

**HIV Risk Reduction Behaviors in
Adolescent Females:
The Influence of Mastery & Self-Esteem**

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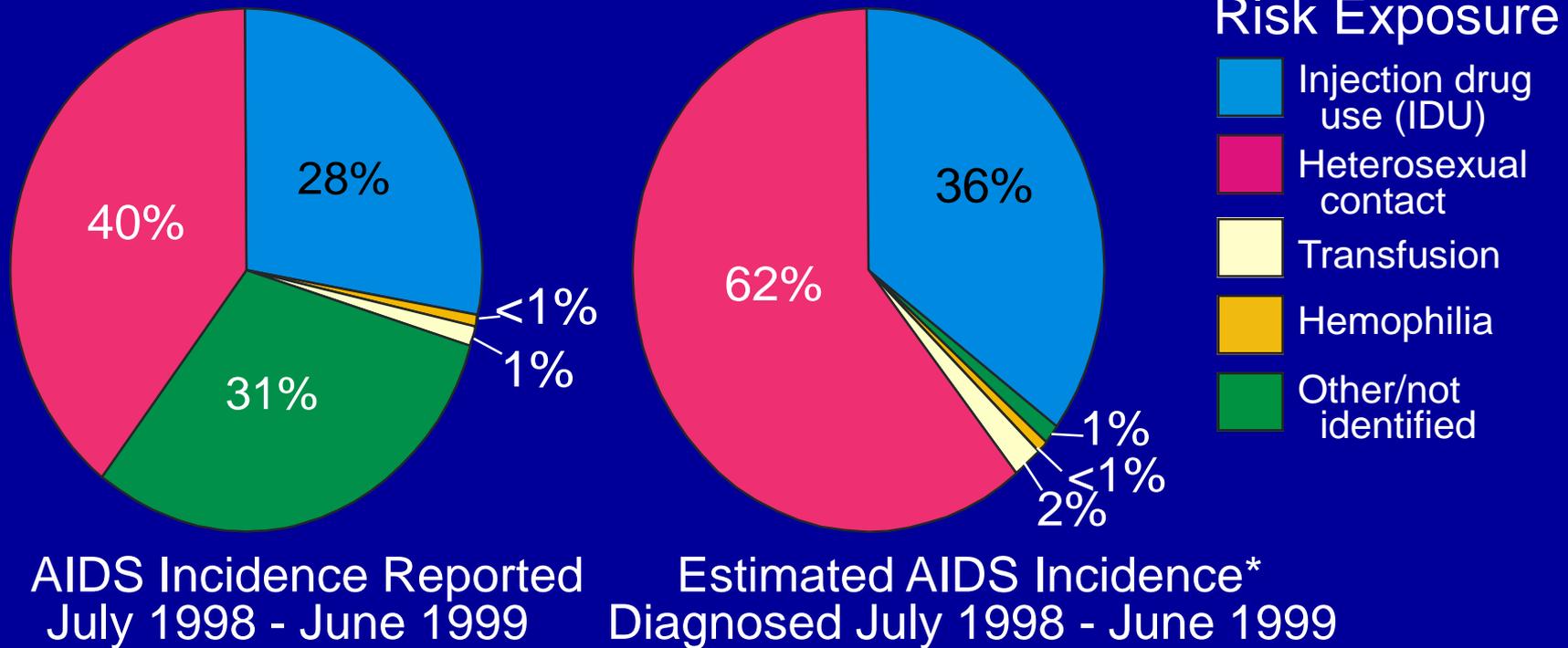
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Problem Statement

- AIDS—A leading cause of death in adolescents & young adults
- Adolescent females—Particularly at risk
- Minorities—Over-represented among those diagnosed with AIDS

AIDS Cases in Adult/Adolescent Women, Reported July 1998 - June 1999, and Estimated AIDS Incidence,* Diagnosed July 1998 - June 1999, by Risk Exposure United States



* Data adjusted for reporting delays and estimated proportional redistribution of cases initially reported without risk. Data reported through March 2000.

