Bi-Directional Relations Between Anti-Smoking Parenting Practices and Adolescent Smoking in a Dutch Sample

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Objective: Parenting is generally regarded a determinant of adolescent behavior, whereas the reverse is seldom considered. Reported effects of anti-smoking parenting practices on adolescent smoking are inconsistent. Cross-sectional results may have been misinterpreted and child effects have been overlooked. The main goal of this study was to explain previous inconsistent effects of anti-smoking parenting practices, by examining bi-directional relations between parenting and adolescent smoking.

Design and Main Outcome Measures: Bi-directional relations were studied using a cross-lagged model where anti-smoking house rules, communication about smoking, and adolescent smoking were assessed at three subsequent years. Results: The most prominent finding was that adolescent smoking behavior was a stronger predictor of parenting than vice versa. Anti-smoking house rules decreased as a result of adolescent smoking behavior, while communication increased. The reduction in house rules was more pronounced if parents smoked, while the increase in communication was greater for non-smoking parents. Results were independent of adolescent sex. Conclusion: Further research is needed to establish which aspects of parenting can be effective in deterring adolescent smoking. This study emphasizes the need for caution in interpreting cross-sectional research findings relating parenting to adolescent smoking.

Keywords: bi-directionality and reciprocity, anti-smoking parenting practices, socialization, smoking, adolescents

As adolescents continue to take up smoking (U.S. Department of Health and Human Services [USDHHS], 1994), research into determinants of adolescent smoking accumulates. In this context, anti-smoking parenting practices have received considerable attention. Two of the most widely acknowledged forms of anti-smoking socialization are anti-smoking rules in the house set by the parents and parent-child communication about smoking (Harakeh, Scholte, De Vries, & Engels, 2005). Intuitively, adolescents who are not allowed to smoke at home are expected to smoke less than peers growing up in a more tolerant home environment. Similarly, it is thought that the more frequently parents discuss negative aspects of smoking, the less likely the adolescents will start and continue smoking. Indeed, several cross-sectional studies have supported these assumptions (Andersen, Leroux, Bricker, Rajan, & Peterson, 2004; Chassin, Presson, Todd, Rose, & Sherman, 1998; Henriksen & Jackson, 1998). However, other cross-sectional studies have reported contrasting results (Engels & Willemse, 2004; Ennett, Bauman, Foshee, Pemberton, & Hicks, 2001; Huver, Engels, Vermulst, & De Vries, 1997) and results from longitudinal research have failed to show protective effects of house rules or communication on adolescent smoking (Den Exter Blokland, Hale, Meeus, & Engels, 2006; Engels, Finkenauer, Kerr, & Stattin, 2005; Ennett et al., 2001; Harakeh et al., 2005; Huver, Engels, & De Vries, 2006). These contradictory findings are not limited to European samples. For example, Ennett et al. (2001) identified parent-child communication as a risk factor for adolescent smoking. Thus, research findings relating these anti-smoking parenting practices to adolescent smoking are inconsistent.

From scholars in the area of developmental psychology, we know that parents influence their children, and children influence their parents (for a review see Bell, 1968; Lytton, 1990). Nevertheless, bi-directional relations are often overlooked in studies on the associations between parenting and adolescent problem behavior, as parenting is typically regarded as a determinant of adolescent behavior. The few studies that have accounted for child effects do indeed support the idea that parents react to adolescent problem behavior. Kerr and Stattin (2003) showed that parenting does not predict over time changes in adolescent delinquency, but that delinquency manifests itself in reduced monitoring efforts. Stice and Barerra (2005) examined bi-directional links between parental support and strict control on the one hand and adolescent...
substance use and found the relationship to be fully bi-directional. Similarly, in a Dutch study, parental monitoring prevented alcohol use by adolescents and alcohol use evoked reduced levels of parental strict control (Van der Vorst, Engels, Meeus, Dekovic, & Vermulst, 2006).

In brief, the evidence for bi-directional associations is gradually growing. However, bi-directional relations between anti-smoking parenting practices and adolescent smoking have not yet been studied. In view of the inconsistent research findings relating the two, causality that has been inferred from studies employing cross-sectional designs may be erroneous and some longitudinal designs may have been inadequate to thoroughly study the origins of the relations (Kazantzis, Ronan, & Deane, 2001). Cross-sectional associations can be interpreted in two ways.

It is possible that, for instance, the presence of anti-smoking house rules causes a reduction in adolescent smoking, but also that adolescent smoking leads to a decline in anti-smoking house rules as a result of parental adaptation. Likewise, the association between communication and adolescent smoking does not necessarily have to be unidirectional (see Ennett et al., 2001), as parents might communicate more as the children progress through smoking stages.

