

Program fidelity in diverse youth smoking cessation programs in the United States

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Background

- Evidence from Phase I of the Helping Young Smokers Quit (HYSQ) project suggests that most youth smoking cessation programs use "prepackaged" smoking cessation programs (defined as programs developed for wide distribution).
- Prepackaged programs are widely disseminated and available to organizations that wish to offer cessation treatment to youth.
- Fidelity of implementation (defined as the degree to which the program is delivered as planned by program designers), has not been extensively examined for youth smoking cessation programs.
- Using evidence from Phase II of HYSQ, this poster examines program fidelity in community-based youth smoking cessation programs.

Research Questions

- To what degree did program providers deliver the core components of the smoking cessation program used?
- To what degree did program providers add additional components to the core?
- Is training in the prepackaged curriculum and/or experience leading the program associated with fidelity to the core? With additions to the core?

Method

This paper analyzes the HYSQ Phase II baseline participant survey, end of program participant survey, and provider survey. A complete description of HYSQ can be accessed on the HYSQ website (www.HYSQ.org).

Sites & Cohorts

41 sites participated in HYSQ across the US. Many offered classes in consecutive months or semesters, called "cohorts" for this study. Data was collected on 76 cohorts. 1 site used a program that was not prepackaged, so the 2 cohorts at that site were removed from this analysis.

Participants

The initial sample was 878 adolescents who were in smoking cessation programs nationwide. Of the original participants, 21 had never smoked and were removed, and 69 were in the 2 removed cohorts, resulting in a sample size of 788. Participants filled out surveys at the start and end of the program.

Providers

Treatment providers were interviewed about the content covered in each cohort, the provider's relationship with the participants, and other items. Data was also collected about their training, education and experience.

Program content

Program materials were collected from every site. The content was abstracted to measure the program-as-planned.

Key Measures: Provider

Information about the program-as-planned was abstracted from the prepackaged materials for the items in the question below. Information about the program-as-implemented was obtained at the end of every cohort by asking the provider the question below:

Did the program ask participants to....

- Learn about the health consequences of smoking?
- Keep track of their smoking habits?
- Smoke until they felt ill?
- Throw away their smoking stuff (ashtrays, lighters, etc.)?
- Reduce how many & how much of each cigarette they smoke?
- Change cigarette brands?
- Sign contracts that reward not smoking?
- Sign contracts with penalties for smoking?
- Practice ways to cope with smoking temptations?
- Practice how to refuse cigarette offers?
- Identify people to help their efforts to quit?
- Invite a family member to participate?
- Invite a friend to participate?
- Talk to younger children about not smoking?
- Change their diet or make healthier food choices?
- Increase physical activity?
- Practice meditation or relaxation?
- Plan how to deal with withdrawal symptoms?
- Celebrate quitting?
- Learn to deal with social pressures to smoke?
- Use medication?

Fidelity to core items, a dependent variable, was measured as the percentage of planned items that were actually implemented. Mean = 89.0%, range 58.8% to 100%, SD = 9.9

Additions to core items, a dependent variable, was measured as the number of added items as a percentage of all items that were additions to the core. Mean = 9.2%, range 0% to 33.3%, SD = 10.0

Other data collected from the provider:

- Education, race, sex, age, number of times teaching the cessation program at the site, training
- How close did you feel to the group members this round? 1 (not at all) to 5 (extremely).

Key Measures: Participants

- What grades do you normally get? Mostly A's, mix of A's and B's, mostly B's, mostly F's (asked at baseline).
- How comfortable did you feel talking about personal issues with the program leader? 1 (not at all) to 5 (extremely) (asked at end of program).
- Other data include age, race, gender, motivation to quit, smoking attitudes and history, other health issues, addiction, stage of change, school attendance.

Analysis Method

All analyses are conducted at the cohort level. The cohort-level mean is used for participant items. A stepwise linear regression model was used to estimate the associations of fidelity and additions with curriculum training and experience. Curriculum training and experience items were forced into the model to test their association with fidelity and additions.

Description of Cohorts

74 cohorts at 40 participating sites (mean of 1.9 cohorts per site)
Mean cohort size: 10.2 Mean age of participants: 16.8 years

Pre-packaged programs used by participating cohorts

Pre-packaged program	Number of Cohorts	% of Cohorts
NOT on Tobacco	18	24
END Ending Nicotine Dependence	17	23
TAP Helping Teens Stop Using Tobacco	13	18
Texas Adolescent Tobacco Awareness & Cessation Program	7	9
Other	19	26

Fidelity to Core Items

Linear regression analysis to explore curriculum and experience associations

Variable	Parameter estimate (beta)
Trained in program used at site [†]	1.75
Trained in another program [†]	-1.89
Number of times provider has led the program at the site [†]	0.12*
Youth participants feel comfortable with provider (mean of all participants in cohort)	-3.85*
Provider feels close to participants	3.41*

[†] forced into model * p<0.05 ** p<0.01 n=74

Other items in the pool for both stepwise analyses: age, education, gender, group dynamic and rapport items (from both participant and provider perspectives), participant addiction level and smoking history, participant stage of change, and participant school attendance

Additions to Core Items

Linear regression analysis to explore curriculum and experience associations

Variable	Parameter estimate (beta)
Trained in program used at site [†]	-5.40**
Trained in another program [†]	-5.09*
Number of times provider has led the program at the site [†]	0.21**
Youth participants feel comfortable with provider (mean of all participants in cohort)	-7.79**
Usual grades the youth participants get (mean of all participants in cohort)	-2.58*

[†] forced into model * p<0.05 ** p<0.01 n=74

Summary and Next Steps

This analysis suggests that training and experience may be associated with fidelity.

- Number of times leading the program at the site is positively associated with higher fidelity to core items and more additions to the core.
- Training in the curriculum used at the site and training in another curriculum are both negatively associated with additions to the core, suggesting that training in programs may be important.

Next steps: Further analyses are required. We will model fidelity to core items and additions to core items using an approach that accounts for clustering of participants within cohorts, using disaggregated participant-level measures. We will include additional provider items not explored here.

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You may obtain a complete description of HYSQ, a copy of this poster, and other HYSQ findings on our Web site at: www.HYSQ.org