



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

Comprehensive Research Report/ Program Evaluation

July 2012

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

SUMMARY

The Arkansas Children's Hospital (ACH), in partnership with the Connect with Kids Education Network (CWK), is piloting a multimedia program in 18 schools, focusing on health education, using the power of CWK online multimedia, reality- and research-based resources. The goal of this program evaluation is to determine how well students learn, and how their behavior and attitude changes with a more intense, focused use of technology (online access and other media) for health education.

CWK videos are designed to harness the power of storytelling as real kids share real stories about issues affecting teen health including bullying prevention, depression and mental health, obesity, nutrition, and physical activity, and alcohol and other drug use prevention. Participating middle and high schools were provided with online access to video and print resources, as well as curricula binders with DVDs and supporting lesson plans and activities for the classroom.

ACH and CWK worked with schools to measure program efficacy with independent pre- and post-testing research to assess impact of the program on the students involved. Participating middle and high schools identified a facilitator, student participants and a control group which took the pre- and post-tests without experiencing the curricula. Program facilitators logged on to a training webinar, administered a pre-test to a selected class as well as a control group, and conducted 10 classroom learning modules over a 10-week period.

Topics addressed include the following health issues: making healthy choices, stress and anxiety, teen depression, OTC and prescription drugs, underage drinking, cyber bullying, managing technology, physical fitness and nutrition. Each 30 to 60-minute lesson includes a 7 to 10-minute video segment and accompanying activity. At the conclusion of all lessons, the facilitator administered post-tests to the participating students. The post-test was also administered to the participants in the control group who did not receive the lessons.

The survey evaluation is intended to demonstrate a sustainable change in behavior, the impact of visual media and that difficult-to-measure emotional quotient in reaching youth and affecting their decision-making process. The overall initiative was directed at health literacy through technology to employ various media to reach teens with the topics at hand. Evaluation results are summarized in this report.

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

Evaluation Design

The evaluation was intended to assess the ability of the program components to demonstrate sustainable changes in behavior, as well the impact of visual media to affect the decision-making of participants, a mix methods design, focusing on research questions that call for real-life contextual understandings and multi-level perspectives. The overall initiative was directed at health literacy through technology to employ various media to reach teens with information on the topics at hand. Evaluation results are summarized in this report.

The initial evaluation design targeted sixth- through twelfth- grade health classes in 20 middle and high schools throughout the state of Arkansas. Due to the constraints of various end-of-the-school-year activities, two high schools were unable to complete the program and were eliminated from the evaluation.

The program was executed using both an experimental group that participated in the 10-week program and a control group that did not. The schools and classes selected were intended to represent the diversity of the student population. The responses were reviewed to ensure a representative sampling in both the control and experimental groups.

To match responses from the same individual across time in the pre- and post-survey in a paired comparison, participants were asked to provide their mother's first initial and the day of the month in which they were born. These two values were combined into a single unique identifier variable that preserved participants' anonymity.

The pre- and post-survey both consisted of 28 questions.

- Three (3) questions (Questions 1, 2, and 3) were intended to obtain student demographic information, including gender, grade, and ethnicity.
- Additional questions provided outcome measures before and after the curriculum. These questions consist of Likert items designed to capture attitudes and behaviors regarding the program content areas. Questions are designed to address the various program sessions:
 - Making Healthy Choices (Questions 18, 11, 12, 7, 9, 17)
 - Managing Stress (Questions 6, 13)
 - Depression and Anxiety (Questions 5, 10)
 - Over-the-Counter and Prescription Drug Abuse (Question 22)
 - Underage Drinking (Questions 4, 8, 27)
 - Tobacco (Questions 26, 28)
 - Cyberbullying/Bullying Prevention (Questions 15, 16)

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

- Managing Technology (Questions 19, 21, 24)
 - Nutrition/Body Image (Questions 20, 23)
 - Physical Fitness (Question 25)
 - Multimedia Relevance (Questions 14, 30)
- The pre-survey included two (2) an additional qualitative questions to allow participants to provide input on causes of stress in their lives and whether they preferred to obtain information for decision making through online media or videos, or classroom discussions and lectures.
 - Four (4) qualitative questions were used in the post-survey to request input on whether students viewed stress differently after the program and their preferred means of obtaining decision making information through either online media or videos, or classroom discussions and lectures. Participants were also asked the most important thing learned from the program, as well as how the program could be improved.
 - The technique of affinitizing was used to organize and summarize the narratives into logical groupings to better understand the essence of the anecdotal responses.
 - A survey of facilitators was used to obtain input on the perceived effectiveness of each program session, as well as information on the facilitator preparation and administration of the program to assess the fidelity of the program administration.

Findings

Results from analysis of response data indicated a shift in preference for the availability of information through online media and videos, especially in combination with the use of classroom discussion groups. Quantitative and qualitative anecdotal responses indicated that the program had a positive impact on a change in attitude regarding importance of making healthy choices within the experimental group. Among the notable findings, results indicated statistically significant improvements after the curriculum in the following outcomes:

- Responses from student participating in the course indicated a significant increase in understanding that choices made during the teen years have a continued life-long effect on health. There was a 20 % overall gain in the experimental group versus a 4 % gain in the responses of the control group.
- Responses to student surveys indicated increased awareness of cyberbullying and the impact on themselves and others. There was a 10% increase in the number of students who realized that they had previously participated in bullying or making fun of others online.
- Participants indicated a statistically significant increase in confidence in their ability to positively deal with day-to-day stress. There was a 5 % increase in the

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

number of students who indicated that they feel like they have the skills to handle day-to-day stress versus no change in the experimental group.

