

Health and Wellness Education Case Story

Changing Behavior: The importance of non-smoking initiatives for K-6 students

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Where did the program originate?

NTC, Allina Health System and University of Minnesota epidemiologist Dr. Cheryl Perry presented a novel educational programming module, *2 Smart 2 Smoke*, for students in 160 schools in the Twin Cities area of Minnesota. Of the 160 schools, 17 schools were randomly selected to participate in a more in-depth study. The program included educational content for students in grades 1-6 and used pre- and post-questionnaires to measure knowledge of and attitudes toward smoking. This evidence-based prevention study was originally published in *Tobacco Control*, a peer-reviewed international journal.

What approach was used in implementing this program?

The goal of *2 Smart 2 Smoke* was to reduce the psychosocial risk of smoking among elementary students by changing their intentions to smoke in the future. Secondly, the program was designed to change normative expectations, functional meanings, expected outcomes and attitudes about smoking. A pre-test/post-test design with two sequential groups was used by the University of Minnesota department of epidemiology to evaluate the effectiveness of the *2 Smart 2 Smoke* program.

The program consisted of a live theatre production that was presented in the Twin Cities schools that featured anti-smoking messaging. The program also included follow-up activities for the classroom and for use at home. Students in grades 1-6 were surveyed before and after the theatre production and associated activities. These surveys focused on the intention to smoke in the future, normative expectations about how many people smoke, functional meanings of smoking and expected outcomes of smoking. The data were examined for pre-test/post-test differences and intervention-control differences.



Live, in-school
theatre performance

What distinguishes this program from other anti-smoking campaigns?

A variety of interventions have been suggested by the surgeon general's office and implemented in communities across the country including cigarette tax increases, enforcement of minors' access laws, youth-oriented mass media campaigns and school-based smoking prevention programs. The use of live educational theatre is a unique approach that proved effective in this case. The intervention consisted of two 30-minute plays that were shown at each school with professional actors, classroom activities and take-home materials for parents, designed for grades K-3 and grades 4-6, respectively. Programs like *2 Smart 2 Smoke* affect behavior change through social norming. By presenting students with an opportunity to emulate peers and act in a positive way, within the large social group of a school population, we create an environment conducive to behavioral change and effective action.

What impacts did the program have on students?

The theatre production and accompanying activities that comprise *2 Smart 2 Smoke* had a significant impact on psychosocial risk factors for smoking among students in grades 1-3 and grades 4-6. Among both sets of students, the percentage of students who said that they would "never smoke a cigarette" increased by 10% following the play in the pre-test/post-test analysis. Students in grades 4-6 showed changes in the functional meanings and expected outcomes of smoking. Students in grades 1-3 showed changes in normative expectations.



After the production, the students in grades 1-3 were more likely than before the production to disagree that a lot of adults smoke cigarettes, that a lot of teenagers smoke cigarettes and that smoking cigarettes makes you look cool. After the production, students were more likely to agree that they will never smoke a cigarette, that smoking cigarettes makes your clothes stink and that people who make cigarettes don't care if cigarettes make you ill.

Students in grades 4-6 were more likely than before the production to agree that they would never smoke a cigarette, that there are not as many smokers as there used to be, that smoking cigarettes will kill you, that nicotine is more addictive than heroin, that smoking costs a lot of money, that smoking cigarettes makes your teeth yellow and that advertisements try to convince you to try smoking cigarettes.



What were the results of this program?

The following is a select sampling of questions from the pre- and post-tests for both sets of grade levels.

GRADES 1-3		
QUESTIONS	PRE-TEST	POST-TEST
Agree:		
I will never smoke	70%	77%
People don't like smoke	76%	78%
Makes your clothes stink	83%	90%
Makes it hard to breathe	91%	93%
Starts forests fires	93%	95%
Bad for your lungs	92%	92%
Makes your breath smell	93%	94%
Makes you look cool	105%	7%

GRADES 4-6		
QUESTIONS	PRE-TEST	POST-TEST
Agree:		
I will never smoke	63%	69%
No plans to start	87%	90%
Don't want to smoke	87%	88%
Smoking will kill you	70%	80%
Costs lots of money	63%	86%
Makes your teeth yellow	84%	90%
Difficult to quit	87%	90%
Makes your breath smell	91%	93%
Hurts lungs and heart	89%	91%
Advertisements get you to try	70%	77%

Can this model be replicated and scaled by other organizations?

