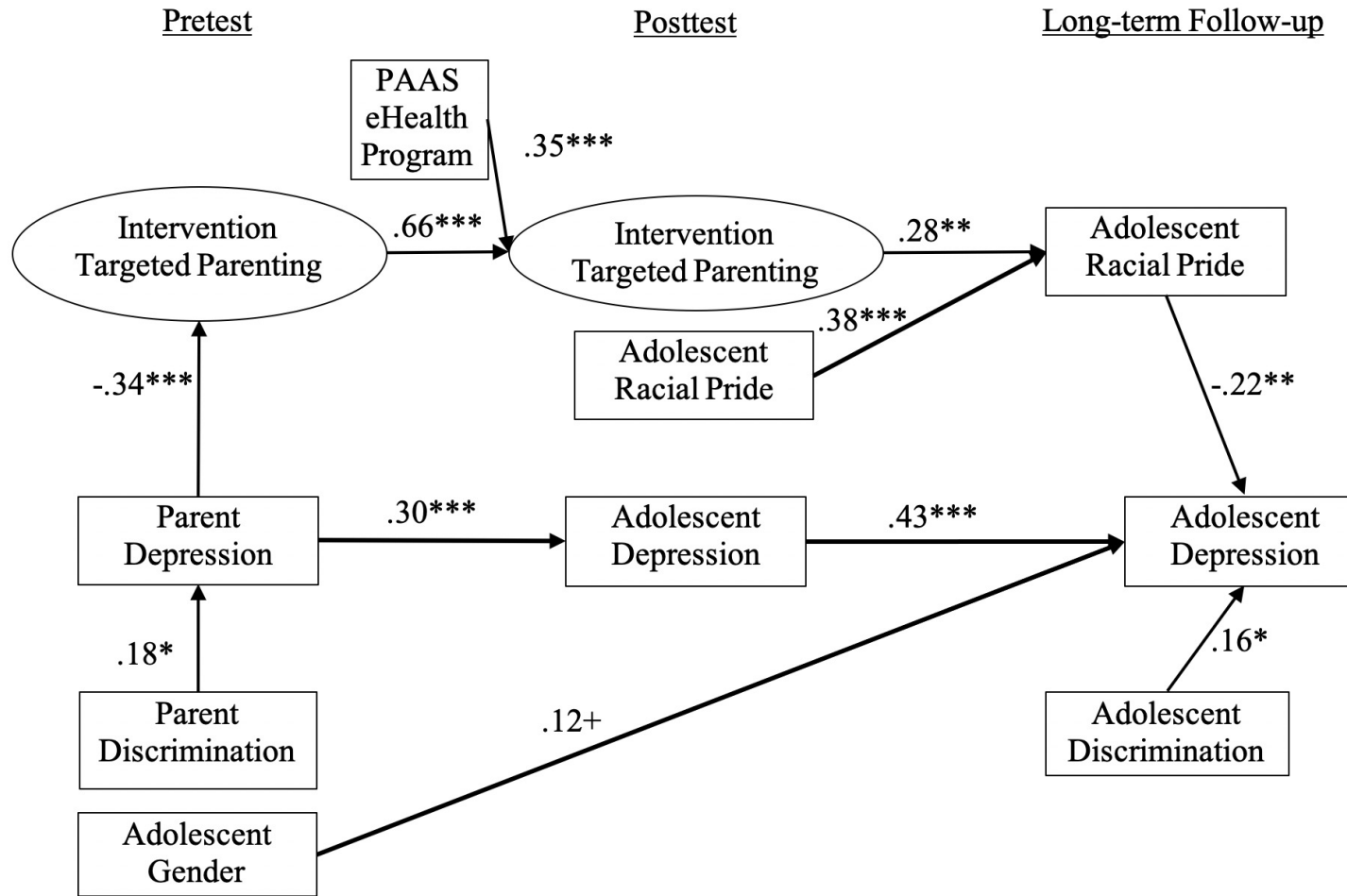


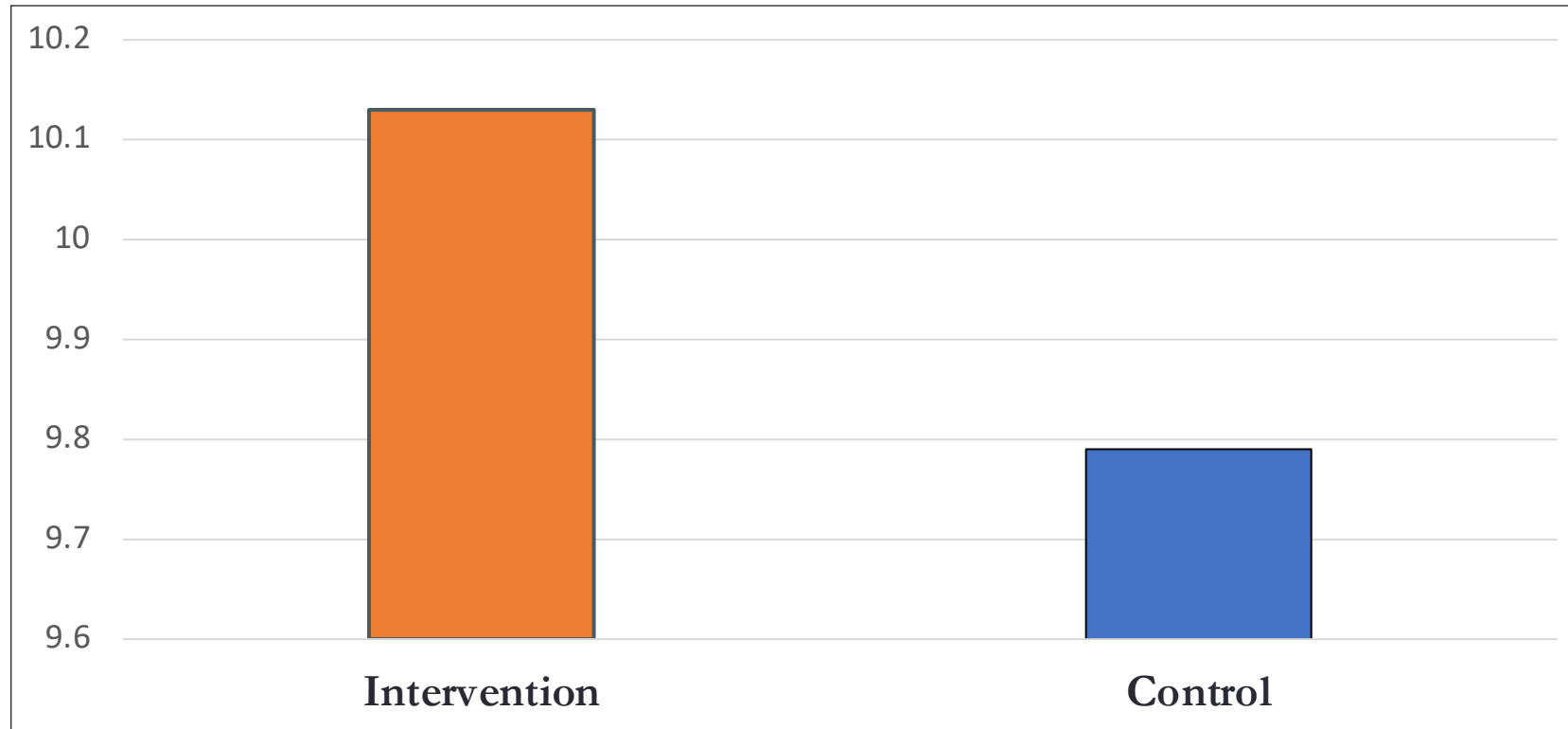
Figure 3. Examination of the Effects of the PAAS eHealth Program on Protective Processes for Adolescent Depression



Notes:  $\chi^2(79) = 97.01, p = .08$ ; RMSEA = .04 (90% confidence interval, CI = .00, .06); CFI = .92; SRMR = .07  
 $^{***}p \leq .001$ ;  $^{**}p \leq .01$ ;  $^*p \leq .05$ ;  $^+p \leq .10$

