HackHealth: Improving the Health Literacy, Health-Related Self-Efficacy, and Long-Term Health Outlook of Disadvantaged Youth through the Facilitation of Scientific Inquiry and Information Literacy Skills

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Topic: Working with school librarians to design and implement an 8-week afterschool program to teach tweens how to look for, evaluate, share, and make use of health-related information

Population: Disadvantaged tweens (10–14) attending selected Title I middle schools

Funding: National Library of Medicine (NLM)

Time Frame: July 2013 – June 2014
Goals

- Boost disadvantaged tweens’:
  - Interest in the health sciences
  - Health literacy
  - Health–related self–efficacy
  - Understanding of the crucial link between daily health behaviors and the ability to maintain health and prevent disease
  - Long–term health outcomes
Research Questions

- How do tweens go about looking for and evaluating health-related information online?
- How can we best teach tweens to look for and evaluate health-related information online?
- What role can afterschool programs involving school libraries play in improving tweens’ health literacy and their interest in the health sciences?
- To what extent can we improve tweens’ health-related self-efficacy by increasing their health literacy?
- To what extent can improved health literacy and improved health-related self-efficacy lead to better health-related decisions and positive health behavior changes in tweens?
Methods: Overview

- 8-Week after-school program prepared and conducted in collaboration with school librarians
- Program will include activities designed to teach disadvantaged youth how to:
  - Look for and evaluate health-related information online
  - Serve as an information intermediary for their family
  - Use information to make decisions that will improve their (and their family members’) health
- Design of overall program and activities will be guided by Eisenberg and Berkowitz’s Big6 information problem-solving model
- Program will be iteratively revised as it is run consecutively at 3 Title I middle schools
Big6 Information Problem-Solving Model
(Eisenberg & Berkowitz, 1990)

1. Task Definition
2. Information Seeking Strategies
3. Location and Access
4. Use of Information
5. Synthesis
6. Evaluation
Methods Data Collection

- Pre-/Post-Survey
- Pre-/Post-Card Sorting Exercises
- Automated logging of browser interactions
- Interactive observation
- Student search logs
- Student health behavior logs
- Student journals
- Follow-up interviews with students
- Focus groups with participating students and their parents
Deliverables

- Conference presentations
  - 2013 ASIS&T SIG–USE Symposium
  - 2014 ALISE Annual Conference
  - AASL @ ALA 2014 Annual Conference
  - iConference 2014
  - Interaction Design and Children (IDC) 2014

- Journal articles

- Final program materials will be made available through:
  - Our project Website (http://hackhealth.umd.edu/)
  - The American Association of School Librarians Lesson Plan Database (http://aasl.jesandco.org/)
Follow us...

- Our Project Website (currently under construction): [http://hackhealth.umd.edu/](http://hackhealth.umd.edu/)
- Twitter: @kidshackhealth
Health Literacy by Overall Health

SOURCE: 2003 National Assessment of Adult Literacy Public-Use Data File
Health Literacy by Age Group

<table>
<thead>
<tr>
<th>Age</th>
<th>Proficient</th>
<th>Intermediate</th>
<th>Basic</th>
<th>Below Basic</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-18</td>
<td>7.5%</td>
<td>11.4%</td>
<td>16.5%</td>
<td>11.9%</td>
</tr>
<tr>
<td>19-24</td>
<td>58.4%</td>
<td>57.7%</td>
<td>55.2%</td>
<td>56.3%</td>
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<tr>
<td>25-39</td>
<td>23.1%</td>
<td>20.7%</td>
<td>18.1%</td>
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<tr>
<td>50-64</td>
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<td>11.4%</td>
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<td>11.9%</td>
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<tr>
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<td>3.3%</td>
<td>38.2%</td>
<td>29.5%</td>
<td>29.0%</td>
</tr>
</tbody>
</table>

SOURCE: 2003 National Assessment of Adult Literacy Public–Use Data File
Health Literacy by Mother’s Educational Attainment

Mother's Educational Attainment

SOURCE: 2003 National Assessment of Adult Literacy Public-Use Data File
Health Literacy by Father’s Educational Attainment

Father's Educational Attainment

SOURCE: 2003 National Assessment of Adult Literacy Public-Use Data File
Health Literacy by Household Income

Approximate Household Income

SOURCE: 2003 National Assessment of Adult Literacy Public–Use Data File
Health Literacy by Income Adequacy

- Below poverty threshold:
  - Proficient: 3.3%
  - Intermediate: 34.2%
  - Basic: 27.1%
  - Below Basic: 35.4%

- At or above poverty threshold:
  - Proficient: 13.3%
  - Intermediate: 57.7%
  - Basic: 19.4%
  - Below Basic: 9.5%

SOURCE: 2003 National Assessment of Adult Literacy Public-Use Data File
Have you ever received Temporary Assistance for Needy Families (TANF), Aid to Families with Dependent Children (AFDC), public assistance or public welfare payments?

SOURCE: 2003 National Assessment of Adult Literacy Public–Use Data File
Health Literacy by Computer Use

**Yes**
- Proficient: 13.4%
- Intermediate: 61.6%
- Basic: 18.1%
- Below Basic: 6.9%

**No**
- Proficient: 1.8%
- Intermediate: 28.7%
- Basic: 28.9%
- Below Basic: 40.6%

**SOURCE:** 2003 National Assessment of Adult Literacy Public–Use Data File
Health Literacy by Internet Use

Use the Internet to Find Information

SOURCE: 2003 National Assessment of Adult Literacy Public–Use Data File
Health Literacy by Internet Use for Health Information

Receive Health Issue Information from the Internet

SOURCE: 2003 National Assessment of Adult Literacy Public-Use Data File