To study bi-directional relations between anti-smoking parenting practices and adolescent smoking, we tested a cross-lagged model in which anti-smoking house rules, communication about smoking, and adolescent smoking were assessed at three subsequent years. Cross-sectional relations were examined and presumed parental influences on adolescent smoking were tested, as were adolescent influences on parenting practices. We additionally tested whether patterns differed with the respondents’ sex and parental smoking status. It was expected that smoking parents would be less effective in preventing their offspring from smoking and would give in to adolescent smoking more easily as compared to non-smoking parents, since smoking parents feel less capable of coping with the situation when smoking is prohibited. Furthermore, it was expected that their offspring would be less effective in preventing their siblings from smoking, and would give in to adolescent smoking more easily as compared to non-smoking siblings, since smoking siblings are more likely to influence the smoking behavior of their younger siblings.

To measure the effect of parental smoking status on adolescent smoking, we tested a cross-lagged model in which parental smoking status was assessed (0 = neither parent smokes, 1 = one parent smokes, 2 = both parents smoke). It has been found that adolescents are capable of accurately indicating the smoking status of their parents (Vink, Willemsen, & Bovensm, 2003).

Methods

Data were gathered in 1998, 1999, and 2000 among 2410 Dutch high school students in the European Smoking Prevention Framework Approach (ESFA; De Vries et al., 2003). All 7th graders (i.e., students in their first year of high school) in the control condition of ESFA were asked to fill in self-administered questionnaires at the beginning of the school year (T1). This cohort was asked to participate again one and two years later (T2 and T3, respectively). The questionnaires had been qualitatively pre-tested in a sample that was representative of a Dutch population of adolescents.

Students were informed that they would remain anonymous and that their answers would be treated confidentially. Completed questionnaires were put in envelopes and individually sealed, after which the teacher put all the envelopes in a larger one that was sealed in front of the class. Data were merged longitudinally by questionnaire barcodes. Only students who participated in all three waves were included (N = 1,721, 71.4%). Compared to participants, those who did not participate in all three waves were older (OR = 1.32, 95% CI = 1.11 – 1.56), less often religious (OR = 0.83, 95% CI = 0.69 – 0.99), less often of Dutch origin (OR = 0.64, 95% CI = 0.52 – 0.79), in more advanced smoking stages (OR = 1.31, 95% CI = 1.19 – 1.45), and had smoked more cigarettes during their lifetime (OR = 1.80, 95% CI = 1.08 – 3.00). No sex differences were found.

Background variables. Age, sex (1 male, 2 female), religiousness (1 no religious, 2 religious) and ethnicity (1 not of Dutch origin, 2 of Dutch origin) of the respondents were assessed. In addition, parental smoking status was assessed (0 = neither parent smokes, 1 = one parent smokes, 2 = both parents smoke). It has been found that adolescents are capable of accurately indicating the smoking status of their parents (Vink, Willemsen, & Bovensm, 2003).

Adolescent smoking behavior. As previous research has established the high validity and reliability of self-report measures to assess adolescent smoking (e.g., Kentala, Utriainen, Pahkala, & Mattila, 2004), two items assessed adolescent smoking behavior. The respondents were asked to indicate current smoking stage by choosing one of nine statements best describing them, ranging from “I have never smoked a cigarette, not even one puff” to “I smoke at least once a day.” Respondents were classified as never smokers (0) if they indicated never to have smoked (“not even one puff”), as non-smokers (1) if they had smoked less than four cigarettes or had quit, as triers (2) if they had smoked less than once a month, as experimenters (3) if they smoked more than once a month but less than weekly, and as regular smokers (4) if they had smoked at least once a week (Fly, 1993; Kremers, Mudd, & De Vries, 2001). Second, the respondents were asked to indicate the number of cigarettes they had smoked during their lifetime (0 = 0, 1 = 1–4, 2 = 5–99, 3 = 100 or more; World Health Organization [WHO], 1988). Answers were cross-validated using a four-item algorithm assessing current and lifetime smoking status (De Vries et al., 2003). Cronbach’s α was .87 at T1, .91 at T2, and .92 at T3.

Smoking behavior was a collapsed latent measure of both indicators.