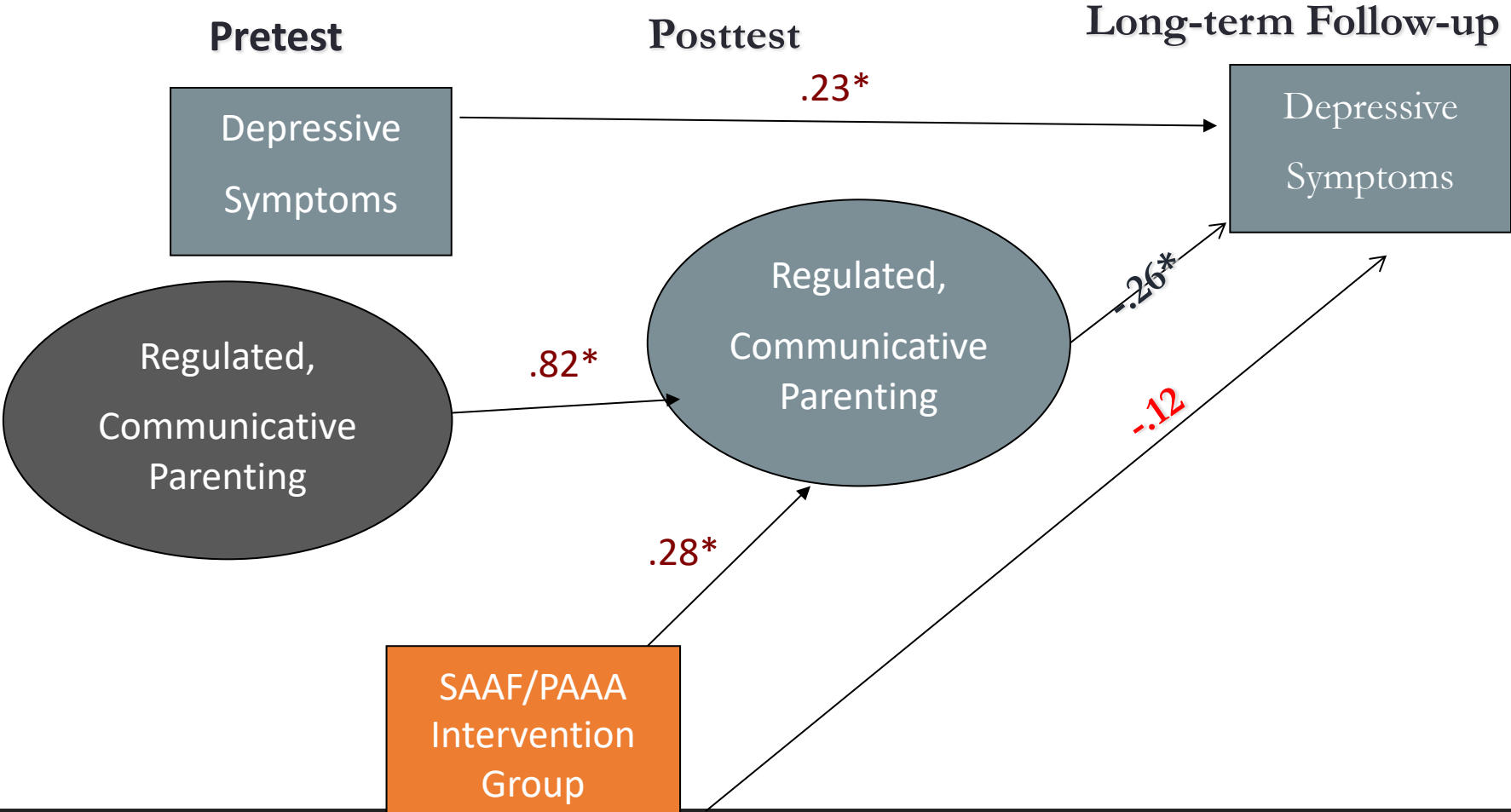
# Murry et al., (2014)

## Promotes Marital Satisfaction and Stability



The t-value is 2.01,  $p < .05$ .

# Reduces Mental Health Problems among Parents



## *Merging Neuro and Prevention Science*

**Background:** Neuroimaging studies have implicated deficits in the fronto-striatal circuit in increased risk-taking behaviors. However, little is known about the role of functional coupling between the reward system (ventral striatum; VS) and regions responsible for emotional and cognitive control (prefrontal cortex; PFC) in relation to adolescent coping behaviors.