AIDS Cases and Rates in Adult/Adolescent Women, by Race/Ethnicity, Reported in 1999, United States

<u>Race/Ethnicity</u>	<u>Number</u>	<u>Percent</u>	<u>Rate per 100,000</u>
White, not Hispanic	1,924	18	2
Black, not Hispanic	6,784	63	49
Hispanic	1,948	18	15
Asian/Pacific Islander	63	1	1
American Indian/ Alaska Native	40	<1	5
<u>Total*</u>	<u>10,780</u>	<u>100</u>	<u>9</u>

*Includes 21 women of unknown race/ethnicity

Theoretical Rationale

- Rising risk of heterosexually-transmitted HIV infection is related to unequal status in relationships (Amaro, 1995)
- Gendered power relationships between young men and women construct and constrain choice in HIV risk reduction behaviors (Lear, 1996)
- Mastery & self-esteem may have a bearing on HIV risk reduction behaviors in adolescent females

Definitions

- **Mastery:** A global sense of control over one's life
- **Self-Esteem:** The extent to which one accepts oneself; the value placed on self
- **HIV Risk Reduction Behaviors:** Actions taken by an individual to diminish the chance of acquiring HIV

Significance of Study

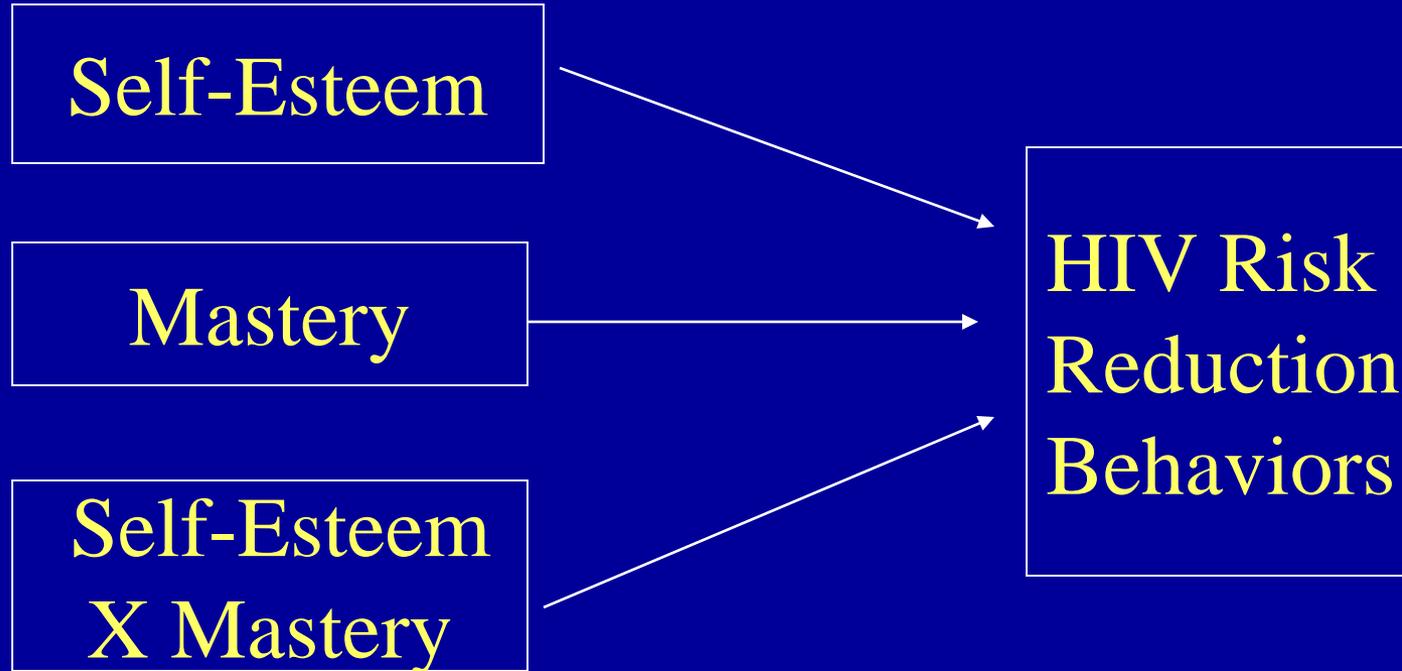
- Enhance understanding of who is proficient at HIV risk reduction behaviors and who is at-risk for HIV risk-taking behaviors
- Above knowledge can allow HIV preventive interventions to be tailored to the individual
- Potential for reduction in HIV infection

Aims of Study

- 1) Examine the relationships among mastery, self-esteem and HIV risk reduction behaviors in a culturally diverse group of adolescent females
- 2) Determine if differences exist in relationships among mastery, self-esteem and HIV risk reduction behaviors across three cultural groups

Relationships Among Variables

Mastery as Moderator



Research Hypotheses

After accounting for the influence of selected demographic variables, mastery will moderate the relationship of self-esteem and HIV risk reduction behaviors:

- In a culturally diverse group of adolescent females, and
- In groups of black, Latina, and white adolescent females examined separately.



