

Home smoking restrictions and adolescent smoking

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The prevention of adolescent smoking has focused on peer influences to the relative neglect of parental influences. Parents socialize their children about many behaviors including smoking, and parental rules about their child's smoking have been related to lower levels of adolescent smoking. Moreover, among adults, indoor smoking restrictions have been associated with decreased smoking. Accordingly, the current study tested the relation of adolescent smoking to home smoking policy (rules regulating where adults are allowed to smoke in the home). Results showed that restrictive home smoking policies were associated with lower likelihood of trying smoking for both middle and high school students. However, for high school students this relation was restricted to homes with non-smoking parents. Home smoking policies were not associated with current regular smoking for either middle or high school students. Home smoking policies may be useful in preventing adolescent smoking experimentation, although longitudinal and experimental research is necessary to confirm this hypothesis.

Introduction

The harmful effects of adolescent smoking are well-documented (United States Department of Health and Human Services [USDHHS], 1994). Attention devoted to the prevention of adolescent smoking has largely focused on school-based programs to combat peer social influences. However, although peer influences have been shown to be powerful predictors of adolescent smoking (Conrad, Flay, & Hill, 1992; USDHHS, 1994), parental influences are both potentially important and relatively neglected in smoking prevention efforts (Pentz, 1994).

Darling and Steinberg (1993) suggest that both specific parenting practices and general parenting style serve to socialize children about parental values. Specific parenting practices are behaviors used to socialize children about a specific content area (e.g., socialization about tobacco use), whereas general parenting style creates the emotional atmosphere in which the child is raised (e.g., general supportiveness). Studies on general

parenting style have suggested that adolescent non-smoking is related to high 'demandingness' paired with high responsiveness (Chassin, Presson, Todd, Rose, & Sherman, 1998; Kandel & Wu, 1995; Melby, Conger, Conger, & Lorenz, 1993). However, general parenting style may be relatively pervasive, ingrained, and difficult to change, in contrast with specific parenting practices which involve a single issue and may be more amenable to change. Therefore, specific parenting practices may be more realistic targets for smoking prevention programs.

The literature on smoking-specific parenting practices suggests that parent-child discussion of smoking (Chassin *et al.*, 1998; Jackson & Henriksen, 1997), punishment of smoking (Chassin *et al.*, 1998; Jackson & Henriksen, 1997), and rules against adolescent smoking (Kandel & Wu, 1995; Noland *et al.*, 1996) are related to less adolescent smoking. Another specific parenting practice that may socialize children about smoking is home smoking policy, or rules governing where adults are allowed to smoke in relation to the home. Home smoking policy can vary from permissive (smokers may smoke anywhere) to somewhat restrictive (smokers may smoke in limited designated areas) to completely restrictive (no smokers may smoke inside the home).

In the parent socialization perspective (Darling & Steinberg, 1993; Grusec & Goodnow, 1994), restrictive

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home smoking policies send adolescents the message that smoking and secondhand smoke in the home are undesirable. By contrast, parents who have permissive home smoking policies send the message to adolescents that smoking and secondhand smoke are not a concern, leading to increased likelihood of adolescent smoking.

Outside of the family context, indoor smoking restrictions have been related to decreased smoking (USDHHS, 1994). Workplace smoking restrictions are associated with less employee smoking (Longo *et al.*, 1996; Wakefield, Wilson, Owen, Esterman, & Roberts, 1992). In addition, Wasserman, Manning, Newhouse, and Winkler (1991) found that highly restrictive indoor smoking regulations, including restrictions in public transportation facilities and recreational facilities, work-sites, stores, and schools, were related to less adult cigarette consumption and less adolescent smoking initiation and cigarette consumption. Wasserman *et al.* estimated that if smoking regulations were to become restrictive to the point of restricting smoking in private workplaces, adolescent cigarette consumption would decrease by 41%. Given these findings, a similar relation may exist between restrictive home smoking policies and adolescent smoking.

