# Relationship between School Policies to Prevent Tobacco Use and Students' Use and Disapproval of Cigarettes

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School Environment of Tolerance toward Tobacco Use by Students

➢ School policies related to tobacco use by
1. Students
2. Staff
➢ Staff behavior

School tobacco prevention programs → Student tobacco use behavior
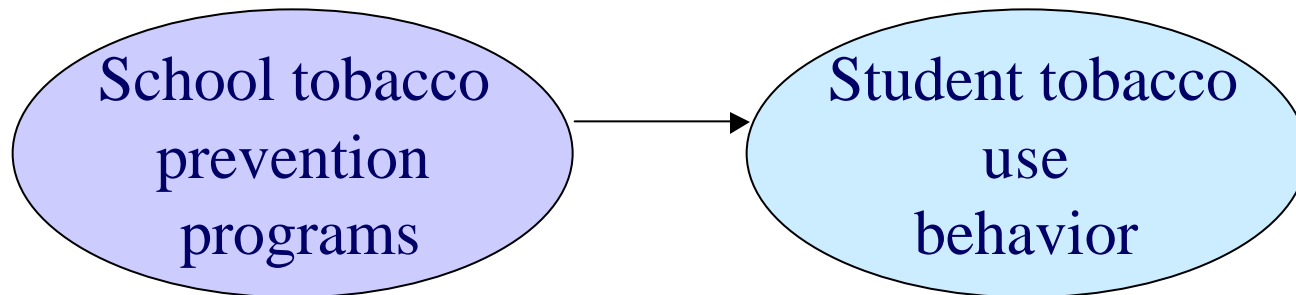
Hypothesis

The prevalence of cigarette use among students will be **lower** in schools where:

- ➢ students' compliance to the schools' tobacco policy is <u>monitored strictly</u>.
- ➢ the <u>severity of consequences</u> for infraction of the school' tobacco policy is high.

The prevalence of cigarette use among students will be **higher** in schools where:

- ➢ staff are <u>permitted to smoke</u> in school or on school grounds.
- ➢ a <u>high percentage</u> of staff smoke.

Hypothesis

Students' **disapproval** of cigarette use is **unrelated** to:

➤ how strictly compliance to the schools' tobacco policy is monitored.

➤ the severity of consequences for infraction of the schools' tobacco policy.

However, students' **disapproval** of cigarette use will be **lower** in schools where:

➤ staff are permitted to smoke in school or on school grounds.

➤ a high percentage of staff smoke.

Youth, Education, & Society

Dependent Variables

Measure of tobacco use

Daily use of cigarettes in the past 30 days.

$$0 = No$$
$$1 = Yes$$

Measures of tobacco use disapproval

Individuals differ in whether or not they disapprove of people doing certain things. Do you disapprove of people **smoking one or more packs of cigarettes per day**

Measures of disapproval were originally on a three-point scale, with

1 = Don't disapprove, 2 = Disapprove, and 3 = Strongly disapprove.

These were <u>recoded</u> as five-point scales, with

1 = Don't disapprove, 4 = Disapprove, and 5 = Strongly disapprove.

Predictor Variables

School level predictors from the <u>School Administrator Survey</u>

➢ **<u>Scale measuring monitoring of students' compliance to the school's Tobacco Use Policy</u>**

Indicate the extent to which compliance with your schools' tobacco use policy is monitored in the following locations and events:

During the normal school day:
a. Inside school buildings
   (including restrooms, locker areas)
b. Parking lot(s)
c. Playing fields(s)
d. Other school grounds
e. School bus

During the following events:
f. School-sponsored sporting events
g. School-sponsored social events

The Monitoring Compliance scale is a five point scale ranging from "1 = Not at all" to "5 = Very Strictly" This scale is a <u>mean of all the items</u> mentioned above

Actions taken when a student is caught violating the policy

➢ **Warning** given to student and/or a note on student's record

➢ Parents/guardians **notified**

➢ School administrators/counselor **notified**

➢ Student required to **meet with school counselor**

➢ Parents/guardians required to **meet with school officials**

➢ **Law enforcement** officials **notified**

➢ Student **referred to an assistance program**

➢ Student **required to participate** in **education** or **counseling program**

➢ Student **suspended** from **extracurricula**r activities

➢ Student given **detention or in-school suspension**

➢ Student **suspended from school**

➢ Student **sent to an alternative school**

➢ Student **expelled** from school altogether

➢ **Community service**

Predictor Variables

School level predictors from the <u>School Administrator Survey</u>

➢ <u>**Scale measuring severity of action taken**</u>
1. Warning
2. Notification/ meeting
3. Counseling and education
4. Suspension
5. Law enforcement officials notification
6. Alternate program
7. Expulsion

