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HIV/AIDS Protective Factors among Sexually Active Hispanic/Latino and African American Adolescents

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SAMHSA

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Background

Study Objective

The study objective was to evaluate an HIV risk profile using a structural equation model (SEM) in sexually active Hispanic adolescents compared to African American adolescents who participated in CSAP Substance Abuse and HIV Prevention Initiative from 2002-2006.

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Method

Participants - The data were collected from the 2002 SAMHSA/CSAP Substance Abuse and HIV Prevention Initiative funded grant sites

- <u>34 of the 48</u> community-based sites agreed to participate in use of standardized data collection and submission protocol that used common instruments
  - IRB approval was obtained locally by the sites

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Study Sample

- Baseline Data (within 30 days prior to receipt of services) was collected on a total of 8,767 youth

- Out the total minority youth (N= 3,121), Hispanic youth (N=919) & African American (N=1,458) were included in the present study

  - Youth had to have experienced
    - vaginal, oral, or anal sex so that HIV risk behaviors could be assessed in the model

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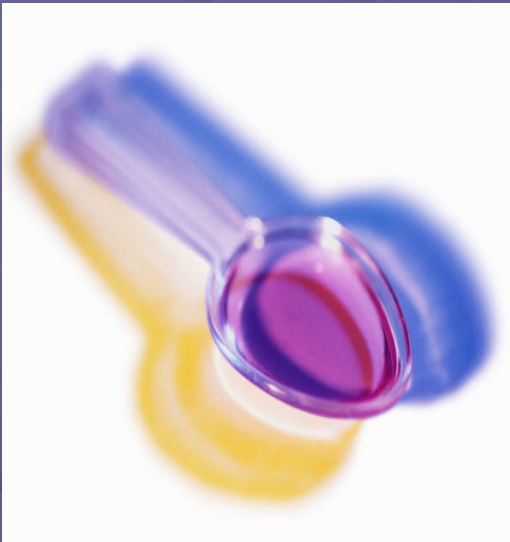
Measures

Six Variables
(Process/Intervention Related)

Neighborhood Attachment

- 3 Items focused on –
  - like to get out of neighborhood,
  - like neighborhood, and
  - if moved would miss neighborhood.
- Response categories were a
  - 4-choice Likert scale (i.e., strongly agree to strongly disagree).
- Scale reliability ($\alpha = 0.758$)

Ethnicity Pride

- Measure using questions from the Phinney (1992) Multi-group Ethnic Identity Scale
  - Ethnic group described as a cultural group that has similar customs, traditions, and sometimes values
- 5 items were associated with
  - participation in social educational, and cultural enrichment activities, such as groups or organizations of the respondent's own ethnic group
- Response categories 4-choice Likert scale "strongly agree to strongly disagree"
- Scale reliability ($\alpha = 0.855$)

Family Cohesion

- Items adopted from Moos (1974) Family Environment Scale
- 6 items focused on
  - Availability to talk with family members
  - Listen to family members
  - Ask for help from family members,
  - Spend free time with family members
  - Feel close to family members
  - Think of things to do together with family member
- Departing from Moos true/false response choice,
  - response choices were placed on a 4-point Likert scale "strongly agree to strongly disagree" to allow for variations across a continuum
- Scale reliability ($\alpha = 0.874$)

School Bonding/Connectedness

- 6 items ask about attitudes toward school
  - (i.e., "How often do you feel that the school work you are assigned is meaningful and important" and "Over the last year, how did you enjoy being in school")
- Response categories 5-choice Likert scale "almost to never"
- Scale reliability ($\alpha = 0.751$)

Peer Behavior

- Term "peers" was defined as close or best friends, generally questions were asked regarding friends'
  - How many? - alcohol, tobacco, and drug use, and school performance (6 items, none to all)
  - # of best friends - dropped out of school, been sexually active, using drugs, arrested, drinking, smoking cigarettes (7 items, 1 to 4 or more)
- Scale reliability
  - How many? $\alpha = 0.738$, Number? $\alpha = 0.85$

Self-Efficacy

- 6 items used to determine behavioral intentions with others toward not having protective sex, or the use of alcohol or drugs

  - Response choice 4-point Likert scale "strongly agree to strongly disagree"

- Scale reliability ($\alpha = 0.833$)