Only three previous studies have examined the relation between home smoking policy and adolescent smoking. In two studies, completely restrictive smoking policies were related to less smoking initiation and less intent to smoke among elementary and middle school students (Henriksen & Jackson, 1998), and to less smoking onset among elementary school students (Jackson & Henriksen, 1997). In contrast, one study found no significant relation between home smoking policy and current regular smoking among middle and high school students (Biener, Cullen, Xiao, & Hammond, 1997). This non-significant relation may be due to the inclusion of older participants, or, alternatively, to the prediction of a later stage of smoking (i.e., current regular smoking). Smoking stages have been described by Flay (1993) and quantified and validated by Stern, Prochaska, Velicer, and Elder (1987), and the predictors of each smoking stage may differ (Chassin, Presson, Sherman, Corty, & Olshavsky, 1984; Flay, d'Avernas, Best, Kersell, & Ryan, 1983).

The literature on home smoking policy also has significant limitations. First, the studies did not test for a unique effect of home smoking policy by controlling for both covariates (e.g., gender, family structure) and several recognized smoking predictors (e.g., parent smoking status, parent smoking attitude, etc.). Therefore, it has not yet been shown that home smoking policy predicts adolescent smoking above and beyond other predictors. Second, no study has tested the relation of home smoking policy to both trying and current regular smoking. Third, only the Biener *et al.* (1997) study included high school-aged adolescents and multiple levels of home smoking policy. The current study adds to the literature by testing for a unique effect of home smoking policy, differentiating between trying and current regular smoking, including both middle school-

and high school-aged participants, and considering multiple levels of home smoking policy.

An additional question of interest is whether anti-smoking socialization can occur when parents themselves smoke. To date, it appears that the relation between home smoking policy and adolescent smoking is moderated by parent smoking. Jackson and Henriksen (1997) found that completely restrictive smoking policies were related to less child smoking onset for children with non-smoking parents, but not for children with one or more currently smoking parents. Accordingly, the current analyses tested for interactions between home smoking policy and parent current and former smoking in the prediction of adolescent smoking.

Finally, the current study differentiated between adolescent trying and current regular smoking. We hypothesized that restrictive home smoking policies would be associated with adolescent trying smoking because smoking restrictions socialize adolescents to believe that all smoking is undesirable. In contrast, we hypothesized that restrictive home smoking policies would not be associated with current regular smoking because adolescents who try smoking despite anti-smoking socialization are unlikely to be deterred from further smoking by restrictive home smoking policies. This latter hypothesis is supported by previous research on restrictive home smoking policies (Biener *et al.*, 1997).

Methods

Participants

Participants were drawn from the baseline survey of a large, adolescent smoking prevention project (the Full Court Press Project; $n = 8886$). Consenting 7th, 8th, 11th, and 12th graders (plus a small number of 9th and 10th graders) in a Southwestern city who attended public, private, alternative, and charter schools that had 30 or more students per grade completed the survey. For the current analyses, we excluded students who did not identify as Anglo or Hispanic ($n = 1229$), who did not live with at least one biological parent ($n = 590$), who attended 9th or 10th grade ($n = 517$), and who completed less than 40% of the survey ($n = 147$). The final sample size was 6686 participants. Approximately half of the participants were male (48%), 47% were Hispanic/Latino, 26% had at least one parent who graduated from college, and 23% lived in single parent families.

Procedure

Permission to administer the surveys to students in all schools in a mid-sized Southwestern city was obtained from 93% of schools. Surveys were administered during the 1995–96 school year in classrooms. Students were given the option of completing the survey in English or in Spanish. Less than 2% ($n = 110$) of students chose to take the survey in Spanish.

Passive consent procedures were allowed for all high school students and approximately one-third of middle school students. Active consent procedures were required for the students of 15 public middle schools in one school district. For each middle school, we tested whether the percentage of female, Hispanic, and Anglo students in the full student body significantly differed from the corresponding percentage of students who completed the survey under active consent procedures (*z*-tests for the difference in percentages). For eight of the 15 schools that used active consent, there were no significant differences between the participating sample and the overall school. For three schools females were significantly over-represented, and for seven schools Hispanics were significantly over-represented. Because of differences in consent procedures and because data were not collected from most 9th and 10th graders, separate analyses were performed for the middle school ($n = 2506$) and high school ($n = 3980$) students. Some caution in generalization from the middle school sample is warranted.