**Study Purpose:** To examine frontal-striatal changes during a reward-seeking task before and after exposure to PAAS.

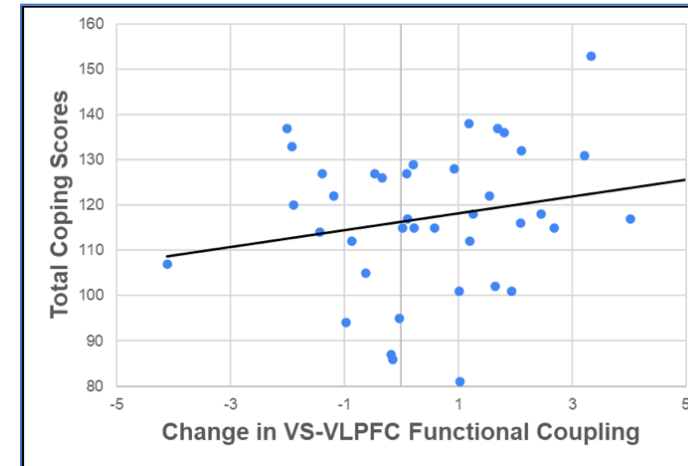
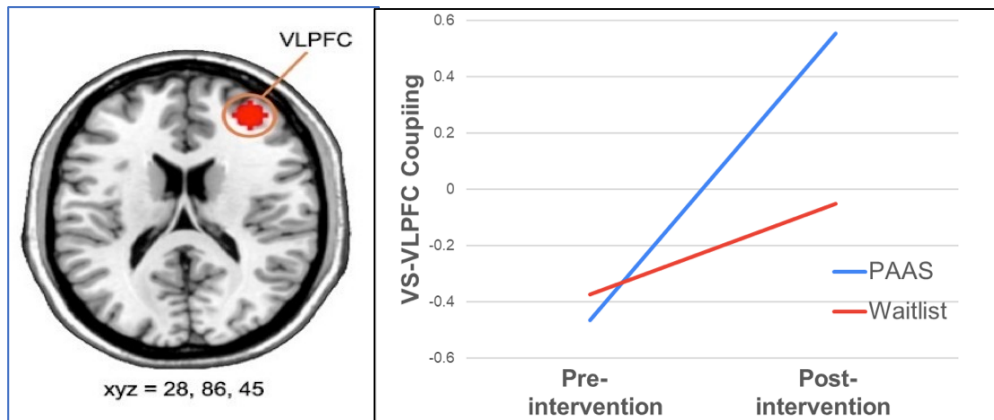
**Research Design:** 47 African-Americans (AA) aged 11-14 years (66% males, M age =  $12.5 \pm 1.0$ ). Participants randomized to intervention (n = 22) and waitlist (n = 25) completed functional magnetic resonance imaging (fMRI) scans at pre- and post-intervention and self-report measures of risk-taking and coping at pre-intervention and 3-month follow up.



# Functional Connectivity During Reward-Seeking in Adolescents Enrolled in a Risk-Reduction Intervention

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<sup>1</sup>University of California, Irvine, Department of Psychiatry & Human Behavior  
<sup>2</sup>National Institute of Mental Health, Bethesda, MD; <sup>3</sup>Vanderbilt University, Nashville, TN  
<sup>4</sup>Children's Hospital of Orange County, Orange, CA

PAAS participants [ $t(21) = 2.88$ ,  $p \leq .01$ ], but not Waitlist youth [ $t(24) = -0.69$ , NS], exhibited significant increases in functional coupling between the VS and ventrolateral PFC (VLPFC) over time (Figures 2 and 3).



Increases in VS-VLPFC coupling for the full sample were associated with improved coping skills at follow-up [ $B = 2.20$ ,  $SE = 1.06$ ,  $p \leq .05$ ] (Figure 4).

*These preliminary results suggest that PAAS, a family-based, culturally-salient, life-skills program, may influence stronger coupling between reward-seeking and inhibitory control systems.*



- SAAF and PAAS not only provided an opportunity to evaluate the program's effectiveness in changing the targeted behaviors but also allowed us to address an issue that is seldom addressed in prevention research: testing the theory on which the prevention program is based

(Cicchetti & Toth, 1992; Coie et al., 1993; Spoth, Kavanagh, & Dishion, 2002).

- Testing of PAAS intervention on neural circuitry that governs adolescents decision making may hold promise for improving interventions targeting high risk behavior, linking biological mechanisms, psychological processes, and social-contextual factors to behavioral outcomes. All for full testing of a biopsychosocial contextual model in preventive interventions





Thank you!!



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