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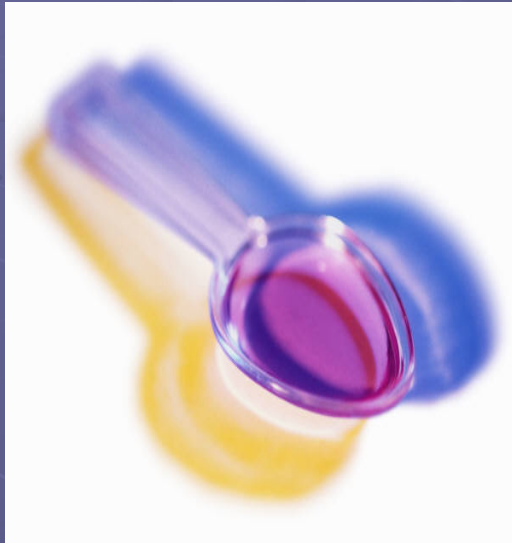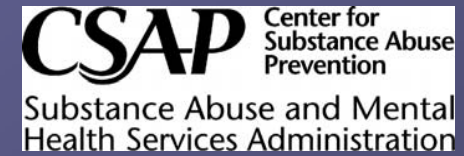
Measures

Two Variables
(Outcome Related Areas)

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ATOD Use

- Consisted of 5 items recoded into "ever used" variable from responses including last 30 days and age of 1st use for
  - alcohol,
  - tobacco,
  - marijuana,
  - inhalants, and
  - other illicit drugs

- Scale reliability (α = 0.85)

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HIV Risk

1. **Condom** – Nonuse of condoms in last 30 days, response "yes" or "no", respondents must said "yes"
   - CDC Coffee Shop Interview

2. **Alcohol & Drug** – use before sex the last time had sex or sex for money, drugs, or other things last 30 days, response "yes" or "no", respondents must said "yes"
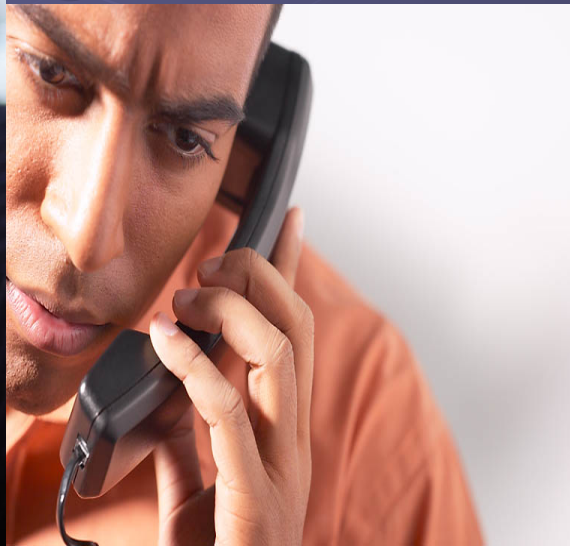
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HIV Risk Con't

3. **Partner** – Multiple partners, response ranged from 0 to 6 or more people for either lifetime or past 3 months, respondents must said 2 or more

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Analysis & Results

ATOD & HIV Risk

- Age 11 or older as the first time having sexual intercourse
  - 86% of African American youth
  - 93% of Hispanic youth
- ATOD African American adolescents
  - Ever used
    - 52% for smoking cigarettes, 61% drank an alcoholic beverage on at least one occasion, 55% used marijuana or hashish, and 19% used other illegal drugs

Past 30-Day Use (Black youth)

Legend:
- Cigarettes (20%)
- Alcohol (30%)
- Alcohol till Drunk (19%)
- Marijuana (31%)

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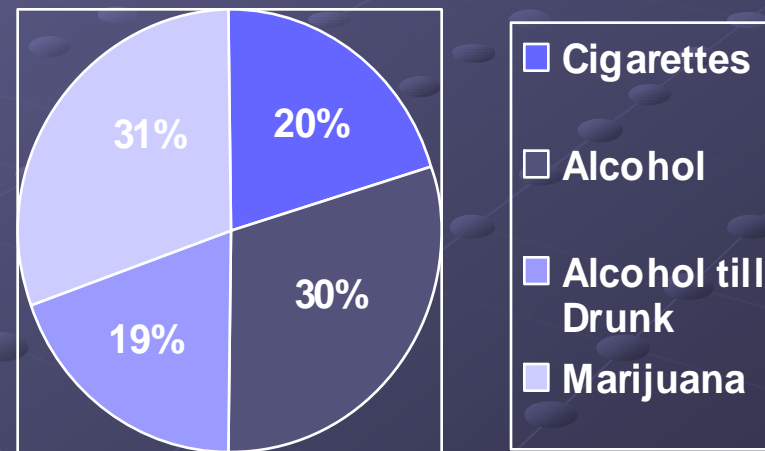
ATOD & HIV Risk Con't

- ATOD Hispanic adolescents
  - Ever used
    - 68% for smoking cigarettes, 81% drank an alcoholic beverage on at least one occasion, 63% used marijuana or hashish, and 41% used other illegal drugs.