- Students expressed a statistically significant increase in awareness that parents and friends influence decisions and choices that affect healthy decisions.
- The use of a mixed methods survey, including both qualitative and quantitative questions, allowed students to open up and share details of stresses both in school and at home, including bullying by classmates and siblings; parental problems with alcohol, smoking, and eating disorders; and feelings of loneliness and disconnection. Responses in these areas within the control group did not indicate a significant change over the same 10-week period.

Additionally, several findings based on demographic indicators included:

- Responses did not differ significantly between ethnic groups.
- Responses did differ significantly between gender groups.
- Responses did not differ significantly between schools, although comments indicated that some of the material was considered by both students and facilitators to be above the level of 6th and 7th graders.

Longitudinal studies typically suffer from problems with attrition; however, this study had a significantly high (18.75%) attrition rates. Possible reasons for this may be lack of sufficient training of facilitators in the fundamentals of administering a pre- and post-survey within control and experimental groups, which may lead to inability to match pre- and post-surveys. Facilitators also indicated that the study experienced challenges due to conflicts with other end-of-the-school-year activities.

PROGRAM OVERVIEW AND EVALUATION DETAILS

Introduction

The Arkansas Children's Hospital, in partnership with Connect with Kids Education Network, is piloting a multimedia program in 18 schools, focusing on health education through the use of online multimedia, reality- and research-based resources. The curriculum is interactive, using a reality-based multimedia format (*real* kids talking about *real* situations and outcomes in videos) to engage students in issues affecting teen health including bullying prevention, depression and mental health, obesity, nutrition, and physical activity, and alcohol and other drug use prevention. Participating middle and high schools were provided with online access to resources, as well as curricula binders with DVDs and print materials for the classroom. Videos and print resources

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

streamed online at a custom, password-protected website hosted by Connect with Kids: www.connectwithkids.com/ACH.

Curriculum Overview

Use of a Collaborative Learning Strategy

The curriculum embraces an approach to enhance the discussions and activities where peers can learn from each other under the guidance of an adult facilitator. This change strategy recognizes the power of one's peer group as a vehicle for solving common problems. The theoretical foundations emerged from the field of social work and was developed by William Schwartz and built upon by Lawrence Schulman and Alex Gitterman. It is based on the concept that there exists a reciprocal relationship between individuals in a group (Schwartz, 1961). It recognizes the strength of a peer group as a vehicle for solving common problems. The peer group provides a forum for trying out new behaviors; giving and receiving feedback; providing positive support; and, most important, learning to help and support others through the aid of a trusted adult. It takes advantage of the positive roles that peers can play in working together to find new solutions to old problems.

Using a multimedia curriculum, the program consists of ten in-class lessons that are 30 to 60 minutes in length, with video segments, discussion questions, and in-class activities. Research has indicated that there is a significant difference in learner motivation based on attention and retention between video-based instruction and traditional text-based instruction (Choi & Johnson, 2005). Sociocultural learning theory supports the notion that behavioral change does not occur in isolation but rather supported by social relationships and engaging experiences, as well as technical and psychological tools (Vygotsky, 1978; Dusenbury, Hansen, & Giles, 2003). Video-based instruction provides for standardization of messages, which increases the fidelity of curriculum implementation.

The curriculum incorporates discussions and activities through which students can learn from their peers under the guidance of an adult facilitator. According to Shulman, "as children and youth come to grips with the impact of substance abuse on their own lives and the lives of friends and significant others, as they attempt to cope with the pressures of growing up that may encourage conformity to unhealthy substance abuse norms....having the opportunity to meet with other youth experiencing similar struggles and having an adult that doesn't judge or lecture them may make all the difference in their successful negotiation of this vulnerable life stage." (Shulman, 1986).

This collaborative approach, through its emphasis on involving peers, takes advantage of peer support, a dynamic in adolescence to enforce healthy decision making. This approach is true not only for adolescents but for adults as well and can be used in both clinical counseling sessions and educational programs. The strength-based perspective in educational groups emphasizes that with increased knowledge and practice of skills an individual can more adequately deal with the challenges of living (Sands & Solomon,

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

2003; Letendre, 2007). Many evidenced base educational programs for adolescents in schools are lengthy and difficult to implement in a high school setting. The curriculum is designed to have the greatest impact in the fewest sessions, thereby making it user-friendly for schools.

Successful implementation of the lessons also requires that the facilitator have knowledge of the health challenges teens face and possess an understanding of adolescent development.

Role of the Facilitator

At the core of this approach is the notion that the facilitator must understand the population to be taught (preparatory empathy). In order to effectively administer this curriculum and to incorporate this change management approach, it is essential that the facilitator prepare for the adolescent audience by considering:

- What teens may be thinking and feeling about the challenges and health decisions regarding drugs, alcohol, online behavior, stress and anxiety, and fitness and nutrition.
- What it is like to be a teenager in today's world.
- What reaction will the counselor have to what is expressed.