➢ <u>**School policy regulating tobacco use by staff**</u>

Is there any location in the school or on the school grounds where staff are permitted to smoke?
0 = No
1 = Yes

➢ <u>**School administrator's report of percentage of staff who smoke regularly**</u>

Control Variables

Students' personal demographic characteristics

      Gender

      Ethnicity

      Level of parental education

School demographic characteristics

      Type of school (public or private)

      School size

      Urbanicity

      Average level of parental education

Sample

The data come from students and schools who participated in the years 1999 and 2000 in the Monitoring the Future project (Johnston, O'Malley, & Bachman, 2000).

Number of **middle schools**
(8th grade) = **126**
Public =81% & Private=19%

Number of **high schools**
(10th grade) = **111**
(12th grade) = **105**
Public = 86% & Private = 14%

Number of **8th** grade students
= **14125**

Number of **10th** grade students
= **9174**
Number of **12th** grades students
= **12447**

Middle school (8th grade)

Ethnicity

White =55.7%   African American = 13.6%

Hispanic = 13.1%   Other = 12.4%

Gender

Males = 50%

Females =50%

High school (10th and 12th grades)

Ethnicity

White =68.3%   African American = 12.2%

Hispanic = 7.8%   Other = 8.4%

Gender

Males = 48%

Females =52%

Descriptives

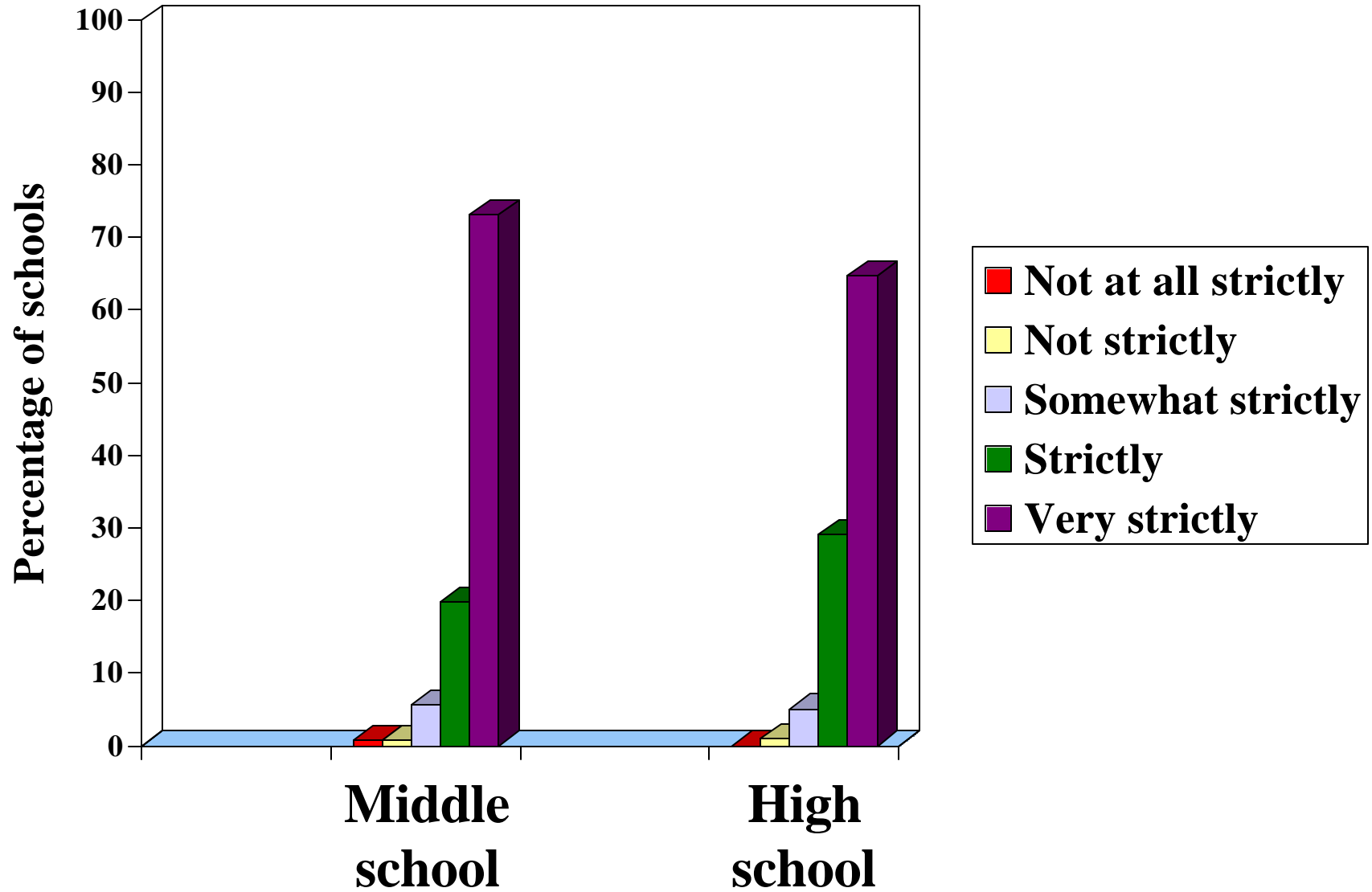**Middle school students**
(8th grade) N = 14125