Statistical methods

Correlations between variables were computed using Pearson correlation coefficients. Internal consistency for scales was computed using Cronbach's alpha. Logistic regression analysis was used to examine the relation between predictors and adolescent smoking. To test for substantial clustering among students in schools, we estimated the models using PROC GLIMMIX MACRO in SAS PROC MIXED (Littell, Milliken, Stroup, & Wolfinger, 1996). The *p* values for the variables changed minimally from the logistic regression results and all of the conclusions remained the same. Therefore, we do not report the adjusted analyses here.

Measures

Adolescent smoking status. Participants reported their smoking status by choosing one of the following response options: (1) 'I have never smoked a cigarette, not even a few puffs,' (2) 'I have smoked one cigarette "just to try" but I have not smoked one in the last month,' (3) 'I no longer smoke but in the past I was a regular smoker,' (4) 'I smoke cigarettes but no more than one a month,' (5) 'I smoke cigarettes but no more than one a week,' (6) 'I smoke cigarettes but no more than one a day,' and (7) 'I smoke more than one cigarette a day.' Adolescent smoking status was operationalized as two dichotomous dependent variables, trying smoking and current regular smoking. For the prediction of trying smoking, adolescents who reported having 'never smoked' (response option 1) were contrasted with those who reported having 'smoked one cigarette "just to try"' (response option 2). For the prediction of current regular smoking, adolescents who reported having 'smoked one cigarette "just to try"' (response option 2) were contrasted with adolescents who reported smoking at least

one cigarette per month or more (combination of response options 4–7). For the prediction of former smoking, adolescents who indicated that they 'no longer smoke' (response option 3) were contrasted with current regular smokers (combination of response options 4–7). Never smokers were not contrasted with a combination of triers, former, and current regular smokers because such a combination would obscure stage-specific predictors. For all analyses, higher values indicate more smoking.

The validity of this study's self-reported smoking data is supported by the comparability of the current regular smoking rate among high school students in this sample (28%) to the rate of current regular smoking among high school students in Arizona (28%; CDC, 1996). In addition, the rate of current regular smoking among 8th graders in this sample (20%) is similar to the national rate of current regular smoking for 8th graders (19%), according to Monitoring the Future Study data (Johnston, O'Malley, & Bachman, 1996).

Family structure. Participants reported their family structure (one item, 'Whom do you live with?') by choosing one of seven response options ('biological Mom and biological Dad,' 'biological Mom only,' 'biological Dad only,' 'Stepmom and biological Dad,' 'Stepdad and biological Mom,' 'other family,' and 'outside of family'). Participants who indicated 'other family' (3.9%) or 'outside of family' (2.6%) were excluded from the analyses. Two variables were created. First, a variable was created to indicate the number of parents in the home (one or two). Second, for participants living in two-parent families, a variable was created to indicate the number of biological parents in the home (one or two). Higher values represent non-traditional families (i.e., single parent families and families with one biological and one step-parent).

Parent smoking status. Participants separately indicated their mother's (or stepmother's) and father's (or stepfather's) smoking statuses as 'current smoker,' 'former smoker,' or 'never been a smoker.' Participants were asked to respond for one mother and one father figure in their lives; however, we cannot determine whether these figures were biological, custodial, or both. Separate variables for parent current and former smoking were formed. Although parent socialization theory suggests that current modeling behavior (e.g., parent current smoking) is most important, a variable to capture parent former smoking was created because parent former smokers may have served as smoking models, albeit the recency and duration of such former smoking is unknown.

The variables for parent current and former smoking were formed by taking the mean number of currently or formerly smoking parents reported by the adolescent. Accordingly, the range of the parental current and former smoking variables was from 0 to 1. For example, for the parental current smoking variable, a value of 0 indicated

that the adolescent did not have any parents who currently smoked, a value of 1 indicated that all of the adolescent's parents currently smoked, and a value of 0.5 indicated that one out of two of the adolescent's parents currently smoked.