It is essential that the facilitator prepare for each topic by reviewing the material prior to the sessions. The ability to achieve the maximum potential benefits from implementing change depends in part on how effectively a climate is created and maintained that minimizes resistant behavior and encourages acceptance and support for a given change. Attempts by individuals to impede the intended change is referred to as resistance to change, and has been defined as "behavior which is intended to protect an individual from the effects of real or imagined change" (Sander, 1950) and "any conduct that serves to maintain the status quo in the face of pressure to alter the status quo" (Zaltman & Duncan, 1974).

The classroom sessions are designed to engage students in a learning process where participants are open to listening to the facilitator and to each other. Central to the process implementing change are several dynamics that are incorporated throughout the class lessons. A powerful force in the intervention is the realization by the student that they are not alone in his or her thoughts, feelings, and emotions. There is something special in hearing others articulate similar feelings and experiences. Such mutuality produces support that energizes learning.

While it is important for students to have support from their peer group and adults, it is not sufficient to create change in behavior or intention to change. Research shows behavior and attitude changes occur when students have sufficient information to learn new skills (Lewin, 1948; Folger & Skarlicki, 1999). Developing new attitudes and behaviors may require first that old ideas and behaviors be questioned and evaluated.

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

The discussion questions and activities ask students to challenge their own views and those of their peers through guided role playing and requests for feedback. Adolescents are in the best position to confront and challenge each other's thoughts, assumptions and actions on how and why to make healthy choices.

As students respond to key questions in each lesson, the facilitator can establish connections by acknowledging the adolescent experience (academic stress, social anxiety and peer pressure, experimentation.) Further reinforced in the reality-based video segments, students learn ways to make informed decisions and healthy choices. Each student has unique life experiences. The discussion questions following each video segment are designed to assist students with sharing their experiences and beliefs, as well as how they can develop lifelong strategies that promote a healthy lifestyle. By encouraging their participation in the learning process, the facilitator can assist students to listen to each other while correcting any misinformation that the students may have about the health-related topics at hand.

Curriculum Evaluation Methods

Programs and curriculum are often conducted without measuring outcomes to ensure objectives are achieved and the desired change occurred. Organizations, both for-profit and non-profit, need to conduct program evaluations to measure the ability to meet objectives (Kirkpatrick, 1993). This initial program assessment focused on sixth- through twelfth-grade health classes in 18 schools throughout the state of Arkansas. The program was executed using both an experimental group that participated in the 10-week program and a control group that did not. The middle and high school classes selected were intended to represent the diversity of the student population. The responses were reviewed to ensure a representative sampling in both the control and experimental groups.

The primary purpose of this evaluation research was to apply social research methods to assess social intervention programs and policies (Singleton, 2010). The effectiveness of programs to implement and sustain change can be measured by a variety of research tools given established evaluation criteria (Kirkpatrick, 1993). Numerous social change theories, suggest that peer and group influences are effective in impacting changes in behavior and attitudes but are frequently difficult to measure (Cooperrider, 1999; 2005). Social Development Strategy (Hawkins & Weis, 1985; Hawkins, Catalano, & Wells, 1986) and Social Learning Theory (Bandura, 1963, 1969, 1977) theorizes that behavior change occurs when individuals are provided information regarding risks and benefits of particular behaviors, and use that knowledge to form attitudes and learn behavioral skills. Behavior is shaped through modeling behaviors within a social context. Sociocultural learning theory supports the notion that behavioral change does not occur in isolation but rather supported by social relationships and engaging experiences, as well as technical and psychological tools (Vygotsky, 1978; Dusenbury, Hansen, & Giles, 2003).

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

Justification for Survey Method

This study used a quasi-experimental design and mixed-methods analysis consisting of both qualitative and quantitative data. Qualitative and quantitative methods are often closely aligned with survey design techniques and individual case studies as a way to reinforce and evaluate findings over a broader scale. The broad area of survey research is an important and frequently used quantitative method that encompasses any measurement procedures involving the asking questions of respondents. Surveys are frequently used to assess attitudes and characteristics of a wide range of subjects. In a survey, researchers sample a population. A population is any set of persons or objects that possesses at least one common characteristic (Basha & Harter, 1980). Since target populations may be extremely large, researchers directly question only a sample of the population. Data are usually collected through the use of questionnaires, although sometimes researchers directly interview subjects. Surveys can use qualitative, such as open-ended questions, or quantitative, such as forced-choice questions, measures (Babbie, 1990).

Data Analysis

The researcher checked for exaggerated and inconsistent responses to screen every survey prior to use in this study. Exaggerated responses could be a very critical problem, and one that could lead to skepticism about the survey results. For a variety of reasons, some students may be inconsistent in how they respond to the survey questions. They may mark their answers randomly, just to get the survey over with. They may have reading problems and be unable to understand the questions. They may give false responses to “mess with” the survey. Students may, for example, indicate on one question that they do not make decisions affecting their health (including food, exercise and substance use/abuse) based upon what their friends are doing, while on another question might indicate that friends provide the most influence regarding choices affecting health.

Checks were made for inconsistencies and missing information, and while any student might just mark an answer wrong in a survey this long, if it happened more than twice on one survey, the survey is deleted from the report process. Inconsistency, attrition, and inability to match pre- and post-surveys accounted for elimination of 123 (18.75%) surveys from the final data analysis.