	Mean	SD
Prevalence of daily use of cigarettes	.07	.25
Disapproval of cigarette use	4.18	1.31

High school students
(10th and 12th grades) N = 21621

	Mean	SD
Prevalence of daily use of cigarettes	.17	.38
Disapproval of cigarette use	3.69	1.60

Monitoring of Tobacco Use in Schools

Percentage of schools

- Not at all strictly
- Not strictly
- Somewhat strictly
- Strictly
- Very strictly

Middle school

High school

Level of Severity of Action taken by schools
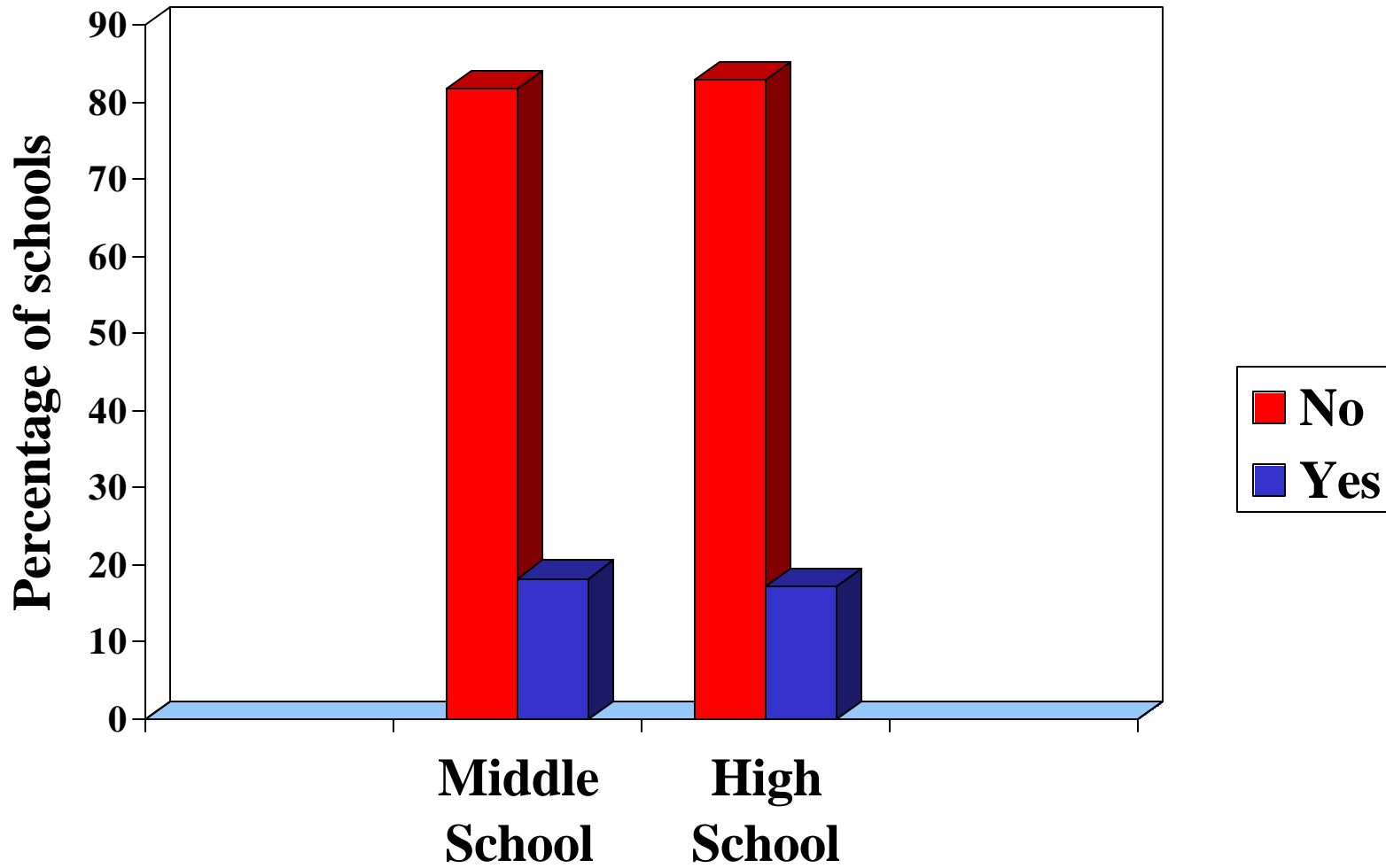
Percentage of schools

