Professional development’s impact on teachers’ confidence to teach sexual health

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American School Health Association Conference
October 13, 2017

Presentation Objectives

- At the end of the session, participants will be able to:
  - Describe the change in teachers’ self-reported confidence to teach about HIV, STD, and pregnancy prevention before and after professional development
  - Identify characteristics of teachers who reported having lower confidence to teach than their peers before professional development
  - Describe how self-reported confidence differs among teachers with varying levels of experience and educational background

Background: Youth and HIV/STD

- Youth are at disproportionately high risk for sexually transmitted diseases (STD)\(^1\)
- Behaviors that place young people at risk for HIV, other STDs, and pregnancy often begin in adolescence
  - 2015 National Youth Risk Behavior Survey data from U.S. high school students show:\(^2\)
    - 41.2% have ever had sex
    - 30.1% are currently sexually active
    - 43.1% of those youth had not used a condom at last sex

Background: Sexual Health Education

- Schools can play an important role in helping young people reduce their risk for HIV, other STDs, and pregnancy
  - Health education can provide students with knowledge and skills they need
  - Multiple studies have shown that well-designed and implemented programs can be effective in decreasing sexual risk behaviors among youth\(^3-6\)

Background: Fort Worth Independent School District (FWISD)

- Activities to support sexual health education
  1. Used Health Education Curriculum Analysis Tool (HECAT) to guide the selection and adoption of a new curriculum to support health education, including sexual health education
  2. Professional development (PD)
  3. Teacher observation with coaching

Co-authors

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Centers for Disease Control and Prevention
- Paula Jayne, PhD, MPH

Fort Worth Independent School District
- Georgi Roberts, MLS
Background: Professional Development in FWISD

- 4 health-specific PD events in the 2015-2016 school year
  - 3 for high school teachers; 4 for middle school teachers
- In 2 of these, PD evaluation forms were completed
  - August 2015—General training
    - Covered characteristics of effective health education and delivery of the adapted curriculum
  - February 2016—Training specific to teaching sexual health

Study Purpose

- To explore the impact of professional development (PD) on teachers’ confidence to teach sexual health education in a large, southern, urban school district.

Method: Study Background

- Evaluation of FWISD’s sexual health education activities
  1. Review of the sexual health lessons from the adapted HealthSmart curriculum
  2. Student-level assessment
  3. Teacher-level assessment

Method: Procedure

- Quantitative retrospective pre-post evaluation questionnaires
  - Following 2 of 4 PD events
  - N=117 questionnaires (72 in August; 45 in February)
  - Assessed self-reported confidence to teach sexual health education
- Qualitative interviews with teachers
  - N=24 interviews (May 2016)
  - 45-60 minutes in length
  - Explored teacher attitudes, skills, comfort, and confidence related to sexual health education, as well as future professional development interests

Method: Quantitative Measures

- Teacher characteristics
  - Years teaching health education
    - How many years have you taught health education to youth in school?
      A. I have never taught health education in school before
      B. 1-2 years
      C. 3-4 years
      D. 5-10 years
      E. More than 10 years
    - Recorded for analysis into 2 categories: Less than 5 years, 5 or more years
  - Health degree
    - Do you have a degree in health (e.g., health education, public health)?
      A. Yes
      B. No

  HIV, STD, and pregnancy prevention

  For the next set of questions, please rate your individual level of knowledge, skill, and comfort for teaching different health topics to youth. In addition, please rate your overall level of confidence (which should take into consideration your knowledge, skill, and comfort levels collectively).