The pre- and post- student survey was utilized to test the effectiveness of this program in developing an awareness and change of attitude and behavior in regards to health and behavior risks, as well as to increase protective factors needed to help students to live healthy and productive lives. In order to measure the significance of change in attitude based on exposure to the curriculum, the pre- and post-survey were evaluated in a paired comparison (Aczel & Sounderpandian, 2009). By looking at paired-observations, the between group (extraneous variation) is minimized. To match responses from the same individual across time, participants were asked to provide their mother's first initial

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

and the day of the month in which they were born. These two values were combined into a single unique identifier variable that preserved participants' anonymity.

The pre- and post-survey consisted of 28 questions designed to capture student demographic information; current attitudes and behaviors and the impact of visual media to affect the teen decision-making process. Three (3) questions are intended to obtain student demographic information, including gender, grade, and ethnicity. The pre-survey included two (2) qualitative questions designed to obtain input on causes of stress in the lives of participants and whether they preferred to obtain information critical for decision making through online media or videos, or classroom discussions and lectures. Four (4) additional qualitative questions were used in the post-survey to request input on whether students viewed stress differently after the program and their preferred means of obtaining decision making information through either online media or videos, or classroom discussions and lectures. Participants were also asked the most important thing learned from the program, as well as how the program could be improved. Responses were affinitized to organize and summarize the narratives into logical groupings to better understand the essence of the anecdotal responses.

Survey Results

A total of 775 pre-surveys and 737 post-surveys were received, and of these 652 (334 in the experimental group and 318 in the control) were complete and usable for later paired comparison. Assessments were provided by the facilitators on the effectiveness of each session. Power analyses indicated that sample size provided sufficient power (power = .84) to detect effects of the curriculum. Of the paired surveys analyzed, the controlled and experimental groups are comparable.

GENDER	EXPERIMENTAL	CONTROL	TOTAL	PERCENT
Female	157	150	307	47.1%
Male	177	168	345	52.9%

GRADE	EXPERIMENTAL	CONTROL	TOTAL	PERCENT
6 th	31	36	67	10.3%
7 th	139	137	278	42.3%

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

8 th	35	29	64	9.8%
9 th	88	41	129	19.8%
10 th	12	36	48	7.4%
11 th	10	11	21	3.2%
12 th	19	28	47	7.2%

ETHNICITY	EXPERIMENTAL	CONTROL	TOTAL	PERCENT
White	169	163	332	50.9%
Hispanic	33	22	55	8.4%
African American	88	95	183	28.1%
Multi-racial	30	20	50	7.7%
Other	8	3	11	1.7%
Asian	2	7	9	1.4%
American Indian	4	7	11	1.7%
Pacific Islander	0	1	1	0.2%

Notes for Interpreting Results

Reliability is the consistency of a measurement, or the degree to which an instrument measures the same each time it is used under the same condition with the same subjects (Trochim, p. 80). It is the repeatability of a measurement. A measure is deemed reliable if the result of a test given twice is similar each time. Reliability is estimated, not measured. *Validity* refers to the degree to which a study accurately reflects or assesses the specific concept that the researcher is attempting to measure (Trochim, p. 56).

External validity refers to the extent to which the results of a study can be generalized or transferred. *Internal validity* refers to (1) the rigor with which the study was conducted, including the study's design, the care taken to conduct measurements, and decisions concerning what was and was not measured; and (2) the extent to which the designers of a study have taken into account alternative explanations for any causal relationships they explore (Huitt, 1998).

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

Results for each question, presented in Appendix II, are shown separately for each question for respondents. Results from the pre- and post-survey for both control and experimental groups are shown side-by-side to examine change in correct responses over time. We expected to find improvement in measured responses of the experiment group in the post-survey, which immediately followed the four classroom sessions and three homework assignments. Differences between survey times (pre- and post-survey) were tested for statistical significance using repeated measures analyses of variance (ANOVA). In addition, gender and ethnicity were also tested for statistical significance using ANOVA.

The Tukey method of pairwise comparisons of the population means was used to compare every possible pair of means using a single level of significance at $\alpha=0.05$ (Aczel & Sounderpandian, 2009). The mean (μ) indicates the average response for each question, using the Likert scale, while the standard deviation (σ) indicates the variation of all responses to the question from the mean. [A low standard deviation indicates that the data points tend to be very close to the mean, whereas high standard deviation indicates that the data are spread out over a large range of values.] Statistical significance was determined using the F-test of equality of variance with a probability factor (p) of 0.05% (95% confidence). The larger the F value, the greater the significant difference (increase or decrease) between the response populations (pre- and post-curriculum) (Trochim & Donnelly, 2007).

ASSESSMENT OF STUDENT FEEDBACK

The narrative responses to the qualitative questions included in the pre- and post-survey were affinitized to organize and summarize the narratives into logical groupings to provide for distillation of the anecdotal responses. For the pre-survey question regarding sources of stress and the ability to positively manage it, female participants tended to be more forthcoming with their feelings; however, males also shared their thoughts about topics including:

1. School work and plans for the future. (43%)
2. Feelings of inadequacy or disconnection from peers, including bullying in school and weight issues. (35%)
3. Family issues, such as health of parents/grandparents, divorce, bullying by siblings. (22%)

Examples of comments included:

“My cause of stress of life is that my English teacher is so mean and my parents are a total neglect. I try to get over the stress, but I just burst into depression.”