40
35
30
25
20
15
10
5
0

Middle school

High school

- ■ 1= Not at all severe
- ■ 2
- ■ 3
- ■ 4
- ■ 5
- ■ 6
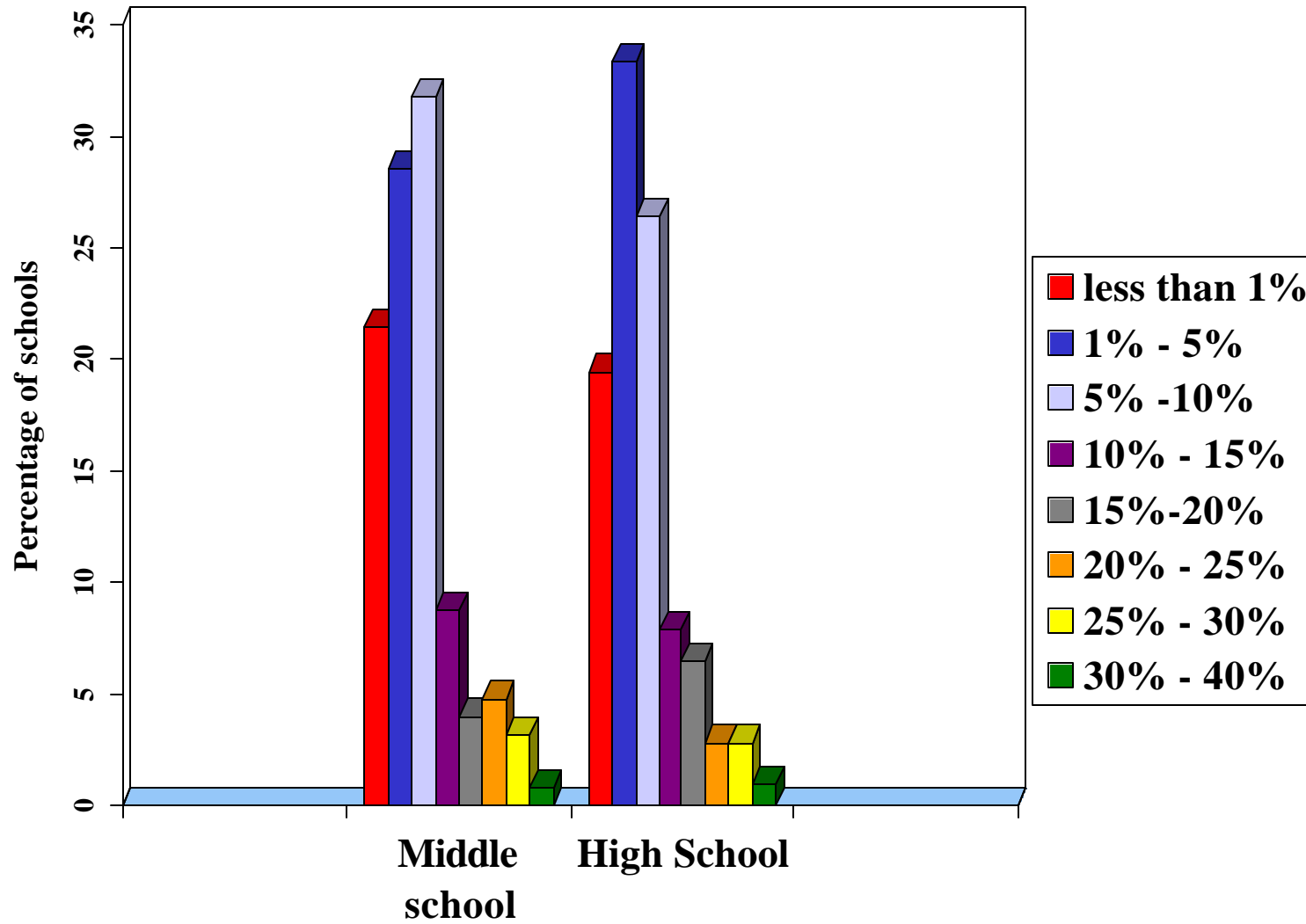- ■ 7= Very severe

Are staff permitted to smoke in school or on school grounds?

