Antismoking Parenting Practices Are Associated With Reduced Rates of Adolescent Smoking

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Background: Although parental smoking is clearly one important influence on children’s smoking, it is still unclear what are the many mechanisms by which parents influence their children's smoking. Antismoking actions are one potential mechanism.

Objective: To determine whether parental antismoking actions including having rules about smoking in one's home, using nonsmoking sections of public establishments, or asking others not to smoke in one’s presence are associated with adolescents' adoption of smoking.

Design: A cross-sectional survey.

Setting: Rural and suburban communities in western Washington State.

Participants: Population-based cohort of 3555 adolescents and their parents.

Main Outcome Measure: Daily smoking in 12th grade.

Results: Adolescents of parents who report having rules about smoking in one’s home, using nonsmoking sections of public establishments, or asking others not to smoke in one's presence were significantly less likely to smoke than adolescents of parents who did not engage in antismoking actions. This association of antismoking action and reduced smoking was found for children of both smoking and nonsmoking parents.

Conclusion: Parents' antismoking actions may help prevent smoking by their teenaged children.


Social influence includes a variety of social environmental factors affecting adolescent smoking.1 Most important among these is parental smoking.2-8 Still unclear, however, are the many other mechanisms by which parents influence their children's tobacco smoking. Parenting style may influence adolescents as there is evidence that closeness to parents is protective, reducing smoking among children and adolescents.9 Another potential mechanism for parental influence is specific parenting practices or the parents' antismoking actions. Specific practices of parents that might influence adolescents' smoking might include having rules restricting smoking in the home. This has been found to reduce rates of adolescent smoking compared with households without such rules.10,11 Other antismoking actions, however, such as choosing to sit in nonsmoking sections of restaurants and asking others not to smoke in one's presence, may also reduce adolescents' smoking, and these have not, to our knowledge, been examined. If parents’ antismoking actions reduce tobacco use by their teenaged children, it may help parents, most of whom hold antismoking attitudes and do not want their children to smoke, to know this.

We used data collected from a large, well-maintained cohort of parents and children randomized to the control arm of a large trial testing a school-based intervention to reduce adolescent smoking. As part of that study, parents were surveyed when their children were in the 11th grade and asked about their own smoking behavior and a variety of antismoking practices in which they may have been engaging. Their teenaged children were surveyed regarding their use of cigarettes in the 12th grade. Data collected from this cohort have several advantages for examinations like those presented herein. These include the population-based sampling scheme and the avoidance of the use of proxy reports to collect data on either the parents or their children.

METHODS

PARTICIPANTS

Study participants were students and their parents, drawn from 2 consecutive third grade en-
rollments of 20 Washington school districts. The 20 school districts were randomly assigned to the control condition of the Hutchinson Smoking Prevention Project (HSPP). The HSPP was a 15-year, group-randomized trial in school-based tobacco use prevention.12 The participants in the study described herein were those 3555 students (89.7%) in the HSPP control cohort for whom a parent survey was completed and outcome data were collected in 12th grade. Overall 89.9% of parents responded to the parent survey.

DATA COLLECTION PROCEDURES

Information on parental smoking practices was collected via a mailed parent survey. Student self-reported smoking behavior data were collected when student participants were in the 12th grade. Data were collected via a self-report survey administered in classrooms by trained project staff. If students were absent, or no longer enrolled in an HSPP cohort class, self-report data were collected primarily by telephone. Survey procedures were based on those proven successful in this and other settings.12,13

Procedures for Data Collection

The parent survey was mailed to the parents or guardians along with a stamped, self-addressed, return envelope and a cover letter explaining the study and encouraging parental participation. Parent nonresponders were followed up via reminder postcards, second parent survey mailings, and telephone calls.

Procedures for Follow-up

Given the importance of minimizing the potential for attrition bias,16-18 the HSPP attempted to track all members of the original third grade cohort to end point at 12th grade, even those who dropped out of school or otherwise left their original collaborating school district. Standard tracking strategies and methods were meticulously applied.12,13 As a result, 93% (3685/3962) of the HSPP control population completed 12th grade surveys. In total, 89.7% of the children in the control group, who completed 12th grade surveys, had a parent complete the parent survey.

Follow-up Data Collection

Detailed descriptions of data collection procedures used in this study are available elsewhere.19 Because misreporting of tobacco use is a possibility among adolescents,20-22 12th grade in-class participants were asked to provide a saliva specimen for cotinine analysis. (Analysis of a 12.6% random sample of the specimens provided confidence that the student self-reports were accurate.) For all other participants, letters and telephone scripts included content designed to encourage valid survey responses.

INFORMED CONSENT AND HUMAN SUBJECTS APPROVAL

The HSPP experimental design and procedures were reviewed and approved in advance of the trial, and annually throughout the trial, by the Fred Hutchinson Cancer Research Center’s institutional review board. Project staff mailed letters to parents in advance of data collection.12,22 The letter described the survey procedures and invited parents to call to ask questions or to decline their child’s participation. In all data collection settings, trained data collectors informed students of the study purpose and the confidential and voluntary nature of the data collection, and they provided students the opportunity to ask questions and to decline participation.