No illicit drug use has prevalence over 12% for Hispanics or 4% African Americans

Past 30-Day Use Hispanic youth

Legend:
- Cigarettes
- Alcohol
- Alcohol till Drunk
- Marijuana

Pie chart values: 19%, 34%, 23%, 24%
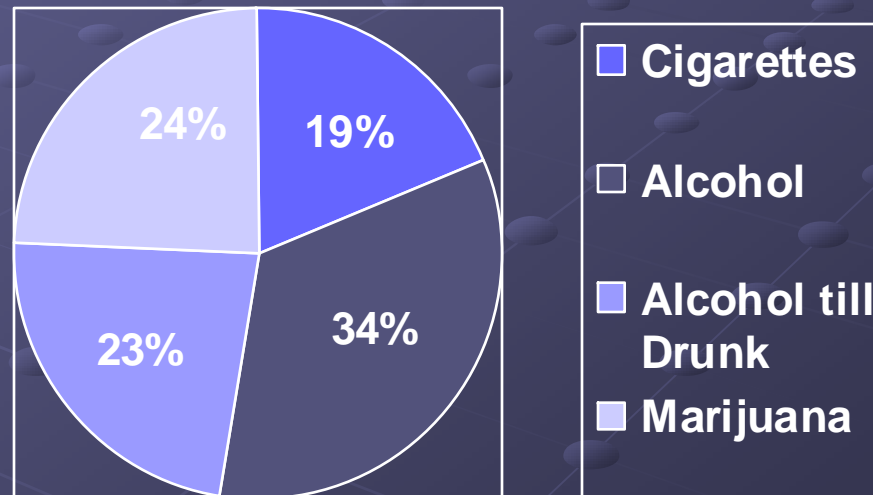
SEM

The structural equation models (SEM) were conducted using Mplus software

The models were covariance structural models with multiple indicators for all latent constructs

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The hypothesized model for **Hispanic adolescents fit** moderately well with CFI = 0.940, TLI = 0.928, RMSEA = 0.040,

- <u>**Neighborhood attachment**</u> was significantly related to
  - peer behavior (coefficient = -.09, p<.05)
- <u>**Ethnicity pride**</u> was significantly related to
  - school connectedness (coefficient = .54, p<.05),
  - family cohesion (coefficient = .25, p<.05), and
  - peer behavior (coefficient = .28, p<.01),

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- **<u>School connectedness</u>** was significantly related to both self-efficacy and ATOD use,
  - more school connectedness was associated with more self-efficacy of engaging in safe sex practices (coefficient = .40, p<.01) and
  - less ATOD use (coefficient = -.58, p<.01)
- **<u>Peer behavior</u>** was significantly related to
  - family cohesion (coefficient = .23, p<.01)
  - school connectedness (coefficient = .68, p<.01)

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- **<u>Self-efficacy</u>** was significantly related to ATOD use (coefficient = -.23, p<.05), with more self-efficacy predicting less ATOD use

- In turn, **<u>more ATOD use predicts</u>**
  - less condom use (labeled as HIV1 Condom) (coefficient =.23, p<.01),
  - more likely to use alcohol or drugs before sex (labeled as HIV2 Alcohol Drug) (coefficient =.76, p<.01), and
  - more reported sex partners (labeled as HIV3 Alcohol Drug) (coefficient =.50, p<.01)