School administrator's report of percentage of staff who smoke regularly

Percentage of schools (y-axis: 0, 5, 10, 15, 20, 25, 30, 35)

Categories (x-axis): Middle school, High School

Legend:
- less than 1%
- 1% - 5%
- 5% -10%
- 10% - 15%
- 15%-20%
- 20% - 25%
- 25% - 30%
- 30% - 40%

Analysis

We conducted hierarchical analyses, using HLM 5 (Raudenbush, Bryk, Cheong, Congdon, 2000), to examine the effect of school level predictors on students' daily use of cigarettes, and students' disapproval of cigarette use controlling for student and school level demographic characteristics.

Predicting daily cigarette use:

➢Conducted <u>non-linear hierarchical logistic regression</u> model for dichotomous outcome variables with values of 0 and 1.

Predicting disapproval of cigarette use:

➢Conducted <u>linear hierarchical regression</u>.

Both the logistic and linear regression models included two levels of analyses:

level 1 (within-school) model and
level 2 (between-school) model.

Relation between enforcement of school policies and staff behavior on students' daily use of cigarettes
(8th grade, middle school)

	Daily cigarette use	
	Without controlling for demographic characteristics	**Controlling** for student and school demographic characteristics
1. Monitoring compliance to school tobacco policy	-.24**	-..20**
2. Severity of consequences for infraction of school tobacco policies	-.04	-.03
3. Staff permitted to smoke in school and on school grounds	.29*	.23*
4. Percentage of staff smoking	.02**	.02**

*** p < .01, ** p < .05, * p <.10

Note: Logistic regressions were conducted separately for each of the predictor variables.

Relation between enforcement of school policies and staff behavior on students' daily use of cigarettes (10th & 12th grades, high school)

	Daily cigarette use	
	Without controlling for demographic characteristics	**Controlling** for student and school demographic characteristics
1. Monitoring compliance to school tobacco policy	-.04	.02
2. Severity of consequences for infraction of school tobacco policies	.14***	.02
3. Staff permitted to smoke in school and on school grounds	.17	.18*
4. Percentage of staff smoking	.00	.01

*** p < .01, ** p < .05, * p <.10

Note: Logistic regressions were conducted separately for each of the predictor variables.

Relation between enforcement of school policies and staff behavior on students' disapproval of cigarette use (8ᵗʰ grade, middle school)

	Disapproval of cigarette use	
	Without controlling for demographic characteristics	**Controlling** for student and school demographic characteristics
1. Monitoring compliance to school tobacco policy	.03	.02
2. Severity of consequences for infraction of school tobacco policies	.02	.01
3. Staff permitted to smoke in school and on school grounds	-.12**	-.08*
4. Percentage of staff smoking	-.01**	.00

*** p < .01, ** p < .05, * p <.10

Note: Linear regressions were conducted separately for each of the predictor variables.

Relation between enforcement of school policies and staff behavior on students' disapproval of cigarette use (10th & 12th grades, high school)

	Disapproval of cigarette use	
	Without controlling for demographic characteristics	**Controlling** for student and school demographic characteristics
1. Monitoring compliance to school tobacco policy	-.01	.01
2. Severity of consequences for infraction of school tobacco policies	-.06**	.00
3. Staff permitted to smoke in school and on school grounds	-.11	-.12
4. Percentage of staff smoking	.00	.00

*** $p < .01$, ** $p < .05$, * $p < .10$

Note: Linear regressions were conducted separately for each of the predictor variables.

Recommendations

➢Schools need to provide a healthy environment for all students and staff. Neither students nor staff should be permitted to use tobacco in any form in school buildings or on school grounds.
➢Permitting staff to smoke on school property sends the wrong message to students. It makes students, particularly middle school students, more tolerant of cigarette use and more likely to smoke.
➢Schools can help reduce cigarette use by students by monitoring students' use of tobacco and tobacco products both within school, school buses, and during school sponsored events.
➢Attempting to regulate student smoking by punishment and other punitive measures may not be an effective way of reducing adolescent smoking.

Recommendations

➢Finally, findings from this study suggest that **enforcing school policies by monitoring and regulating staff behavior had a more beneficial effect on middle school students than on high school students**. It is probable that by the time they are in high school, enforcing school anti-tobacco policy is not as effective because students who smoke become addicted to it.

➢It is also interesting to note that monitoring middle school students' behavior is effective in reducing daily cigarette use without changing their disapproval of cigarette use.