



Tobacco World: Interactive Tobacco Education for Teens

Grant Number: R44CA103623-03

Abbreviated Abstract

The project will develop an interactive computer-based program for tobacco prevention aimed at middle school students. The CD-ROM is designed to be an adjunct to the existing health education curriculum provided for 6th through 8th grades.

The CD-ROM is based upon our Phase I prototype program entitled *Tobacco World* in which students are presented with a video arcade interface that offers them random access to several game-like activities in which they learn about tobacco and the negative health effects associated with tobacco use. We will expand the menu of options to include more complex activities and entertaining games.

The Phase II program will deliver engaging media to educate students about the risks of tobacco and peer and industry influences on their decisions regarding tobacco. Games and activities will be designed to act on mechanisms shown to be effective in decreasing intentions to use tobacco through changing attitudes, social images, and beliefs about short and long term physical consequences, perceptions of peers' social images, subjective norms, and perceived behavioral control. We will test individual components of the program with middle school students for effectiveness in changing mediating variables related to initiation and use of tobacco.

The final program will be evaluated in a randomized trial where middle schools in Lane County, Oregon and New York City will be assigned to either an established tobacco prevention curriculum, or to the usual tobacco curriculum plus the *Tobacco World* program. Students will be assessed at pre-, post- and one-month follow-up to evaluate the impact of program use on intentions, and actual tobacco use. For the commercial product, a companion website will offer administrative and scoring feedback to teachers via the Internet.

Primary Investigator

Herbert H. Severson, Ph.D.

Deschutes Research, Inc.

261 E. 12th Avenue

Eugene, OR 97401

(541) 345-0404

Fax: (541) 345-3854

herb@deschutesresearch.com; herb@ori.org

www.deschutesresearch.com; www.appliedbehaviorscience.com

Research Team & Affiliations

Deschutes Research, Inc.

Herbert H. Severson, Ph.D. President; & Applied Behavior Science Press

Chris Arthun, M.Ed. Research Assistant



Chris Widdop, M.S. Research Assistant
Tracy Shaw, M.A. Research Assistant

InterVision Media

Steve Christiansen, B.A. President
Tom Jacobs, B.A. Multimedia Programmer
Aaron Sarnoff-Wood, B.A. Multimedia Designer

Total Budget

\$971, 214

Research Objectives

AIMS

- 1) Based on the Phase I evaluation of our interactive prototype, feedback from focus groups of target users, and ideas from a panel of experts, develop a Beta version of our adolescent tobacco CD-ROM program that includes revisions in design, content, navigation, and functionality.
- 2) Evaluate the Beta version of the adolescent tobacco prevention program in a randomized trial in which 10-15 middle schools in New York City and Lane County, Oregon are randomized to either usual tobacco education curriculum or usual tobacco education curriculum plus our interactive CD-ROM program. The program will be evaluated through examining change in outcomes and mediating mechanisms from baseline to post-test and from baseline to one month follow-up after program participation. Outcomes are willingness, intention to use tobacco in the future, and use in the past six-months. Mediating mechanisms are attitudes, as measured by prototypes or social images, knowledge of consequences associated with tobacco use, subjective norms, increase in perceived behavioral control, and willingness and intention to use tobacco in the future. In addition, we will evaluate student and teacher satisfaction with the program.
- 3) Create a final version of the CD-ROM with Internet administration and data collection function, and a companion teacher's guide that can be marketed to schools and health clinics.

Theory/Hypothesis

Students in middle school classrooms whose teacher uses the interactive CD-ROM adjunct prevention program in addition to the standard curriculum will be significantly less likely to use tobacco products than students who receive only the standard curriculum alone.

Experimental Design

- Recruit 10-15 middle schools in Lane County, Oregon and New York City.
- Classrooms randomized to either Usual Care (current curriculum) or Usual Care plus *Tobacco World* program
- Evaluation of students using pre- and post-assessments of attitudes, knowledge, perceived barriers, and tobacco use. Follow-up surveys of all students at one month post-intervention to assess effects on attitudes, intentions and current tobacco use.

Final Sample Size & Study Demographics

Projected: 1800, 6-8th grade students in 60 health classes in Lane County, Oregon and New York City.



Data Collection Methods

Evaluated by:

- Focus groups of students and focus groups of teachers for formative evaluation.
- Usability testing was done with students to assess their navigation and use of the program. We completed pilot testing of our Beta version of the program before conducting field testing and evaluation.
- Evaluation design: We will recruit 10-15 middle schools in Lane County, Oregon and New York City and randomize classes to receive usual care tobacco prevention curriculum or the standard curriculum plus the interactive computer based adjunctive program, *Tobacco World*. We will collect baseline assessment prior to exposure to the prevention curriculum and follow up assessments will be used to assess the effect on dependent measures of attitudes, intentions, and tobacco use behaviors.

Outcome Measures

- ❖ Student Survey (paper) measuring attitudes toward, and intentions to use tobacco at:
 - Baseline
 - Post-test (evaluation only)
 - One-month follow-up
- ❖ Consumer Satisfaction Surveys (paper) given post-intervention to:
 - Students (intervention classes only)
 - Teachers (intervention classes only)

Evaluation Methods

See Experimental Design

Research Results

TBA

Barriers & Solutions

No information at this time

Product(s) Developed from This Research

Team Health Space: Interactive Tobacco Education for Middle School Students