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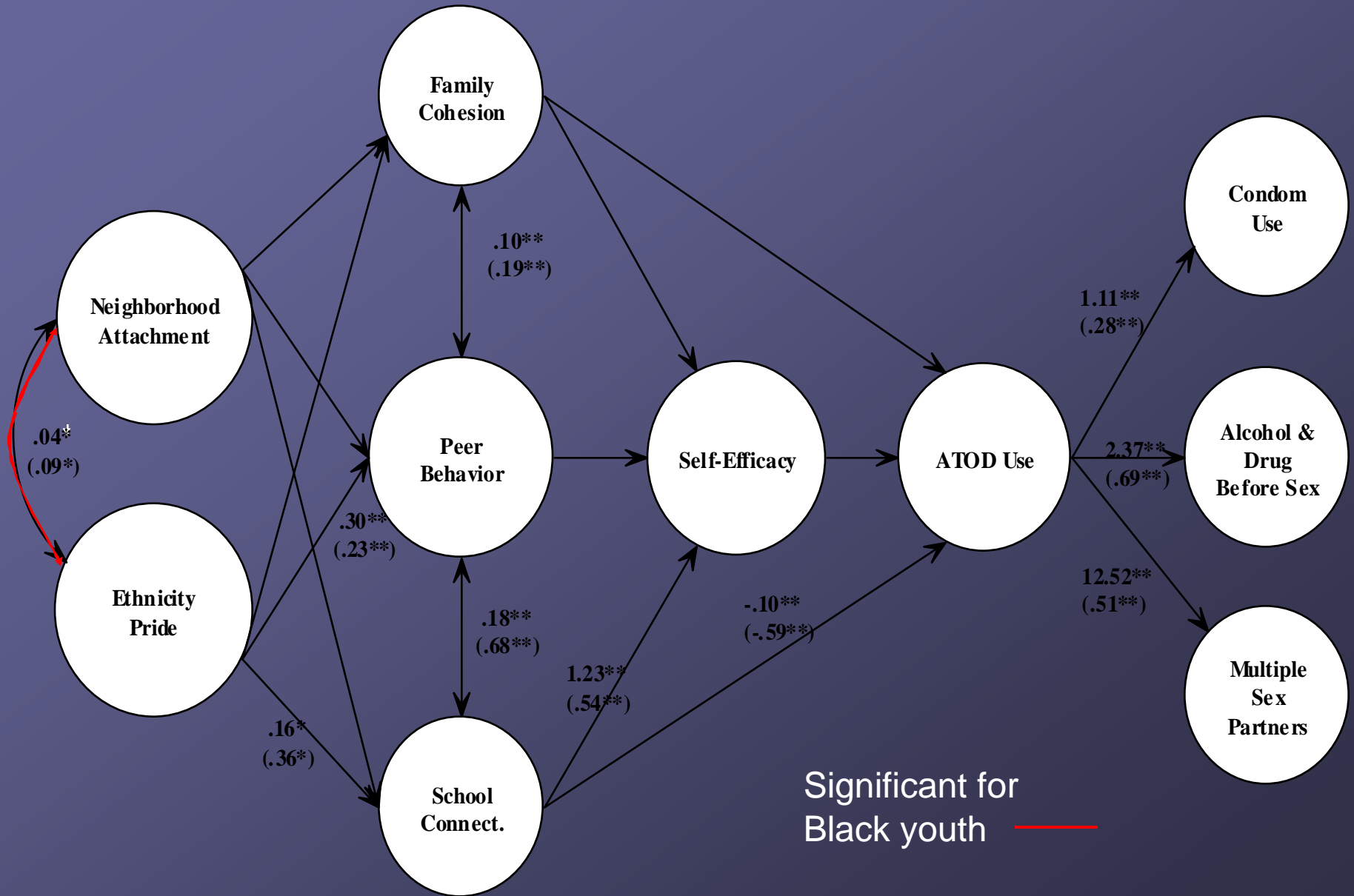# Structural Model (Hispanic youth N=919)
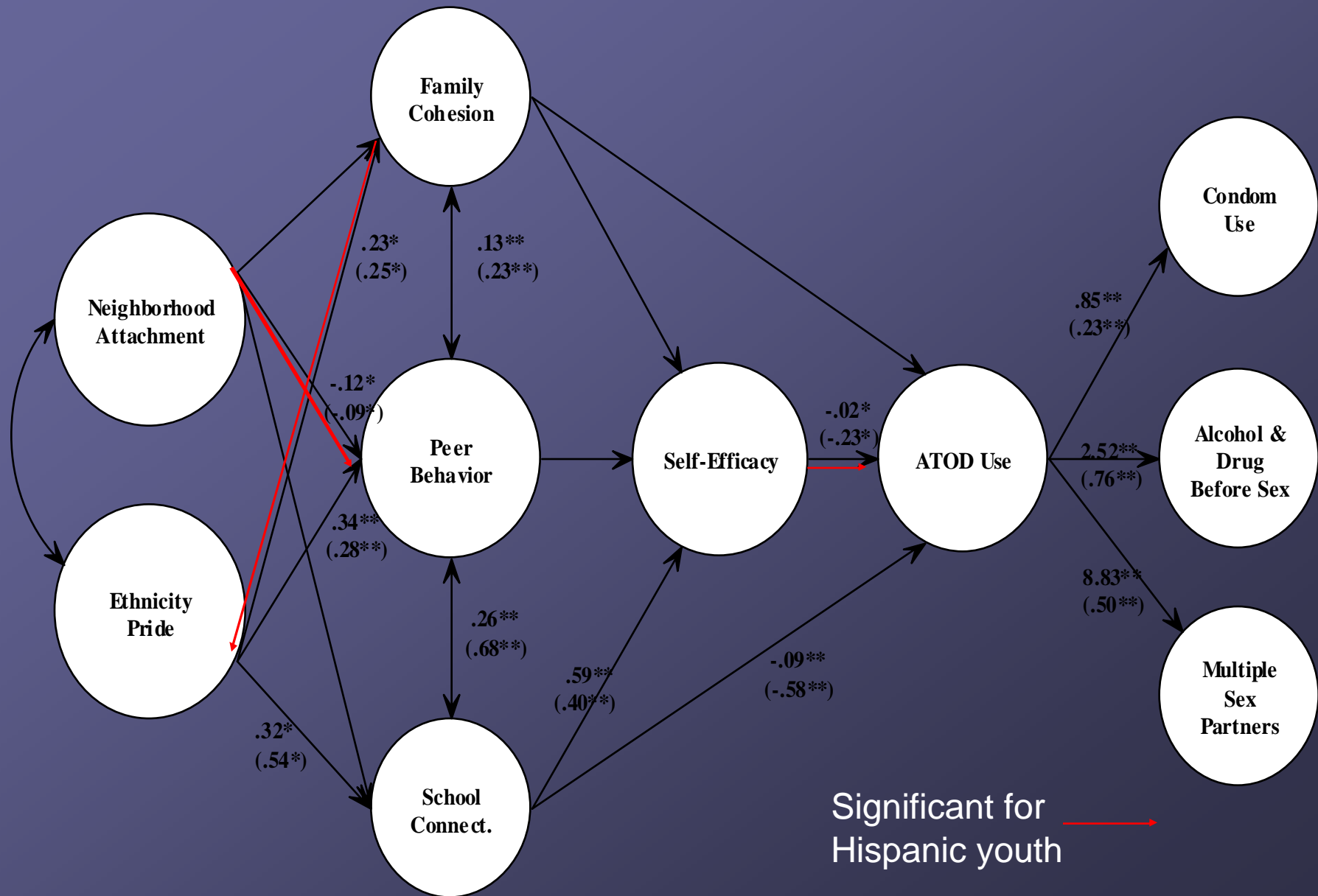
SEM Differences