Perceived parent smoking attitude. Participants reported their perceptions of each of their parents' attitudes toward their smoking (one item each for one mother and one father figure, 'How important do the following group of people think staying off cigarettes is?') with a four-point response scale (very important to not important at all). Perceived mother and father attitude were combined into a single measure of perceived parent attitude by taking the mean of the responses. Internal consistency was 0.70 for middle school and 0.65 for high school students. Higher scores reflect more pro-smoking attitudes.

Home smoking policy. Participants reported their home smoking policy for visitors (one item, 'When you have visitors who smoke, are they allowed to smoke in your home?') and for family members (one item, 'How about smoking by your family members?'). The response options for each item included: 'Yes, they can smoke wherever they want,' 'Yes, they can smoke in certain rooms only,' and 'No, they cannot smoke inside my home.' One limitation of this measure is that it did not allow participants to indicate that they do not know their home smoking policy. However, from a parent socialization theory perspective, home smoking restrictions of which adolescents are unaware are the equivalent of a policy without those restrictions. When reporting their home smoking policy, participants were allowed to indicate that none of their family members smoke. For these participants, the item on home smoking policy for family members was not applicable, and home policy scores for those respondents ($n = 2381$ or 36%) were obtained from the visitors item only. Otherwise, the home policy score was computed by taking the mean of the two items. Values ranged from 1 (most restrictive) to 3 (most permissive). Internal consistency was 0.89 for middle school and 0.91 for high school students. For the combined sample of participants, 58% reported that visitors and family members 'cannot smoke inside my home,' 22% reported that visitors and family members 'can smoke in certain rooms only,' and 20% reported that visitors and family members 'can smoke wherever they want.'

Parent education. Participants reported the educational attainment of each parent by choosing one of seven response options ranging from 'never went to high school' to 'went to graduate/professional school.' The measure of parent education was formed by computing the mean of the maternal and paternal educational attainment items. Internal consistency was 0.69 for middle school and 0.67 for high school students. Higher values indicate higher levels of parent education.

Results

Correlations among study variables for middle school students are presented in Table 1. The size of these coefficients is restricted by the ordinal nature of the variables (Cohen, 1983). As expected, middle school students who have tried smoking or who currently smoke were more likely to be in older grades, live with a stepparent, have parents who are current or former smokers, and have parents with pro-smoking attitudes. In terms of home smoking policy for middle school students, permissive home smoking policies were significantly correlated with permissive parent smoking attitudes, more parent current smoking, more adolescent trying smoking, more adolescent current regular smoking, lower levels of parent education, living in a single parent family, living with a stepparent, and Hispanic ethnicity. Home smoking policy was not associated with former smoking or 'quitting' among middle school students.

Correlations among study variables for high school students are presented in Table 2. As expected, high school students who have tried smoking or who currently smoke were more likely to have parents who are current smokers and parents with pro-smoking attitudes. Two unexpected correlates were found: higher levels of parent education were associated with more current regular smoking and living in a two-parent family was associated with more trying smoking. In terms of home smoking policy for high school students, permissive home smoking policies were significantly correlated with permissive parent smoking attitudes, more parent current smoking, less parent former smoking, more adolescent trying smoking, lower levels of parent education, living in a single parent family, living with a stepparent, and Hispanic ethnicity. Home smoking policy was not significantly correlated with high school current regular smoking. Restrictive home smoking policies were significantly associated with former smoking or 'quitting' among high school students.

Trying smoking

To test whether home smoking policy was uniquely associated with adolescent trying smoking, logistic regression analyses were conducted. Separate logistic regressions predicted trying smoking among middle school and high school students using ethnicity, gender, grade level, number of parents in the home, number of biological parents in the home, and parent education in the first step, and home smoking policy, parent smoking attitude, parent current smoking, and parent former smoking in the second step. All possible two-way interactions were included in the third step. For each interaction term, the variables were centered (Aiken & West, 1991). All non-significant interaction terms were removed and the models were rerun.