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

"Some of the causes of stress in my life is [sic] my brother. He is 13 and he punches me and hurts me a lot and he yells at me all the time, so when my friends ask why I have a lot of bruises. I lie because I don't want to get into trouble if he hears about it."

"Some of the causes of stress in my life is that my grades in school have been getting lower. I'm not doing very well in school, and I have trouble turning my work in on time. Also, I'm stressed because people always make fun of me because I have acne on my face. To deal with the stress in a positive manner, I try to ignore the things people tell me, but sometimes it's too much for me and actually hurts my feelings..."

"Keeping up with my grades, work, my friends, my loved ones and keeping my room clean; also paying bills my parents have given me the responsibility to pay and managing time and money. I usually just plan everything out ahead of time and take on each day as its own thing."

"Well, my stress is caused by my home life, abusive sister, all my school work, not having enough of my own space from people, and people always asking the same questions over and over. I am not crazy only in a fun kidding way, but not a psycho girl. Also some of the ways I get rid of my stress is reading/writing books, listening to music, drawing, and singing"

"Watching over my stepmothers' kids sometimes. I breathe in and out for about 15 seconds."

"Most of the stress in my life is from my family and what my sister say and tell and make fun of me...my older sister likes to push me around and push me down...some of the things is about my mom and what she's done in the past... and I've been raised to keep my mouth shut about everything... and how I deal with it is to hide the pain behind a mask."

"My mom smokes and drinks and won't stop when I tell her to and it makes me mad because that shows she doesn't care. She says that she does but I go to my room and call up a friend or my dad and get away or I just lie down and try to calm down."

In the post-survey, those participates in the experimental group (52%) indicated an increase in the ability to positively manage stress, while the control group either did not respond or indicated no change.

"Yes. I know now that I am getting stressed by factors in my life. But I also know that it is being relieved in healthy ways."

"Yes, I talk to my parents about my stresses and it helps me a lot."

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

"I deal with a lot of stress because my parents are in a really bad divorce and fighting over us. Also the economy is super bad so I can't buy everything I want. Also, yesterday my mom moved away for 3 months to help her parents."

"Yes I used to think that stress was something wrong with me that I have to just deal with. Now I know differently."

In response to questions regarding a preference for obtaining information, students in both the control and experimental groups indicated a slight preference for video or online media over classroom discussion in the pre-survey (56% video, 44% classroom discussion). After the 10-week program was completed, students in the experimental group indicated a 61% preference for video learning versus 38% classroom; however, 65% of those indicating a preference for classroom discussion suggested that it should be in combination with video or online media presentation. Students in the control group did not indicate a significant shift in learning format preference.

In response to question regarding the importance of the program, students indicated:

"I kind of looked at my body wrong. It makes me feel guilty but it does change what I think. It also made me think I'm making the wrong choices."

"The most important thing that I learned was not to be pressured into doing something that will follow me for the rest of my life."

"The most important thing that I learned from this program was how to maintain a healthy lifestyle, how to manage stress, and how much drugs influence negative behavior."

"Even though you are growing more mature and wiser, your health is a big part of life that you should take seriously."

"I learned how dangerous porn is and how easy it is to get drawn into it."

"I learned a lot through the online media and videos but I enjoyed the discussions with the group."

"I have a greater understanding that things that I say and do might bully others when I don't mean to. I never thought about cyber bullying before."

"I kind of looked at my body wrong before. This program helped me to change what I thought and to make better choices."

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

"I don't know if there is a way to improve this program. I love it the way that it is right now. It has helped me a lot. Stuff I learned is helping me to deal with my parent's divorce. Thank you!"

"I think differently now about the causes of stress in my life and make better choices to deal with problems."

Negative comments received in response to question regarding the importance of the program, students indicated:

"Nothing really except for the usual "don't smoke" and "stay in school" kind of things."

"I knew most of this already."

"Not that much. Just basic stuff."

ASSESSMENT OF FACILITATOR FEEDBACK

The role of the facilitator is to guide students through the program. Providing information alone has not proven effective in preventing use, so the curriculum employs interactive activities and multimedia resources to engage students within their peer groups. The peer group is intended to provide a forum for developing new behaviors, giving and receiving feedback, and providing positive support. This help and support from others is provided through the aid of the facilitator as a trusted adult.

Fidelity

Facilitators from 13 of the participating schools responded to the request for feedback. Of the respondents, 53.8% are female and 46.2% are male, with 76.9% of the respondents White and 23.1% Black/African American. For each of the ten class sessions, facilitators were asked for feedback on their preparation prior to each session and how effective they thought each session was in supporting healthy decision making. Overall, 69.2% of the facilitators rated the curriculum as Effective, while 30.8% indicated that it was Extremely Effective.

The Facilitator Survey consisted of four (4) questions for each session, and facilitators may have selected multiple responses for a given question:

1. Prior to the session on making healthy choices, I prepared by reviewing the curriculum by reviewing the materials and considering:

- What teens may think or feel about the topic.
- How teens may react to the material presented.
- Goals of the lesson.

