

Background

- Adolescents join community youth smoking cessation programs either by volunteering or after being mandated to participate because they violated local or organizational possession, use, or purchase ordinances.
- Little is known about the effects of required participation in smoking cessation programs.
- Different types of motivation-- internal (intrinsic) motivation versus more external (extrinsic) motivation-- have differing effects. Studies have shown that external rewards or pressure can undermine intrinsic motivation (Deci & Ryan, 1985).
- **We hypothesized that voluntary and required participants come into smoking cessation programs with differing expectations and motivations.**
- This paper analyzes the Phase II baseline participant survey of the *Helping Young Smokers Quit (HYSQ)* initiative. A complete description of Phase II of the HYSQ project can be accessed on the HYSQ website (www.HYSQ.org).

Method

Participants
878 adolescents who were in smoking cessation programs nationwide. 21 of the original participants had never smoked, and were dropped from the analyses, leaving 857 participants.

Procedure
Prior to the first program session, participants completed baseline surveys indicating their daily activities, smoking behavior, and desire to quit smoking. The paper and pencil questionnaire was administered by a study coordinator. Missing data were imputed by using multiple algorithms.

Participants in Programs
• 81% of the participants were in programs that offered services in a school-based setting

- 58% of the participants were in programs that included volunteers only
- 41% of the participants were in programs included any mandated

Participant Demographics
Race/Ethnicity
• 6.0% Black/African American • 13.2% Latino/Hispanic
• 71.6% Non-Latino White

- 50% female
- mean age = 16.82 years old
- 92.4% were currently enrolled in high school or vocational school

Measures

- Reason for joining the program: (choose an option)
Are you participating in this stop-smoking program:
--because you want to?
(Volunteered) or
--because you are being forced or required to participate?
(Required)
- Stages of change: coded by combinations of items endorsed:
--*Considering quit in 6 months* (yes or no)
--*Planning to quit in 30 days*
- *How motivated to quit are you?*
(0=not at all to 10= extremely motivated)
- Reasons for Quitting scale (Curry, Grothaus, & McBride, 1997),
(1=not at all true to 5=extremely true)
--intrinsic motivation to quit
(internal reasons, i.e. 'to feel in control')
--extrinsic motivation to quit
(external reasons, i.e. 'pressure from parents')

Analyses

We used descriptive statistics in addition to a logistic regression model to discriminate type of participant.

Table of Means & Frequencies by Participant Category

	Voluntary n = 655 76.4%	Required n = 202 23.6%
Demographics		
Age	16.9	16.4**
Gender (female)	53.7%	36.1%**
Race (white)	70.8%	74.3%
Smoking behavior		
# days smoked in last 30		
Infrequent: 5 days or less	14.5%	15.3%
Occasional: 6 to 19 days	16.0%	12.9%
Frequent: > 20 days	69.5%	71.8%
# of cigarettes per day (6 day recall)	6.70	7.58
Nicotine dependence (NDSS)	2.76	2.75
# times ever tried to quit	3.84	4.24
Problem behaviors		
Any trouble due to alcohol	26%	25%
Ever suspended	68%	71%
N= 857; **p<.01, *p<.05		

Characteristics of adolescents who felt required to join a Smoking Cessation Program

Predictor	Odds Ratio	95% CI
Voluntary only vs. Any Required program	0.1152**	0.0624, 0.2125
School vs. other setting	0.1856**	0.1005, 0.3430
Age in years (centered at 17)	0.9509	0.7951, 1.1371
Gender (female vs. male)	0.6971*	0.5058, 0.9606
Race (other vs. white)	0.9322	0.5554, 1.5645
Cigarettes per day (6 day recall)	1.0288	0.9816, 1.0784
Stage of change		
Pre-contemplation	Reference	
Contemplation	0.6908	0.3947, 1.2089
Preparation	0.4718*	0.2513, 0.8855
Motivated (high vs. low)	0.5601	0.2979, 1.0532
Extrinsic Motivation	1.4071**	1.1458, 1.7279
Intrinsic Motivation	0.8530	0.6549, 1.1109

A Logistic regression model was used to discriminate between membership in the voluntary versus required 'reason for joining' groups. A Generalized Estimating Equation approach for clustered binary data was taken in which we took account for students clustered in programs (using Proc Genmod).
N= 801; **p<.01, *p<.05

Summary of Results

Accounting for all relevant variables, participants who felt **required to join** were more likely to:

- be male
- be less ready to quit, and be in the "pre-contemplation" stage of change
- report less motivation to quit
- have greater extrinsic motivation to quit (i.e. external reasons)

Discussion

- We found that the most prominent difference between participants distinguished by their 'reason for joining' (voluntary or required) was in their **motivation and readiness to quit.**
- Further when distinguished by their 'reason for joining,' the participants **did not differ in the amount or frequency that they smoked**, in the number of times they had **tried to quit**, or in problem behaviors such as having ever been **suspended or missing school.**
- This project informs how youth who felt required to join smoking cessation programs differ in motivation from volunteers, and how **readiness to quit and differing motivations of participants** need to be considered by program designers to possibly tailor the programs to fit the motivational needs of the participants.
- The **next step** of this project is to examine **actual quit rates at the end of program and a 12 month follow-up.**
- In the **upcoming longitudinal analyses**, we hypothesize that as volunteer participants have greater motivation to quit and readiness to quit, they **would likely have higher quit rates after 12 months** relative to the required participants.

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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