Results for the trying smoking analyses for middle school students are presented in Table 3, and results for

Table 1. Pearson correlation coefficients for the middle school sample

Variable or scale name	Variable or scale name												
	Grade	Ethnicity	Gender	Number of parents in home	Number of biological parents in home	Parent education	Home smoking policy	Parent smoking attitude	Parent current smoking	Parent former smoking	Adolescent trying smoking	Adolescent current regular smoking	Adolescent former smoking
Grade	1.00	0.001	0.004	-0.02	0.004	-0.06**	-0.03	-0.02	-0.02	0.01	0.07**	0.10***	-0.01
Ethnicity		1.00	0.01	0.06**	-0.01	-0.40***	0.06**	-0.05	-0.10***	-0.01	0.09***	-0.11***	0.01
Gender			1.00	0.04	0.07***	-0.04	0.01	0.01	0.05*	-0.01	-0.03	-0.0002	0.01
Number of parents in the home				1.00	0.32***	-0.11***	0.09***	0.15***	0.17***	-0.03	0.11***	0.05	-0.02
Number of biological parents in the home					1.00	-0.11***	0.10***	0.18***	0.22***	-0.01	0.13***	0.07*	0.02
Parent education						1.00	-0.22***	-0.20***	-0.17***	-0.02	-0.12***	-0.04	0.02
Home smoking policy							1.00	0.33***	0.41***	-0.02	0.17***	0.10***	-0.03
Parent smoking attitude								1.00	0.41***	-0.04*	0.12***	0.16***	-0.09*
Parent current smoking									1.00	-0.34***	0.10***	0.16***	-0.04
Parent former smoking										1.00	0.06*	-0.02	0.04
Adolescent trying smoking											1.00	-	-
Adolescent current regular smoking												1.00	-
Adolescent former smoking													1.00

Sample size ranges from 2008 to 2506, with the exception of correlations with adolescent smoking. For trying smoking, sample size ranges from 1711 to 1936. For current regular smoking, sample size ranges from 917 to 1040. For former smoking, sample size ranges from 483 to 547. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 2. Pearson correlation coefficients for the high school sample

Variable or scale name	Variable or scale name												
	Grade	Ethnicity	Gender	Number of parents in home	Number of biological parents in home	Parent education	Home smoking policy	Parent smoking attitude	Parent current smoking	Parent former smoking	Adolescent trying smoking	Adolescent current regular smoking	Adolescent former smoking
Grade	1.00												
Ethnicity		-0.02											
Gender		1.00	0.003										
Number of parents in the home			0.01	-0.01									
Number of biological parents in the home			0.01	-0.06***	0.01								
Parent education			0.004	0.05**	-0.01	0.06***	-0.02	-0.07***	-0.06***	0.10***	-0.15***	0.004	
Home smoking policy			1.00	0.31***	0.06***	0.12***	0.13***	0.21***	-0.02	0.01	0.07**	-0.01	
Parent smoking attitude				1.00	0.11***	0.16***	0.15***	0.16***	-0.01	0.09***	0.04	0.02	
Parent current smoking					1.00	-0.19***	-0.15***	-0.16***	0.04*	-0.11***	0.14***	-0.03	
Parent former smoking						1.00	0.37***	0.45***	-0.10***	0.12***	0.03	-0.06*	
Adolescent trying smoking							1.00	0.53***	-0.09***	0.09***	0.07**	-0.06*	
Adolescent current regular smoking								1.00	-0.34***	0.09***	0.09***	-0.06*	
Adolescent former smoking									1.00	0.02	0.05*	0.002	
										1.00	-	-	
											1.00	-	
												1.00	

Sample size ranges from 3535 to 3980, with the exception of correlations with adolescent smoking. For trying smoking, sample size ranges from 2424 to 2609. For current regular smoking, sample size ranges from 2040 to 2211. For former smoking, sample size ranges from 1247 to 1346. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3. Logistic regression model predicting trying smoking for middle school students