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

- How to ensure participation.
- 2. I presented the video and led the students in discussion.**
 - Students were willing to share their opinions.
 - Students needed encouragement to share their opinions.
 - Students discussed all questions following video.
 - Students were reluctant to discuss questions following video.
- 3. I presented the activity and assisted students in small group discussions.**
 - Students were willing to share in peer groups.
 - Students needed encouragement to share in peer groups.
 - Students completed the activity.
- 4. How effective do you think this session was in equipping students with information to make healthy choices?**
 - Not Effective At All
 - A Little Effective
 - Effective
 - Extremely Effective

Managing Healthy Choices

In response to Question 1 regarding preparation for session, 61.5% of the respondents indicated that they prepared for the class by reviewing the materials and considering what students may think or feel about the topic. Of the respondents, 46.2% considered how students might react to the material presented. The lesson goals were a consideration for 76.9% of the respondents. Ensuring participation was a consideration for 46.2% of respondents. After presenting the video and leading the students in discussion (Question 2), 76.9% of the respondents felt that students were willing to share their opinions. Students indicated that 15.4% shared that they felt that needed encouragement in order to share their opinions. Of the respondents, 61.5% reported that students discussed all questions following video, and 7.7% felt that the students were reluctant to discuss questions following the video.

Following presentation of the activity (Question 3), the facilitators assisted students in small group discussions. One hundred (100%) of the facilitators felt that students were willing to share their opinions on making healthy choices with their peers, and that 46.2% of the students completed the activity.

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

In response to Question 4, this module was considered Effective by 84.6% of the facilitators, while 15.4% rated it as Extremely Effective in providing the information to meet learning objectives.

Managing Stress

Regarding preparation for session (Question 1), 69.2% of the respondents indicated that they prepared for the class by reviewing the materials and considering what students may think or feel about the topic. Of the respondents, 46.2% considered how students might react to the material presented. The lesson goals were a consideration for 76.9% of the respondents. Ensuring participation was a consideration for 38.5% of respondents. After presenting the video and leading the students in discussion (Question 2), 76.9% of the respondents felt that students were willing to share their opinions. Students indicated that 15.4% shared that they felt that needed encouragement in order to share their opinions. Of the respondents, 46.2% reported that students discussed all questions following video, and 7.7% felt that the students were reluctant to discuss questions following the video.

Following presentation of the activity (Question 3), the facilitators assisted students in small group discussions. Of the responding facilitators, 69.2% felt that students were willing to share their opinions on making healthy choices with their peers, while 15.4% needed encouragement. Respondents indicated that 46.2% of the students completed the activity.

In response to Question 4, this module was considered A Little Effective by 15.4% of the respondents, while 69.2% of the Facilitators rated the session as Effective and 15.4% rated it as Extremely Effective in providing the information to meet learning objectives.

Depression and Anxiety

Regarding preparation for session (Question 1), 69.2% of the respondents indicated that they prepared for the class by reviewing the materials and considering what students may think or feel about the topic. Of the respondents, 69.2% considered how students might react to the material presented. The lesson goals were a consideration for 53.8% of the respondents. Ensuring participation was a consideration for 38.5% of respondents. After presenting the video and leading the students in discussion (Question 2), 76.9% of the respondents felt that students were willing to share their opinions. Students indicated that 15.4% shared that they felt that needed encouragement in order to share their opinions. Of the respondents, 46.2% reported that students discussed all questions following video, and 7.7% felt that the students were reluctant to discuss questions following the video.

Following presentation of the activity (Question 3), the facilitators assisted students in small group discussions. Of the responding Facilitators, 69.2% felt that students were willing to share their opinions on making healthy choices with their peers. Respondents indicated that 69.2% of the students completed the activity.

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

In response to Question 4, this module was considered A Little Effective by 15.4% of the respondents, while 76.9% of the Facilitators rated the session as Effective and 7.7% rated it as Extremely Effective in providing the information to meet learning objectives.

Over-the-Counter and Prescription Drug Abuse

In response to Question 1, 61.5% of the Facilitators indicated that they prepared for the class by reviewing the materials and considering what students may think or feel about the topic. Of the respondents, 69.2% considered how students might react to the material presented. The lesson goals were a consideration for 76.9% of the respondents. Ensuring participation was a consideration for 46.2% of respondents.

After presenting the video and leading the students in discussion (Question 2), 76.9% of the respondents felt that students were willing to share their opinions. Students indicated that 30.8% shared that they felt that needed encouragement in order to share their opinions. Of the respondents, 46.2% reported that students discussed all questions following video.

Following presentation of the activity (Question 3), the Facilitators assisted students in small group discussions. Of the responding Facilitators, 84.6% felt that students were willing to share their opinions on making healthy choices with their peers, while 15.4% needed encouragement. Respondents indicated that 69.2% of the students completed the activity.

In response to Question 4, this module was considered Effective by 76.9% of the respondents and 23.1% rated it as Extremely Effective in providing the information to meet learning objectives.

Underage Drinking

In response to Question 1, 76.9% of the facilitators indicated that they prepared for the class by reviewing the materials and considering what students may think or feel about the topic. Of the respondents, 61.5% considered how students might react to the material presented. The lesson goals were a consideration for 69.2% of the respondents. Ensuring participation was a consideration for 53.8% of respondents.

