Effects of an Abstinence Education Program on Sexual Knowledge and Intent of Urban Middle Schoolers

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Purpose

• The purpose of this study was to evaluate the effectiveness of the “YES You Can!” (YYC) curriculum.

• Specifically, the study examined the effects of the program on knowledge and behavioral intent of preteens/young teens relative to sexual activity.

Rationale

• It is important that programs intended to prevent teen pregnancy be evaluated.

• The Office of Adolescent Health reinforced the call for program evaluation in a 2015 Funding Opportunity Announcement.
Rationale

- One program that has been used extensively in programming for young people is the curriculum YES You Can!

- To date, however, no evaluations have been published regarding the effectiveness of this program.

Methods

- **Participants**
  - Participants included students ages 10-14 from public schools in an urban area of New Jersey.

- **Testing Instrument**
  - The testing instrument was a 30-item self-report questionnaire. It included demographic items as well as items dealing with sexual knowledge and items concerning intent to participate in sexual intercourse.

Methods

- **Testing Instrument**
  - Knowledge items consisted of three true statements concerning reproductive health. Students indicated their degree of agreement or disagreement with the statement using a four-point response option from “strongly disagree” to “strongly agree.” Scores potentially ranged from 3 (strongly disagreed with all three true statements) to 12 (strongly agreed with all three true statements).
Methods

• **Testing Instrument**
  
  - Intention was measured using a scale consisting of three items that asked students about their chances of having sex in: (a) the next 12 months, (b) before finishing high school, and (c) before marriage, using a four-point response option from “definitely not” to “definitely will.” Scores ranged from 3 (“definitely not” for all three items) to 12 (“definitely will” for all three items).

Methods

• **Intervention**
  
  - The intervention was the YES You Can! curriculum. The 8-day curriculum encourages young people to live a healthy, strong and focused lifestyle; and to postpone sexual involvement.
  
  - The curriculum has a strong theoretical base and is grounded in social-cognitive, social learning, and protection motivation theory.

Methods

• **Implementation**
  
  - The curriculum was implemented by instructors trained by the curriculum developer.

  - A two-day intensive training workshop helped teachers understand the rationale for each lesson, to see lessons from the curriculum modeled by a skilled trainer, and to present a lesson themselves with constructive feedback.

  - Classroom observations were conducted by the program director who provided constructive feedback to the instructor relative to curriculum fidelity and instructional quality.
Methods

• Procedure
  – All students, both intervention and control completed the pretest questionnaire in their regular classroom setting, prior to the implementation of the curriculum.
  – Following the pretest, curriculum was implemented in all intervention schools. After completion of the program, all students were again surveyed using the same instrument and following the same protocol (posttest). Students also completed the questionnaire a third time in a follow-up that at some schools was as short as three months following the posttest, and as long as nine months at other schools.

• Data Analysis
  – Factor analysis was used to establish that the intent scale measured a single construct;
  – Analysis of covariance was used to determine whether there were differences at posttest and at follow-up between the intervention group and control group relative to knowledge and intent.
  – Pretest knowledge scores were used as the covariate for the knowledge analysis. Pretest intent scores were used as the covariate for the intent analysis.

Results

• Frequency Count
  – For sexual knowledge, matched pretest-posttest data were obtained from 1,829 students, and matched pretest-follow-up data were obtained from 1,179 students.
  – For the sexual intent, matched pretest-posttest data were obtained from 1,788 students, and matched pretest-follow-up data were obtained from 1,124 students.
**Results**

**Demographics**
- Gender: 53.7% female.
- Age: 10-14, with 13-year-old students comprising the largest number (40.9%), followed by 12-year-old students (29.4%), and 14-year-old students (17.5%).
- Race/Ethnicity: Hispanics (49.6%), blacks/African Americans (21.5%), whites (17.1%), other groups also represented.
- Home situation: More than half of the students (53.3%) lived with both parents, while a substantial percentage (30.1%) lived with their mother only.

**Factor Analysis**
- A confirmatory factor analysis was conducted for the three-item sexual intent scale. All items loaded on a single factor at .815 or higher, indicating that as a set the items did appear to measure a single construct. Cronbach’s alpha was .722. Items and factor loadings are shown in Table 1.

**Table 1. Results From Factor Analysis**

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loading</th>
<th>Cronbach's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intent to have sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within the next year</td>
<td>.817</td>
<td>.722</td>
</tr>
<tr>
<td>Before high school graduation</td>
<td>.903</td>
<td></td>
</tr>
<tr>
<td>Before marriage</td>
<td>.815</td>
<td></td>
</tr>
</tbody>
</table>
Results

• Sexual Knowledge
  – Results of the analysis of covariance indicated significant posttest differences ($F_{1,1724} = 182.36$, $P < .001$) and significant follow-up differences ($F_{1,1089} = 38.72$, $P < .001$) between the intervention group and the comparison group relative to sexual knowledge.
  – At both posttest and at follow-up, the students who had participated in the YES You Can! curriculum had a higher level of sexual knowledge than the comparison group.
  – These results are shown in Table 2.

<table>
<thead>
<tr>
<th>Comparison Group</th>
<th>Variable</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Follow-up</th>
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</thead>
<tbody>
<tr>
<td>Knowledge Mean</td>
<td>8.71</td>
<td>8.95</td>
<td>9.00</td>
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<table>
<thead>
<tr>
<th>Intervention Group</th>
<th>Variable</th>
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<th>Posttest</th>
<th>Follow-up</th>
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</thead>
<tbody>
<tr>
<td>Knowledge Mean</td>
<td>9.20</td>
<td>10.18</td>
<td>9.84</td>
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</tbody>
</table>

  Posttest prob < .001  R$^2$ = .235
  Follow-up prob < .001 R$^2$ = .139

Results

• Sexual Intent
  – Results also showed significant posttest differences ($F_{1,1785} = 45.12$, $P < .001$) and significant follow-up differences ($F_{1,1121} = 20.264$, $P < .001$) between the intervention group and the comparison group ($P < .001$) relative to sexual intent.
  – At both posttest and at follow-up the students who had participated in the YES You Can! curriculum had a lower sexual intent score than did the comparison group.
  – These results are shown in Table 3.
Table 3. Sexual Intent

<table>
<thead>
<tr>
<th>Variable</th>
<th>Comparison Group</th>
<th>Intervention Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
</tr>
<tr>
<td>Sexual Intent Mean</td>
<td>6.26</td>
<td>6.69</td>
</tr>
<tr>
<td>Posttest prob &lt; .001</td>
<td>RSq = .518</td>
<td></td>
</tr>
</tbody>
</table>

Discussion

- The results of the study showed that students who participated in the curriculum intervention had higher knowledge scores and lower intentions to have sex than students who did not participate in the curriculum.
- Knowledge and behavioral intent are accepted as antecedents of actual behavior, but it cannot be assumed that because the curriculum was effective in changing knowledge and intent, it will also have an impact on sexual behavior.

Conclusions

- Thus, future research should examine the effects of the program on changes in sexual behavior, including postponing sexual involvement, include a long term follow-up period, and determine whether the effects of the program vary by student characteristics, e.g., gender and ethnicity.