Covariates, predictors, and interactions	B	SE	Bs	OR (95% CI)
Ethnicity	0.47***	0.13	0.13	1.60 (1.24, 2.06)
Gender	-0.18	0.12	-0.05	0.84 (0.67, 1.05)
Grade level	0.33**	0.12	0.09	1.39 (1.11, 1.75)
Number of parents in the home	0.12*	0.05	0.08	1.1 (1.02, 1.25)
Number of biological parents in the home	0.25**	0.08	0.10	1.29 (1.09, 1.52)
Parent education	-0.01	0.04	-0.01	0.99 (0.91, 1.07)
Home smoking policy	0.28***	0.08	0.12	1.32 (1.12, 1.56)
Parent smoking attitude	0.15	0.09	0.06	1.16 (0.98, 1.37)
Parent current smoking	0.14	0.20	0.03	1.15 (0.78, 1.69)
Parent former smoking	0.37*	0.18	0.07	1.45 (1.03, 2.05)
Home smoking policy × number of parents in the home	-0.15**	0.06	-0.08	0.86 (0.77, 0.96)
Parent former smoking × gender	-0.81*	0.33	-0.08	0.45 (0.23, 0.85)
Parent smoking attitude × ethnicity	-0.13	0.15	-0.03	0.88 (0.65, 1.19)

n=1430. B=parameter estimate, SE=standard error, Bs=standardized parameter estimate, OR, odds ratio; CI, confidence interval. Reported odds are for one unit change in the predictor. *p<0.05, **p<0.01, ***p<0.001.

the trying smoking analyses for the high school students are presented in Table 4. Home smoking policy was uniquely associated with trying smoking for both middle school (beta = 0.28, p<0.001, odds ratio, OR = 1.32) and high school (beta = 0.22, p<0.001, OR = 1.25) students. The OR represents how many times more or less likely the adolescent is to have tried smoking for each unit of change in the predictor. Thus, middle school students with somewhat restrictive home smoking policies were 1.32 times and high school students 1.25 times more likely to have tried smoking than were students with most restrictive home smoking policies.

The relation between home smoking policy and trying smoking among middle school students was significantly moderated by the number of parents in the home (beta = -0.15, p<0.05). For middle school students, the relation between permissive home policies and more trying smoking was stronger for students living in two parent families than for students living in single parent families. For high school students, the association between home smoking policy and trying smoking was moderated both

by parent current smoking (beta = -0.47, p<0.01) and parent former smoking (beta = -0.42, p<0.05). Restrictive home smoking policies were associated with a significantly lower proportion of trying smoking only among high school students whose parents were never smokers. Restrictive home smoking policies were not significantly associated with trying smoking among high school students who had one or more parents who were current or former smokers.

Current regular smoking

Home smoking policy was not uniquely associated with current regular smoking for either middle school (beta = 0.11, NS) or high school (beta = -0.06, NS) students. Home smoking policy significantly interacted with only one variable, gender, to predict current regular smoking among middle school students. For middle school students, permissive home smoking policies were more strongly associated with current regular smoking for females than for males.

Table 4. Logistic regression model predicting trying smoking for high school students

Covariates, predictors, and interactions	B	SE	Bs	OR (95% CI)
Ethnicity	0.33***	0.10	0.09	1.39 (1.14, 1.68)
Gender	-0.08	0.09	-0.02	0.93 (0.78, 1.10)
Grade level	0.18*	0.09	0.05	1.20 (1.01, 1.42)
Number of parents in the home	-0.08*	0.04	-0.06	0.92 (0.85, 0.99)
Number of biological parents in the home	0.24***	0.06	0.10	1.27 (1.13, 1.43)
Parent education	-0.05	0.03	-0.05	0.95 (0.89, 1.01)
Home smoking policy	0.22***	0.06	0.10	1.25 (1.10, 1.41)
Parent smoking attitude	0.12	0.07	0.05	1.13 (0.98, 1.29)
Parent current smoking	0.32	0.18	0.06	1.38 (0.97, 1.96)
Parent former smoking	0.15	0.14	0.03	1.16 (0.89, 1.52)
Home smoking policy × parent current smoking	-0.47**	0.18	-0.08	0.62 (0.44, 0.89)
Home smoking policy × parent former smoking	-0.42*	0.19	-0.06	0.65 (0.45, 0.94)
Parent current smoking × number of parents in the home	0.22*	0.10	0.06	1.25 (1.03, 1.51)

n=2238. B, parameter estimate, SE, standard error, Bs, standardized parameter estimate, OR, odds ratio; CI, confidence interval. Reported odds are for one unit change in the predictor. *p<0.05, **p<0.01, ***p<0.001.