House rules. Respondents could indicate whether they perceived they were allowed to smoke in their own room, the living room, the kitchen, bathrooms and toilets, halls, corridors and staircases, and outside (Huvet et al., 2006). A score of 1 was assigned if they were allowed to smoke and a score of 2 if they were not. Principal axis factor analysis with oblimin rotation consistently revealed two factors. The first factor included rules about smoking in the living room, kitchen, and outside (α = .82, T1, .82, T2, .84, T3). The second factor included smoking in their own room, bathrooms and toilets, and halls, corridors and staircases (α = .78, T1, .82, T2, .83, T3). The items were summed to compute two indicators of the number of house rules.

Communication about smoking. To assess parent-child communication about smoking, respondents were asked to indicate the frequency with which their parents talked to them about smoking (Huvet et al., 2006; 1 = never, 2 = talked about it, but not in the last year, 3 = once, 4 = now and then, 5 = quite often, 6 = often). In addition, respondents could tick ten topics that had been discussed at home, namely health risks of smoking, health risks of inhaling, non-smoking agreements, being allowed to smoke, places where smoking was allowed, prices of cigarettes, addiction, attention paid to smoking in school, smoking friends, and others offering cigarettes. If respondents did not tick a particular topic, this
item was scored as 1. If they indicated to have talked about it, it was scored as 2. These were summed to obtain an indicator of the number of topics discussed, ranging between 1 and 20 ($\alpha = .70$, T1; .68, T2; .72, T3).

**Statistical Analyses**

First, means and standard deviations of the variables pertaining to anti-smoking parenting practices were calculated and paired $t$-tests were carried out to compare mean scores of each variable at the three waves. In addition, correlations between model variables were calculated.

Next, the model was tested by means of structural equation modeling (SEM) with Mplus 3.11 (Muthén & Muthén, 2004). The background variables (age, sex, religiousness, ethnicity, and parental smoking status) were included as exogenous variables, while the anti-smoking parenting practices and adolescent smoking were endogenous latent variables at all three waves. Adolescent smoking behavior was assessed by the two items assessing current smoking stage and lifetime number of cigarettes smoked. House rules were measured by the two above-mentioned summed indicators of the number of places in the house where non-smoking rules applied.

Communication about smoking was assessed by the frequency of communication about smoking and the number of topics talked about. The Maximum Likelihood estimation method was used. The two fit measures taken into account were the Root Mean Square Error of Approximation (RMSEA) and the Comparative Fit Index (CFI) by Bentler (Marsh, Balla, & Hau, 1996). RMSEA is used to assess approximate fit, with values preferably smaller than or equal to .05 and values between .05 and .08 indicating a fair fit. CFI is a comparative fit index, with preferred values above .95 and values above .90 considered acceptable (Kaplan, 2000).

Multigroup analyses were used to test whether results were moderated by the respondents’ sex or parental smoking status (Bollen, 1989). The model was tested for boys and girls separately. Moderation by parental smoking status was assessed by testing separate models for respondents with non-smoking parents and those with at least one parent who smoked. Paths were then compared between the groups. Before testing moderation effects, a lambda-constrained model was computed, in which the corresponding factor loadings (lambdas) of two groups were constrained to be equal. The chi-square value of this lambda-constrained model was computed first. Next, beta weights (relations between endogenous variables) were additionally constrained to be equal. If the value of the chi-square of this beta-constrained model was significantly different from the lambda-constrained model, the beta weights were tested one by one to detect which beta weights were significantly different. This procedure is explained in more detail in Byrne (1998) and an example can be found in Huver et al. (2007).

**Results**

**Participants**

The respondents had a mean age of 12.83 years ($SD = 0.52$) at T1. The sample consisted of slightly more boys (50.7%) than girls. Most respondents were not religious (51.9%) and were of Dutch origin (78.0%). Half of the respondents (50.0%) indicated that neither of their parents smoked, whereas 31.7% indicated to have one smoking parent and 18.3% indicated that both parents smoked. At T1, 63.4% of the adolescents were classified as never smokers, 26.2% as non-smokers, 5.8% as triers, 1.5% as experimenters, and 3.1% as regular smokers. At T2, 54.3% were never smokers, 29.4% non-smokers, 5.0% triers, 3.0% experimenters, and 8.4% regular smokers. At T3, 44.2% were never smokers, 30.3% non-smokers, 2.0% triers, 6.5% experimenters, and 17.0% regular smokers.

**Descriptive Statistics**

The mean levels of perceived anti-smoking parenting practices at the three waves are presented in Table 1. Respondents perceived significantly fewer anti-smoking house rules as they got older. There was no change over time in the frequency of smoking-related communication. The mean number of topics discussed, however, was larger at T2 and T3 than at T1.