MAIN OUTCOME MEASURES

Parental Smoking

Parental smoking was assessed by asking the parent completing the survey if he or she currently smoked cigarettes, with response options “Yes, at least once a day”; “Yes, but not every day”; “No, not since ______________ (month/year)”; “No, never smoked regularly”; and “No, never smoked at all.” The parent completing the survey was also asked to indicate whether the child’s other parent or guardian who lived with them at that address currently smoked cigarettes. This question had the same response categories listed earlier, except for the addition of an option for indicating that the child had no other parent or guardian living at the indicated address. Responses to these questions were used to create a variable indicating the smoking status of the parents in the family. Families were coded as nonsmoking if neither parent nor guardian currently smoked (or if a child’s only parent or guardian did not smoke), or as smoking if I or both of the child’s parents or guardians smoked.

Antismoking Actions by Parents

The following 3 antismoking actions were assessed: (1) Antismoking rules in the home. Parents were asked if they allowed smoking in their home. Response categories were “No,” “Rarely,” “Sometimes,” and “Usually.” (2) Using nonsmoking sections of public establishments. Parents were asked to indicate how frequently they asked to sit in nonsmoking sections. Response categories were “No,” “Rarely,” “Sometimes,” and “Usually.” (3) Asking others not to smoke. Parents indicated how frequently they asked others not to smoke in their presence. Response categories were “No,” “Rarely,” “Sometimes,” and “Usually.” These questions were worded generally encouraging parents to provide their thoughts, opinions, and practices in respect to smoking in general and not specific to their interaction with their child.

Adolescent Smoking

Student smoking at 12th grade at survey time point was assessed via the classroom survey using the question: “How often do you currently smoke cigarettes?” The 11 possible responses ranged from never to multiple levels of daily use. The response variable, daily smoking, was classified as “Yes” for responses “1 to 3 cigarettes per day” to “More than 20 cigarettes per day” and “No” for responses “Have never smoked cigarettes” to “More than once a week, but less than once a day.” Students surveyed by telephone were asked the question, “Do you smoke 1 or more cigarettes per day?” Participants who answered “Yes” were classified as daily smokers. Adolescents were categorized as monthly smokers if they indicated smoking at least 1 cigarette a month. Adolescents were categorized as ever smokers if they indicated ever having smoked tobacco.

STATISTICAL ANALYSIS

Because parental smoking is such a strong predictor of smoking by children and adolescents, analyses were conducted separately for children with at least one parent who smoked and for children with no parents who do not smoke. We first examined the individual and combined influence of each of the smoking-specific parenting practices on adolescent smoking using a series of conditional logistic regressions. Then the parent-
We found that parental antismoking actions, such as having restrictive rules in the home regarding smoking or sitting in nonsmoking sections of public establishments, seem to have a significant and sizable effect on adolescents’ rates of daily smoking. That is to say, parent-
tal antismoking actions seem to be associated with a statistically significant reduction in children’s smoking. This was true in our sample for both families with parents who smoke and for families with no smoking parent, and this suggests that parental antismoking actions may be an effective way to reduce adolescents’ rates of daily smoking not only in nonsmoking families but even when parents themselves smoke. Such an effect would suggest that although quitting smoking may be the single most important thing parents can do to prevent their children from smoking, regardless of their smoking status, there are actions parents can take to reduce the risk that their children will smoke daily as adolescents.

Past studies of smoking-specific parenting practices other than parental quitting have focused on parental discussion of smoking with children and restrictive rules against smoking in the home. These studies have generally found discussion to be helpful in preventing smoking by children and adolescents. Specifically, Chassin et al found that the mothers’ smoking-related discussion was associated with a significant reduction in children’s smoking even after controlling for the mothers’ smoking behavior.

Others have also found that rules regarding smoking in the home have a significant effect on adolescents’ rate of smoking only in smoking families. With these data available, we can only hypothesize as to the reason for this finding. We would suspect that the issue of smoking comes up only rarely in a nonsmoking home with few smoking visitors. This could mean that a policy, although present, is neither frequently mentioned nor particularly prominent. In families with a parent who smokes, in contrast, the existence of such a policy could influence family activities on a regular basis and convey an implied message that smoking is undesirable. We would hypothesize similar reasons explain why parent antismoking actions may be more effective when parents smoke. Further research on this issue would be of interest. To our knowledge, others have not investigated the effects on children’s smoking of parental use of nonsmoking sections in public establishments or of asking others not to smoke in one’s presence. These parental actions appear to be valuable in preventing daily smoking and monthly smoking in adolescents. The effects associated with the use of nonsmoking sections in public establishments, in particular, are considerable and consistent in both smok-
Although it is well known that parents can influence their children’s smoking through their own nonuse, other mechanisms by which parents can prevent smoking by their children are less well studied. Parents can engage in a variety of antismoking activities including home smoking bans, use of nonsmoking sections in public establishments, and asking others not to smoke in their presence. We examined rates of adolescent smoking among children of smoking and nonsmoking parents who reported engaging in each of these 3 antismoking activities and found that parental antismoking actions were associated with reduced smoking by adolescents. Further we found that this association occurred in both smoking and nonsmoking households, suggesting that antismoking actions may be one means by which parents (even parents who smoke and are unable to quit) who do not smoke may want their children to become smokers might influence their children to reduce their risk.

What This Study Adds

References