Review of Literature

Mastery

What we know—

Mastery is health-enhancing

What we don't know—

- Whether mastery influences HIV risk reduction behaviors
- What the relationships are between mastery & self-esteem in influencing HIV risk reduction behaviors



Review of Literature Self-Esteem

What we know—

Self-esteem is health-enhancing.

What we don't know—

- Whether self-esteem influences HIV risk reduction behaviors
- What the relationships are between self-esteem & mastery in influencing HIV risk reduction behaviors



Review of Literature

HIV Risk Reduction Behaviors

What we know—

Abstinence and condom use reduce HIV infection

What we don't know—

- The importance of multiple partners in predicting risk for HIV infection, i.e.
 - How many partners is too many?
- The frequency of intercourse with an HIV infected individual that results in infection

Review of Literature Culture

What we know—

Minorities are over-represented among those diagnosed with AIDS

What we don't know—

Whether cultural affiliation influences mastery, self-esteem and HIV risk reduction behaviors

Methods

- Site: Adolescent clinic in northeastern city
- Sample: Adolescent females aged 15-19 years
- Procedures: Questionnaire completed anonymously
- Human Subjects: Review at respective institutions—study site, university, and Office of Protection from Research Risks

Methods

- Measures
 - Demographic Data Form
 - Pearlin Mastery Scale
 - Rosenberg Self-Esteem Scale
 - Metzger High Risk Sexual Relationship Subscale of Adolescent Problem Severity Index
- Data Analysis: Hierarchical Multiple Regression

Mastery & Self-Esteem Scores

Total Sample N=224

- Mastery:

Total Sample: $M=21.38$, $S.D.=3.41$

Range: 11-28 (Possible Range: 7-28)

- Self-Esteem:

Total Sample: $M=31.48$, $S.D.=4.83$

Range: 16-40 (Possible Range: 10-40)

Mastery Scores by Cultural Groups

Mastery Scores*

- Black Participants: $M=22.06$, $S.D.=3.33$
- Latina Participants: $M=20.57$, $S.D.=3.87$
- White Participants: $M=20.93$, $S.D.=2.80$

*Black participants with significantly higher mastery scores than Latina participants

Self-Esteem Scores by Cultural Groups

Self-Esteem Scores*

- Black Participants: $M=32.46$, $S.D.=4.72$
- Latina Participants: $M=30.60$, $S.D.=4.53$
- White Participants: $M=30.49$, $S.D.=5.05$

*Black participants with significantly higher self-esteem scores than Latina and White participants

HIV Risk Reduction Behaviors

N=224

- 71.4% (n=160) had sex (oral, anal, or vaginal intercourse) at least once
- Median age of first intercourse was 15 years
- Median number of sexual partners in last year: 1
- 33% (n=73) “always” used a condom during the last year when having sex

HIV Risk Reduction Behaviors

N=224

- 14% (n=32) had an STD history
- 16% (n=35) had been pregnant
- 9% (n=20) had tried to get pregnant
- 12% (n=26) had a forced sex encounter
- 25% (n=57) had used alcohol or other drugs just before having sex

HIV Risk Reduction Scores

HIV Risk Reduction Scores*

(High scores equal high risk reduction behaviors)

- Total Sample: $M=6.60$, $S.D.=3.45$, Range: 0-11
- Black Participants: $M=6.43$, $S.D.=3.62$, Range: 0-11
- Latina Participants: $M=6.69$, $S.D.=3.30$, Range: 0-11
- White Participants: $M=6.86$, $S.D.=3.31$, Range: 1-11

*No significant difference in scores among groups

Research Hypotheses

After accounting for the influence of selected demographic variables, mastery will moderate the relationship of self-esteem and HIV risk reduction behaviors:

- In a culturally diverse group of adolescent females, and
- In groups of black, Latina, and white adolescent females examined separately.