After presenting the video and leading the students in discussion (Question 2), 84.6% of the respondents felt that students were willing to share their opinions. Of the respondents, 53.8% reported that students discussed all questions following video, and 7.7% of the students were reluctant to discuss questions following the video.

Following presentation of the activity (Question 3), the facilitators assisted students in small group discussions. Of the responding facilitators, 84.6% felt that students were willing to share their opinions on making healthy choices with their peers, while 15.4% needed encouragement. Respondents indicated that 61.5% of the students completed the activity.

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

In response to Question 4, this module was considered Effective by 76.9% of the respondents and 23.1% rated it as Extremely Effective in providing the information to meet learning objectives.

Tobacco

In response to Question 1, 53.8% of the facilitators indicated that they prepared for the class by reviewing the materials and considering what students may think or feel about the topic. Of the respondents, 61.5% considered how students might react to the material presented. The lesson goals were a consideration for 69.2% of the respondents. Ensuring participation was a consideration for 46.2% of respondents.

After presenting the video and leading the students in discussion (Question 2), 69.2% of the respondents felt that students were willing to share their opinions. Students indicated that 15.4% shared that they felt that needed encouragement in order to share their opinions. Of the respondents, 53.8% reported that students discussed all questions following video.

Following presentation of the activity (Question 3), the facilitators assisted students in small group discussions. Of the responding facilitators, 76.9% felt that students were willing to share their opinions on making healthy choices with their peers, while 15.4% needed encouragement. Respondents indicated that 61.5% of the students completed the activity.

In response to Question 4, this module was considered Effective by 76.9% of the respondents and 23.1% rated it as Extremely Effective in providing the information to meet learning objectives.

Cyberbullying

In response to Question 1, 61.5% of the facilitators indicated that they prepared for the class by reviewing the materials and considering what students may think or feel about the topic. Of the respondents, 61.5% considered how students might react to the material presented. The lesson goals were a consideration for 76.9% of the respondents. Ensuring participation was a consideration for 38.5% of respondents.

After presenting the video and leading the students in discussion (Question 2), 69.2% of the respondents felt that students were willing to share their opinions. Students indicated that 23.1% shared that they felt that needed encouragement in order to share their opinions. Of the respondents, 61.5% reported that students discussed all questions following video, and 7.7% of the students were reluctant to discuss questions following the video.

Following presentation of the activity (Question 3), the facilitators assisted students in small group discussions. Of the responding facilitators, 92.3% felt that students were willing to share their opinions on making healthy choices with their peers. Respondents indicated that 53.8% of the students completed the activity. In response to Question 4,

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

this module was considered Effective by 69.2% of the respondents and 30.8% rated it as Extremely Effective in providing the information to meet learning objectives.

Managing Technology

In response to Question 1, 61.5% of the facilitators indicated that they prepared for the class by reviewing the materials and considering what students may think or feel about the topic. Of the respondents, 53.8% considered how students might react to the material presented. The lesson goals were a consideration for 61.5% of the respondents. Ensuring participation was a consideration for 61.5% of respondents.

After presenting the video and leading the students in discussion (Question 2), 38.5% of the respondents felt that students were willing to share their opinions. Students indicated that 38.5% shared that they felt that needed encouragement in order to share their opinions. Of the respondents, 30.8% reported that students discussed all questions following video, and 15.4% of the students were reluctant to discuss questions following the video.

Following presentation of the activity (Question 3), the facilitators assisted students in small group discussions. Of the responding facilitators, 61.5% felt that students were willing to share their opinions on making healthy choices with their peers, while 23.1% needed encouragement. Respondents indicated that 53.8% of the students completed the activity.

In response to Question 4, this module was considered Effective by 69.2% of the respondents and 23.1% rated it as Extremely Effective in providing the information to meet learning objectives. The session was considered Not Effective At All by 7.7%.

Nutrition

In response to Question 1, 61.5% of the facilitators indicated that they prepared for the class by reviewing the materials and considering what students may think or feel about the topic. Of the respondents, 61.5% considered how students might react to the material presented. The lesson goals were a consideration for 84.6% of the respondents. Ensuring participation was a consideration for 46.2% of respondents.

After presenting the video and leading the students in discussion (Question 2), 84.6% of the respondents felt that students were willing to share their opinions. Students indicated that 15.4% shared that they felt that needed encouragement in order to share their opinions. Of the respondents, 38.5% reported that students discussed all questions following video.

Following presentation of the activity (Question 3), the facilitators assisted students in small group discussions. Of the responding facilitators, 84.6% felt that students were willing to share their opinions on making healthy choices with their peers, while 7.7% needed encouragement. Respondents indicated that 38.5% of the students completed the activity.

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

In response to Question 4, this module was considered Effective by 84.6% of the respondents and 15.4% rated it as Extremely Effective in providing the information to meet learning objectives.

Physical Fitness

In response to Question 1, 69.2% of the facilitators indicated that they prepared for the class by reviewing the materials and considering what students may think or feel about the topic. Of the respondents, 46.2% considered how students might react to the material presented. The lesson goals were a consideration for 76.9% of the respondents. Ensuring participation was a consideration for 53.8% of respondents.

