Introduction

The alarming number of young women continuing to be infected with HIV in the U.S. (The Henry J Kaiser Family Foundation, 2012; CDC, 2011) provides support for reinventing current approaches to preventing HIV. Strictly education-based approaches to HIV prevention fail to demonstrate scalable positive behavior change. The current research seeks to identify variables pivotal for positive behavior change among at-risk girls.

Previous research on adolescents has shown the co-occurrence of problem behaviors, including juvenile delinquency, substance abuse, poor academic performance, and risky sexual behavior (e.g., Brookmeyer & Henrich, 2009; Wu et al., 2010). Given the co-occurrence of JD and HIV risk behaviors, strategies that target these behaviors early and simultaneously may be effective methods for reducing HIV risk factors among female adolescents.

To this end, the U.S. Department of Health and Human Services Office on Women’s Health (OWH) implemented the HIV/AIDS Prevention Education Services for Female Youth at Greater Risk for Juvenile Delinquency (Girls at Risk) Project to address the relationship between risk factors for HIV and juvenile delinquent behavior among adolescent females. The current research is a secondary analysis of data collected by OWH and examines the effectiveness of this multi-faceted, gender-specific HIV prevention program.

It is hypothesized that:
1. Girls’ HIV risk as characterized by safe sex intentions will be significantly related to delinquent behavior such that Girls who increase their safe sex intentions will indicate a decrease in delinquent behavior.
2. Changes in safe sex intentions and delinquent behavior will be significantly related to girls’ changes in life skills such that changes in the life skills such as problem solving and conflict resolution skills, will indicate positive changes in safe sex intentions and decreases in delinquency.

Methodologies

Evaluation survey data was collected from girls who participated in a 9-month gender-specific intervention focusing on HIV/STI education, violence reduction, mental health, healthy relationships, and life skills. To assess changes in knowledge, behavior, and attitudes and beliefs, GEARs developed a National Evaluation Questionnaire which consists of questions drawn from a number of well-established scales.

- Rosenberg Self-Esteem Scale (Rosenberg, 1985)
- Intentions for Safer Sex (Lus & Petosa, 1994)
- Self-Reported Delinquency (Thornberry et al., 2003)
- HIV/STI knowledge (Vijpe et al., 2007) (GEARS, Inc.)
- Problems Solving Scale Index (GEARS, Inc.)
- Conflict Tactics Scale (Straus et al., 1996; Straus, 1979)

Pre-test and post-test data was collected from nine sites across the U.S. The sample included 210 at-risk females aged 12-17 (M=14, SD=7, Figure 1).

Results

Multiple regression analyses were conducted to predict girls’ changes in HIV/STI knowledge, safe sex intentions, and delinquent behavior.

Predicting increases HIV/STI knowledge from pre-to post-test

Knowledge was assessed using 42 questions basic and advanced STI and HIV girls. Knowledge girls’ HIV/STI knowledge scores significantly increased by 1.7 points on average from pre-test (M = 27.2, SD = 4.5) to post-test (M = 28.9, SD = 5.2), r(217) = 3.8, p<0.01.

The only significant predictor of changes in HIV/STI knowledge was changes in self-esteem such that increases in self-esteem predicted increases in HIV/STI knowledge scores, p = 0.03 (Table 1).

Predicting decreases in delinquency from pre-to post-test

Girls’ delinquency activities were measured using the 36-item Self-Reported Delinquency Index from the Rochester Youth Development Study (Thornberry et al., 2003). Overall, girls’ scores on the delinquency index did not significantly change from pre-test (M = 2.3, SD=3.2) to post-test (M = 2.1, SD=3.6), t(168) = 0.708, p = 0.48.

Three variables significantly predicted changes in delinquent behaviors: self-esteem, conflict tactics violence subscale, and increases in knowledge. Specifically, increases in self-esteem and HIV/STI knowledge, and decreases in the use of violence as a conflict tactic significantly predicted reductions in self-reported delinquency, p = 0.001 (Table 1).

Predicting increases in safe sex intentions from pre-to post-test

Safe sex intentions were assessed using the Intentions for Safer Sex Scale (Lus & Petosa, 1994). Girls’ intentions for safer sex significantly increased from pre-test (M = 17.7, SD = 4.5) to post-test (M = 18.4, SD = 3.8), t(197) = -3.03, p<0.01.

Two variables significantly predicted changes in safe sex intentions: Changes in delinquency and changes in problem solving skills. Specifically, increases in problem solving skills and decreases in delinquency significantly predicted positive changes in safe sex intentions, p = 0.03 (Table 2).

Interestingly, changes in HIV/STI knowledge were not significantly correlated with changes in intentions for safer sex (r = 0.052, p = 0.251, one-tailed).

Conclusions

The results presented here are a preliminary secondary analysis of pre- and post-test data collected by OWH to examine the effectiveness of a 9-month gender-specific HIV prevention program focusing on HIV/STI education, violence reduction, mental health, healthy relationships and other life skills. These results tentatively support for our hypotheses:
1. Girls’ HIV risk as characterized by safe sex intentions will be significantly related to delinquent behavior such that Girls who increase their safe sex intentions will indicate a decrease in delinquent behavior.
2. Changes in safe sex intentions and delinquent behavior will be significantly related to girls’ changes in life skills such that changes in the life skills such as problem solving and conflict resolution skills, will indicate positive changes in safe sex intentions and decreases in delinquency.

Our findings also lend support to previous work suggesting a critical link between JD and HIV/STI behavior. Most interesting, cognitive skills related to problem solving and conflict resolution predicted positive changes in safe sex intentions and self-reported delinquency. This link between problem solving and conflict resolution skills to JD and HIV-Risk may prove to be a key factor for effective HIV-prevention programs for at-risk girls. Our future work will examine the variation over supplemental and follow-up stages for both cohorts of girls to understand how these variables change over time.

References


Literature cited


Acknowledgements

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Table 1. Results from multiple regression analyses.

<table>
<thead>
<tr>
<th>Model</th>
<th>r</th>
<th>B</th>
<th>t</th>
<th>p</th>
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<td>HIV/STI knowledge</td>
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<tr>
<td>Delinquency</td>
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<td>6.308</td>
<td>0.001</td>
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<tr>
<td>Safe sex intentions</td>
<td>0.21</td>
<td>0.044</td>
<td>3.605</td>
<td>0.029</td>
</tr>
</tbody>
</table>

Figure 1. Self-reported Ethnicity and Race, respectively. Participants were able to select as many racial categories as they wished.

Table 2. Results from multiple regression analyses.