Two major differences between groups

- **Self-efficacy** predicted ATOD use in the SEM for Hispanic adolescents, but this path was not significant in the SEM for African American adolescents.

- **Ethnicity pride** was significantly related to positive peer behavior and school connectedness for both groups;
  - however it was also related to family cohesion only in Hispanic adolescents

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Structural Model (Black youth N=1,458)

Family Cohesion

Neighborhood Attachment

Ethnicity Pride

Peer Behavior

Self-Efficacy

ATOD Use

School Connect.

Condom Use

Alcohol & Drug Before Sex

Multiple Sex Partners

.04*
(.09*)

.10**
(.19**)

.30**
(.23**)

.18**
(.68**)

.16*
(.36*)

1.23**
(.54**)

-.10**
(-.59**)

1.11**
(.28**)

2.37**
(.69**)

12.52**
(.51**)

Significant for Black youth ———

Discussion

Model provides strong support for the direct influence of higher ATOD use significantly predicting higher HIV risk behaviors in Hispanic youth

Model also provides strong support for the inclusion of protective factors particularly

- school connectedness, ethnicity pride, family cohesion, and association with positive peers

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Prevention Implications

- Prevention efforts must focus on groups at greatest risk for HIV infection, presently minority adolescents

- Prevention must address HIV risk factors that interact together with other problem behaviors like ATOD use and underage drinking

- Sensitivity to ethnic and cultural pride values should be interwoven throughout activities, not just a language adaptation

- Interventions must be relevant to the lives of Hispanic adolescents with activities that involve neighborhood, family, school, and peer environments

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