<table>
<thead>
<tr>
<th>HIV, STD, and pregnancy prevention</th>
<th>BEFORE this event</th>
<th>NOW, after this event</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Overall confidence to teach the content</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
**Methods: Analysis**

- **Paired sample t-tests**
  - To examine changes in confidence to teach from “before” to “after” the PD event
- **Independent sample t-tests**
  - To examine differences between subgroups of teachers (based on years of experience and health degree) both “before” and “after” the PD event
- **Qualitative analysis**
  - Codebook development and refinement
  - Established intercoder reliability (Fleiss’s kappa=0.91)
  - Trained coders were assigned a random set of transcripts to code

**Quantitative Results: Sample Characteristics**

<table>
<thead>
<tr>
<th>Grade level taught</th>
<th>August</th>
<th>February</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle School Teachers</td>
<td>48</td>
<td>30</td>
</tr>
<tr>
<td>High School Teachers</td>
<td>24</td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Health degree</th>
<th>August</th>
<th>February</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>30</td>
<td>19</td>
</tr>
<tr>
<td>No</td>
<td>42</td>
<td>25</td>
</tr>
</tbody>
</table>

**Quantitative Results: Change in Confidence to Teach**

<table>
<thead>
<tr>
<th>Confidence to teach</th>
<th>Before PD</th>
<th>After PD</th>
<th>t-test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>General health education PD (August) (n=70)</td>
<td>2.94 (0.92)</td>
<td>3.51 (0.61)</td>
<td>t=6.898 p&lt;0.001</td>
</tr>
<tr>
<td>Sexual health specific PD (February) (n=42)</td>
<td>2.88 (0.92)</td>
<td>3.45 (0.63)</td>
<td>t=5.023 p&lt;0.001</td>
</tr>
</tbody>
</table>

Confidence to teach HIV, STD, and pregnancy prevention increased significantly from pre- to posttest for both PD events.

**Quantitative Results: General Health Education PD (August)**

<table>
<thead>
<tr>
<th>Years of teaching experience</th>
<th>August</th>
<th>February</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never taught health ed.</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>1-2 years</td>
<td>22</td>
<td>13</td>
</tr>
<tr>
<td>3-4 years</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>5-10 years</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>More than 10 years</td>
<td>16</td>
<td>11</td>
</tr>
</tbody>
</table>

No significant subgroup differences either before or after the PD event.

**Quantitative Results: Sexual Health PD (February)**

<table>
<thead>
<tr>
<th>Years of teaching experience</th>
<th>August</th>
<th>February</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never taught health ed.</td>
<td>2.90 (1.00)</td>
<td>2.89 (0.92)</td>
</tr>
<tr>
<td>1-2 years</td>
<td>3.14 (0.88)</td>
<td>3.29 (0.63)</td>
</tr>
<tr>
<td>3-4 years</td>
<td>3.19 (0.68)</td>
<td>3.39 (0.66)</td>
</tr>
<tr>
<td>5-10 years</td>
<td>2.65 (0.98)</td>
<td>3.47 (0.61)</td>
</tr>
<tr>
<td>More than 10 years</td>
<td>3.22 (0.73)</td>
<td>4.17 (0.67)</td>
</tr>
</tbody>
</table>

Significant differences between subgroups based on years of teaching experience and holding a health degree existed before PD but not after PD.
Qualitative Results: Sample Characteristics

<table>
<thead>
<tr>
<th>Sample Characteristics</th>
<th>Teachers (n=24)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Middle school teachers</td>
<td>13</td>
</tr>
<tr>
<td>High school teachers</td>
<td>11</td>
</tr>
<tr>
<td>Attended both August and February PD events</td>
<td>15</td>
</tr>
<tr>
<td>Had a health education background</td>
<td>10</td>
</tr>
<tr>
<td>Taught in a dedicated classroom</td>
<td>12</td>
</tr>
<tr>
<td>Athletic coach</td>
<td>20</td>
</tr>
</tbody>
</table>

Qualitative Results

- Many teachers described increased knowledge, skills, comfort, and confidence to teach sexual health
- Teachers attributed this to:
  - District-sponsored PD events
  - Having gained some classroom experience with the curriculum

Qualitative Results: Knowledge

- Increased knowledge related to:
  - Use of the curriculum
  - Ways to connect students to health services
  - Sources of reliable sexual health information
  - Topics such as sexual orientation, gender roles, gender identity, and gender expression