After presenting the video and leading the students in discussion (Question 2), 84.6% of the respondents felt that students were willing to share their opinions. Of the respondents, 38.5% reported that students discussed all questions following video. Following presentation of the activity (Question 3), the facilitators assisted students in small group discussions. Of the responding facilitators, 76.9% felt that students were willing to share their opinions on making healthy choices with their peers. Respondents indicated that 69.2% of the students completed the activity.

In response to Question 4, this module was considered Effective by 76.9% of the respondents and 23.1% rated it as Extremely Effective in providing the information to meet learning objectives.

Qualitative comments received from the facilitators regarding the program include:

"My students began to understand that they had an opinion and that it was healthy for them to talk about each lesson without fear of being judged because of what they knew or had experienced. My students had lots of information to offer and most of them have actually done research or had been in other environments where these topics/lessons had been discussed. But the peer discussions were wonderful."

"I found the videos to be very effective in reaching my students. One way to improve the program is for each lesson to have a short assessment and key/rubric for the teacher."

"I watched students learn that others in their class have very similar values. Many students were not friends in this group prior to starting the lessons. They bonded a bit during lessons and learned from each other while forming positive opinions of each other and their choices."

"I think that my students finished the program with a greater understanding that all of the decisions that they make are important for a healthy lifestyle."

"One improvement would be to have more time to complete some activities, and to do lessons in the fall to avoid end-of-school-year interruptions."

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

"The cyberbullying and managing technology was awesome. Students are really into the Internet so it was extremely informative for us. Also the OTC drugs [session] was great."

"It's a pilot program -- the videos are fresh and relevant and kept students' attention. To that end, I would say to improve the program you may want to look at adding content to the video segments for each lesson."

"To add more lessons to what is already there and provide more interactive activities. The discussions were WONDERFUL!"

"One way to improve this program is to complete some activities, and do lessons in the fall before end of school interruptions."

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

Recommendations and Program Enhancements

Based upon student and facilitator input, upcoming program enhancements will include the following:

- Develop a more substantial training program than the one-hour video training, including guidebook and teaching aids.
- Update video content periodically to include the latest research and relevant student profiles.
- The creation of an accompanying workbook to facilitate assignment completion and ongoing discussion, including rubrics and alignment to state framework.

References

- Aczel, A. D. & Sounderpandian, J. (2009) *Complete Business Statistics*, (7th ed.) Boston: Irwin McGraw Hill.
- Babbie, E. (1990). *Survey research methods* (2nd ed.). Belmont, CA: Wadsworth Publishing Company.
- Baggett, P. (1984). Role of temporal overlap of visual and auditory material in forming dual media associations. *Journal of Educational Psychology*, 76(3), 408-417.
- Choi, H. J. & Johnson, S. D. (2005). The effect of context-based video instruction on learning and motivation in online courses. *The American Journal of Distance Education*, 19(4), 215-227.
- Dusenbury, L. A., Hansen, W. B.; Giles, S. M. (2003). Teacher training in norm setting approaches to drug education: A pilot study comparing standard and video-enhanced methods. *Journal of Drug Education*, 33(3), 325-336.
- Gitterman, A. (1989). Building mutual support in groups. *Social Work with Groups*, 12(2), 5-22.
- Gitterman, A. (2004). The mutual aid model. In C. Garvin, L. Gutierrez, and M. Galinsky (Eds.), *Handbook of social work with groups* (pp. 93–110). New York and London: The Guilford Press.
- Gitterman, A. & Shulman, L. (Editors) (2005). *Mutual aid groups, vulnerable & resilient populations, and the life cycle* (3rd edition). New York: Columbia University Press.

Comprehensive Research Report



HEALTH LITERACY THROUGH TECHNOLOGY

Connect with Kids

LeCroy, C. W. & Wooton, L. (2006). Social skills training in school settings: Some practical considerations. In R. Constable, C.R. Massat, S. McDonald, and J.P. Flynn (Eds). *School social*

Letendre, J. & Wayne, J. (2008): Integrating Process Interventions into a School-Based Curriculum Group, *Social Work With Groups*, 31(3-4), 289-305.

Letendre, J. (2007). Take Your Time and Give It More: Supports and Constraints to Success in Curricular School-Based Groups. *Social Work With Groups*, 30(3), 65-84.

Sands, R.C. and Solomon, P. (2003). Developing educational groups in social work practice. *Social Work with Groups*, 26 (2), 5-21.

Schwartz, W. (1961). The social worker in the group. In B. Saunders (Ed.), *New perspectives on services to groups: Theory, organization, practice* (7-29), New York: National Association of Social Workers.

Shulman, L. (1986). The dynamics of mutual aid. In A. Gitterman and L. Shulman (Eds.), *The legacy of William Schwartz: Group practice as shared interaction* (51–60). New York: Haworth Press.

Trochim, W. M. K. & Donnelly, J. P. (2007). (3rd ed.). Independence, KY: Cengage Learning.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

Werch, C.E., Moore, M.J., DiClemente, C.C., Bledsoe, R., & Jobli, E. (2005). A Multi-Health Behavior Intervention Integrating Physical Activity and Substance Use Prevention for Adolescents. *Prevention Science*, 6(3), 213-226.

Zmud, R.W. & Armenakis, A.A. (1978). Understanding the measurement change. *Academy of Management Review*, July, 1978. 661-669.