Discussion

The goal of this study was to examine the relation between home smoking policy and adolescent smoking. Results showed that more restrictive home smoking policies were significantly associated with less trying smoking among middle and high school students. These findings are consistent with studies on home smoking policy and adolescent smoking (Henriksen & Jackson, 1998; Jackson & Henriksen, 1997) and were predicted by parent socialization theory (Darling & Steinberg, 1993; Grusec & Goodnow, 1994).

Most important, this study is the first study to find a *unique* association between home smoking policy and adolescent smoking above and beyond several other known predictors. It is also the first study to find a significant association between home smoking policy and smoking among high school students. Further, this significant association was found using three levels of home smoking policy, suggesting that even partially restrictive home smoking policies are associated with less adolescent trying smoking. Specifically, middle school students with permissive home smoking policies were 1.32 times and high school students 1.25 times more likely to have tried smoking than were students with somewhat restrictive home smoking policies.

Home smoking policy was not uniquely associated with current regular smoking among middle or high school students. This finding is consistent with the only other study that examined the association between home smoking policy and adolescent current smoking (Biener *et al.*, 1997). As noted earlier, Biener *et al.*'s non-significant results could be attributed to the inclusion of older participants or the prediction of adolescent current smoking (rather than experimental smoking). The results of the current study suggest that home smoking policy is associated with trying smoking among older participants but may not be associated with current regular smoking.

Home smoking policy was associated with trying smoking among middle and high school students. Models of the development of smoking behavior identify parents as most influential during the preparation and initiation phases of adolescent smoking, somewhat influential during the experimentation phase, and not influential during the regular smoking phase (Best, Thomson, Santi, Smith, & Brown, 1988; Flay *et al.*, 1983). Thus, parent socialization influences may be greater for trying smoking than for current regular smoking; physiological and personality factors may influence the transition to regular smoking more than the transitions to smoking initiation and experimentation (Best *et al.*, 1988; Flay *et al.*, 1983).

A contribution of this study was the test for moderators of home smoking policy relations. Results were consistent with previous research (Jackson & Henriksen, 1997) and showed that the relation between home smoking policy and trying smoking among high school students was moderated by both parent current and

former smoking. High school students with parents who sent consistent messages, i.e., non-smoking parents with restrictive home smoking policies, were less likely to have tried smoking. In contrast, no association was found between trying smoking and home smoking policy for high school students with parents who sent inconsistent messages, i.e., parent current or former smokers who had restrictive home policies. It appears that parental anti-smoking restrictions may be effective only when they are consistent with parents' own behaviors.

This moderating effect was not found for trying smoking among middle school students. It is possible that the consistency of parental messages is particularly important for high school adolescent smoking. Parents often have less control over older adolescents' behavior, providing them with increased opportunities to try smoking. In the face of such opportunities, only older adolescents who have received strong anti-smoking socialization may be deterred from trying smoking.

There are several limitations to this study. First, the use of cross-sectional data and the lack of experimental manipulation prohibit us from determining whether permissive home smoking policies cause adolescent smoking or whether adolescent smoking causes parents to relax their restrictive smoking policies. Second, the quality of the broader parent-child relationship was not assessed, and the relation between home smoking policy and adolescent smoking may depend on this relation. Third, this study relies on child reports of home smoking policies and parent smoking status. Although child reports may be less accurate than parent reports, they do reflect the child's perception, which may be more important than actual home policy and parent smoking status. Despite these limitations, this study indicates that home smoking policy holds promise as one of many tools to prevent adolescent smoking.

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