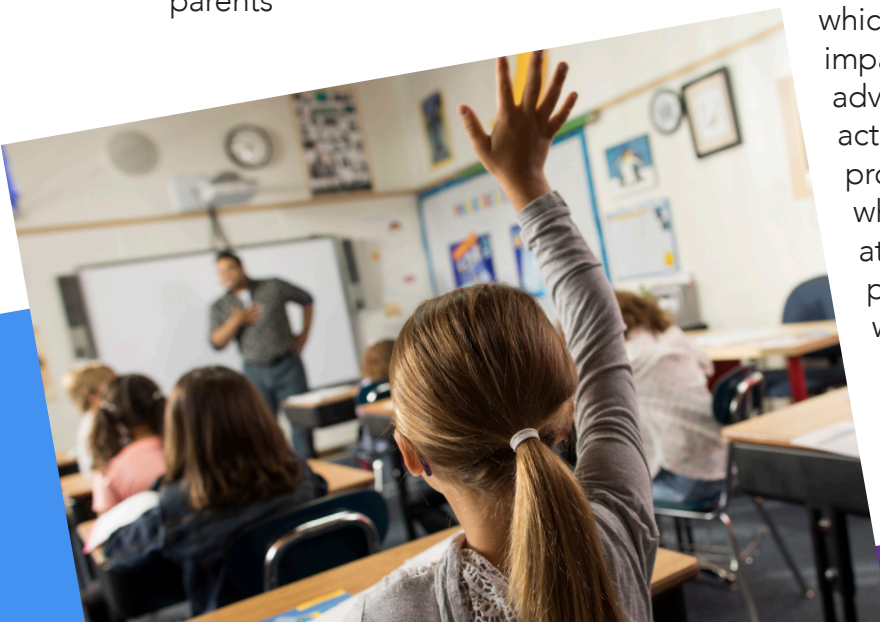
The National Theatre for Children has almost 40 years of experience creating and deploying successful in-school educational theatre programs. It is replicable and scalable for use by many different organizations using varying models. Our unique and proven engagement programs have delivered notable results for various health organizations and agencies across the country.

Any school-based health and wellness program can be successful when it:

- Offers something to schools that they can't get elsewhere (like live theatre)
- Aligns program materials with state educational standards
- Adds proper motivation for schools, teachers and students to influence parents

What lessons did we learn from implementation of this program?

The evidence-based study published by Dr. Perry in *Tobacco Control* revealed changes in the functional meanings, expected outcomes and normative expectations of smoking among students in grades 1-6. The changes observed in the students surveyed can be mostly attributed to the play, as the classroom activities were completed by less than half of the students and only about a quarter of the students completed the homework assignments with their parent(s). Thus the play may have been even more potent had the accompanying activities been fully implemented. The results reported are short term changes but nonetheless are important ones for these age groups because they suggest an effect on certain risk factors for subsequent smoking onset, such as intentions and normative expectations, which may counterbalance the impact of attractive cigarette advertising and promotional activities. Thus, live theatre programs such as *2 Smart 2 Smoke*, which was able to attract the attention of younger children and pre-teens, is a promising strategy warranting further research as part of community-wide efforts to promote non-smoking among children.



NTC is a premium provider of educational programming with operations in the U.S., Australia and New Zealand. We work directly between schools and clients to promote beneficial behaviors and life skills to students in grades K-12 on a local, regional and national level.

Since 1978, we have formed connections and helped develop relationships between thousands of schools and corporations, nonprofits and governmental organizations. Our value is not just in the impact we create; our turnkey services also change the lives and trajectories of students, mobilize parents and entire families with beneficial messages, and cultivate community-wide goodwill for clients.

Our award-winning educational programs are provided free for schools and are customizable to accommodate specific messages and goals for clients. Through formats including live performance, in-class discussion, graphic novels, print curriculum, and digital games and activities, we present topics such as energy conservation, safety, financial literacy, STEM, water and environmental stewardship, and health and social responsibility in ways that engage and empower students. In doing so, we are helping our clients to be forces of change for students, parents and communities.

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