Testing for Demographic Correlates of HIV Risk Reduction Behaviors

- Age
- Income
- Hours Worked
- Number in Household
- Mother in Home
- Father in Home



Hypothesis 1

Total Sample

N=218

- Significant demographic correlates entered first — age, mother in the home, hours worked & income
- 8.1% of adjusted variance explained at .001 level
- Mastery and self-esteem not significantly related to HIV risk reduction behaviors
- No moderating effect of mastery
- Only significant contributor was age (beta=-.228, $p=.002$), accounting for 5.1% of explained variance



Hypothesis 2A

Black Participants

N=109

- Significant demographic correlates entered first—age & income
- 8.7% of adjusted variance explained at .013 level
- Mastery and self-esteem not significantly related to HIV risk reduction behaviors
- No moderating effect of mastery
- Only significant contributors were age (beta = -.236, $p = .013$) and income (beta = .224, $p = .018$) accounting for 5.6% and 5.0% of explained variance respectively



Hypothesis 2B

Latina Participants

N=58

- Age entered first into regression equation
- Non-significant regression equation model
- Mastery and self-esteem not significantly related to HIV risk reduction behaviors
- No moderating effect of mastery
- In regression equation, age no longer significantly related to HIV risk reduction behaviors



Hypothesis 2C

White Participants

N=57

- Age entered first into regression equation
- Non-significant regression equation model
- Mastery and self-esteem not significantly related to HIV risk reduction behaviors
- No moderating effect of mastery
- In regression equation, significant and inverse relationship between age and HIV risk reduction behaviors (beta=-.367, $p=.009$), but overall regression model not significant

Ancillary Analyses

- Significant correlation between hours worked and HIV risk reduction behaviors in total sample
- But no significant relationships between same variables in the black, Latina and white groups
- Relationship between hours worked and HIV risk reduction behaviors examined in subgroups of those who had jobs in each cultural group
- No significant relationship in black and Latina groups

Ancillary Analyses

White Participants Who Work

N=37

- Age and hours worked entered first
- 22.5% of adjusted variance explained at .022 level
- Mastery and self-esteem not significantly related to HIV risk reduction behaviors
- No moderating effect of mastery
- Significant demographic contributors were age (beta=-.347, $p=.040$) and hours worked (beta=-.340, $p=.048$) accounting for 12% and 11.6% of explained variance respectively

Discussion

Theoretical Considerations

- Particularity of HIV risk reduction behaviors as opposed to global nature of mastery and self-esteem
- Developmental issues related to mastery & self-esteem
- High mastery—The risk-takers in life?



Discussion

Literature Considerations

- Is in contrast to overall literature review
- Did not support Cole & Slocomb's study
- Supports Goldman & Harlow's study
- Supports Greenwood's study
- Supports Resnick & colleagues' study



Discussion

Methodological Considerations

- Economically heterogeneous sample
- Sensitivity of measures
- Procedural issues
- Mastery & self-esteem moderately correlated—Implications for testing moderator effect

Limitations

- Subjective self-report
- Cross-sectional design
- Data reduction implicit in quantitative methodology
- Purposive versus random sampling
- Findings restricted to participants & context of data collection



Implications for Practice

- Equal intention needed toward HIV preventive efforts regardless of level of mastery and self-esteem
- Intensify HIV prevention interventions as female adolescents age
- Findings point toward behavioral approaches to HIV preventive efforts



Implications for Future Research

- Replication of study
- Qualitative research related to HIV risk-taking and risk reduction
- Development of reliable and valid measures of HIV risk-taking and risk reduction behaviors
- HIV prevention interventions
- Multiple risks and co-morbidities of adolescents
- Health-enhancing benefits of mastery & self-esteem beyond HIV risk reduction behaviors

Conclusions

- “Not knowing is a strange way of knowing.”
No significant relationships in this sample among mastery & self-esteem & HIV risk reductions, but enhanced understanding of what did not provide explanatory value
- Increased understanding of mastery & self-esteem in a culturally-diverse adolescent female sample