Youth HIV and Sex Education in Nyanza, Kenya: Effects on Knowledge and Attitude

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Background

Lwala Community Alliance (LCA) – NGO in Nyanza, Kenya

- Highest HIV prevalence of all Kenyan provinces
- Small community hospital
  - Nurses, physician assistants, and community health workers
  - HIV/AIDS, maternal/child health, family planning, general
  - Community outreach programs – sanitation, home life-saving
- New HIV and sex education program
  - Piloted at local secondary school in summer 2011
  - Tuko Pamoja curriculum – HIV, sex, life skills
- 2/3 of all persons living with HIV/AIDS (PLWHA) in sub-Saharan Africa – majority of these individuals are women

- Gendered differences in HIV prevalence and knowledge
- Community education as pillar of prevention
- Urgent need for “further investigation of the nature of the gap between political rhetoric and the realities facing attempts to change young people’s sexual behavior in particular contexts” 2
- Multifactorial problems – including “culture of silence” surrounding sexuality 3
- Both boys and girls feel pressured to have sex
  - Boys by sexual urges, peers, and perceived expectations
  - Girls by material needs, peers, reciprocity, requirements/family obligations, and actions of boys 4

Research question: Does the Tuko Pamoja curriculum implemented by LCA staff have a significant impact on students’ knowledge and attitudes surrounding HIV?

Methodology

- Students at two local schools in Forms I-IV (grades 9-12) invited to participate in Knowledge, Attitude, and Practice (KAP) survey
  - Responses written on survey instrument
  - Pre-intervention KAP administered by author MRD
  - Tuko Pamoja program implemented at intervention school
    - 8 weeks, presented by LCA nurses/community health workers
    - No special programming at comparison school
  - Post-intervention KAP administered by LCA nurses
  - All responses recorded in spreadsheet
  - Combined pretest and posttest percent correct scores computed for each student
  - Repeated measures analysis of variance performed

Results

Table 1: Descriptive statistics

<table>
<thead>
<tr>
<th></th>
<th>Intervention</th>
<th>Comparison</th>
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<tbody>
<tr>
<td>N pretest</td>
<td>308</td>
<td>92</td>
</tr>
<tr>
<td>N pre and posttest*</td>
<td>223</td>
<td>42</td>
</tr>
<tr>
<td>Age range</td>
<td>13-24 years</td>
<td>13-19 years</td>
</tr>
<tr>
<td>Mean age</td>
<td>15.57 years</td>
<td>15.50 years</td>
</tr>
<tr>
<td>Female</td>
<td>41.7%</td>
<td>47.6%</td>
</tr>
<tr>
<td>Pretest knowledge</td>
<td>71.36%</td>
<td>71.83%</td>
</tr>
<tr>
<td>Posttest knowledge</td>
<td>80.75%</td>
<td>75.26%</td>
</tr>
</tbody>
</table>

* Only students completing both pretest and posttest KAP surveys were included in analysis.

Figure 1: Mean knowledge scores

Figure 2: Knowledge scores

- Significant increase between pre- and posttest mean knowledge score for intervention and comparison school students combined
- Lack of significant difference between schools due to unexpected increase in scores for comparison school female students (see figure 3)
- Gendered differences in mean knowledge score changes from pre- to posttest (figures 3, 4)

Table 2: Repeated measures analysis of variance

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>MS</th>
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<th>p value</th>
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<tbody>
<tr>
<td>School</td>
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<td>2.404</td>
<td>0.122</td>
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<tr>
<td>Sex</td>
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<td>0.146</td>
<td>6.466</td>
<td>0.012</td>
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<td>School x sex</td>
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<td>0.004</td>
<td>0.195</td>
<td>0.659</td>
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<tr>
<td>Unaccounted for variance</td>
<td>261</td>
<td>1</td>
<td>261.023</td>
<td></td>
</tr>
</tbody>
</table>

Within-subjects effects

- Tests (pre and post)
  - Sex x tests
    - School x sex x tests
      - Unaccounted for variance

Figure 3: Knowledge scores – females

Figure 4: Knowledge scores – males

- Greater increase in score for intervention school students versus comparison school students; but not significant difference
- Female students – intervention and comparison school scores increased significantly; comparison school score did not change significantly

Discussion

- The Tuko Pamoja curriculum was successful in increasing students’ knowledge surrounding HIV and sex
- Increase in knowledge score for intervention school students was not significantly different from comparison school students
- Increase for male intervention school students significantly greater than male comparison school students
- Traditional didactic model – more effective for male students?
  - Kenyan male students typically outperform female students
  - Barriers to female success in school include
    - Missing class during menstruation
    - Household chores and childcare responsibilities
    - Parental preference to educate sons over daughters
- Unknown confounder influencing comparison school female students’ increase in knowledge score
  - Female students speaking more with out-of-school peers?
- Intervention female students often much more interested in discussing “off-topic” subjects rather than HIV-specific knowledge, e.g., menstruation and pregnancy
- Intervention school female students may have gained important knowledge in topics that were not evaluated by the KAP survey

References

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