  "Before the trainings, we did not have as much knowledge, not as much at all, especially sources of reliable sexual health information, like where the kids can actually go to get other information." - High School Teacher

- A few teachers reported no increase in knowledge from PD
  - Several of teachers recommended tailoring trainings based on knowledge, skill level, and/or experience
  - A few teachers still felt they needed to know more about how to deal with students' questions—particularly at the middle school level

  "When they (students) wanted to know more information, I couldn't or didn't want to provide (it) because...there is nothing as an example for discussing wearing condoms in the sixth grade, but they all know about that. We didn't discuss any of that. It was all about...abstaining from sex." - Middle School Teacher

Qualitative Results: Skills

- Although many teachers felt they had the skills needed to teach prior to attending PD, several felt the PD was useful in enhancing their skills

  "I think for the most part, the knowledge was there, and then working on the skills for the students to work on it (e.g., assertive communication); I needed a little work on that, so that's where...a lot of the professional development, the group stuff, getting up and creating scenarios, that type of stuff helped quite a bit." - High School Teacher

- Increased comfort to teach
  - Due to PD and a better understanding that the district fully supports what they are teaching
  - Teach-backs in the PD events were described as extremely valuable, though some teachers felt there should have been more time allowed for feedback

  "I feel very comfortable teaching this now, just because I've gone through so many trainings, and...I have (had) a lot of questions come my way, so I've experience with those. I guess you would say, uncomfortable...questions and uncomfortable situations. High school, you never know because you're always going to have kids throwing things at you that you could never be prepared for...I really, genuinely say...the trainings are what makes me comfortable, with the knowledge of it." - High School Teacher
Qualitative Results: Confidence

- Teachers described increased overall confidence in their ability to teach
  
  "I mean it’s great… In comparison to last year, last year I was nervous, I was scared. Through the professional development at the beginning of the year, getting out there. Once I was able to start getting my hands on the job, I gained that confidence. By next year, I’m going to feel bad for my group this year because… with what I know now, with the experience that I have now, I think I could’ve given them much more."  
  - Middle School Teacher

- Teachers described increased overall confidence in their ability to teach
  
  “…I was comfortable in those things, but the actual confidence of it is different because I’ve been through it, and I’ve faced it, and I know I feel prepared to be able to teach it and talk to the kids about it, and I am still learning myself, but I just have more confidence in it… because I’ve gone through a lot of training…”  
  - High School Teacher

Qualitative Results: Future PD

- Interest in more PD
  - Important topics:
    - Classroom management—particularly for the middle school teachers
    - Discussing topics such as sexual orientation
    - Helping students build their own skills
  - Interest in having the sexual health-specific PD expand beyond a 1-day event

Discussion

- Quantitative findings reveal that confidence to teach HIV, STD, and pregnancy prevention increased from before to after both PD events
- The sexual health-specific PD event appeared useful in eliminating significant differences that existed before the event between:
  - More and less experienced teachers
  - Teachers with a health degree and those without
- Teachers seem to value PD and believe that additional PD could provide further support, particularly in a few key areas

Limitations

- Data were from cross-sectional, retrospective pre-post evaluations
- Data are self-reported, and subject to social-desirability bias
- Data do not represent all health teachers in the district
- Data provide only the teachers’ perspectives—not an objective measure of the quality of teaching or students’ experiences in their classes

Implications for Schools

- Findings suggest PD can be helpful in increasing teachers’ confidence to teach HIV, STD, and pregnancy prevention
- PD may be particularly helpful for teachers without health backgrounds or who have less teaching experience
- Despite increased confidence levels, teachers still express a desire for additional PD
Acknowledgements

India Rose, Jeen Mezzo, Lorin Byars, William Moore, Suzanne Condron, Amanda Geller, Glenda Vestergren-Henne, Pete Hunt, Rachel Omes, Susan Teljhoff, Kelly Wilson

References