**Cross-Sectional Correlations Between Anti-Smoking Parenting Practices and Adolescent Smoking Behavior**

Table 2 shows the correlations between the indicators of parenting practices and adolescent smoking at the three waves. The results printed in italics indicate that cross-sectional associations between the indicators of anti-smoking parenting practices and of adolescent smoking became stronger as time passed. Additional analyses were carried out in Mplus to examine whether these over-time changes were significant. To test this, the structural model of Figure 1 was constructed as a factor (measurement) model in which all latent variables were correlated with each other. The chi-square value of this factor model was compared with the chi-square value of the model where the above-mentioned correlations between the latent variables at T1 were constrained to be equal with the corresponding correlations at T2 and T3. This

<table>
<thead>
<tr>
<th>Table 1</th>
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<tr>
<td><strong>Mean Scores (SDs) on Indicators of Anti-Smoking Parenting Practices at Three Waves in the Model</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>T1</th>
<th>T2</th>
<th>T3</th>
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<tbody>
<tr>
<td>House rules 1</td>
<td>5.64 (0.83)</td>
<td>5.48 (0.96)</td>
<td>5.35 (1.06)</td>
</tr>
<tr>
<td>House rules 2</td>
<td>5.84 (0.57)</td>
<td>5.77 (0.68)</td>
<td>5.69 (0.78)</td>
</tr>
<tr>
<td>Communication frequency</td>
<td>3.04 (1.45)</td>
<td>3.11 (1.39)</td>
<td>3.05 (1.43)</td>
</tr>
<tr>
<td>Communication topics</td>
<td>12.16 (1.97)</td>
<td>12.28 (2.03)</td>
<td>12.31 (2.16)</td>
</tr>
</tbody>
</table>

Note. Means in the same row that do not share subscripts differ at $p < .05$ in paired $t$-tests.
resulted in significant differences for house rules, $\Delta \chi^2(2) = 65.82$, $p < .001$, and communication, $\Delta \chi^2(2) = 28.28$, $p < .001$. During the next steps, each constraint was tested separately. Results indicated that the negative relations between house rules and adolescent smoking behavior became significantly stronger over time. The cross-sectional negative correlations between communication and adolescent smoking remained the same at T1 and T2, but became significantly stronger at T3.

![Figure 1](image-url) Structural equation model of associations between smoking-specific socialization and adolescent smoking behavior. $N = 1,721$, $\chi^2(169) = 432.82$, $p < .001$; RMSEA = .030; CFI = .985. Only significant paths are presented.
Effects of Anti-Smoking Parenting Practices on Adolescent Smoking Behavior

Standardized results of the model of anti-smoking parenting practices and adolescent smoking behavior are presented in Figure 1. Only significant paths are shown, even though non-significant paths remained included in the model. The fit was good, $\chi^2(169) = 432.82, p < .001$, RMSEA = .030, CFI = .985. To prevent the description and graphical representation of the results from becoming too complex, the measurement part of the model is not represented.

We found no associations between parenting at T1 and adolescent smoking behavior one year later. At T2, a larger number of house rules was associated with reduced adolescent smoking behavior at T3, whereas communication at T2 was not predictive of adolescent smoking behavior at T3. The great stability of the paths indicates that all factors were predictive of the same factor measured a year later. Additional analyses were carried out to test the relative stability of paths by comparing the unconstrained model to a model in which the stability paths were set equal for house rules and communication. Chi-square difference tests showed that the model fit significantly worsened, indicating that the factor reflecting parent-child communication about smoking was relatively more stable than the factor reflecting house rules from T1 to T2, and T2 to T3, $\Delta\chi^2(3) = 34.07, p < .001$; and $\Delta\chi^2(3) = 54.95, p < .001$, respectively.

Effects of Adolescent Smoking Behavior on Anti-Smoking Parenting Practices

We found several significant cross-lagged paths relating to effects of adolescent smoking behavior on parental anti-smoking practices. The more respondents smoked at T1, the fewer house rules they experienced and the more their parents communicated with them about smoking a year later. Equally, the more respondents smoked at T2, the fewer house rules and the more communication they reported at T3. Findings suggest that parents adapted to increases in smoking behavior by reducing the number of anti-smoking rules and increasing communication.

Background Variables

Regarding the exogenous background variables in Figure 1, older respondents smoked more, while girls where less likely to smoke and communicated more with their parents about smoking than boys. Religious adolescents perceived more anti-smoking house rules and were less likely to smoke than non-religious adolescents. Dutch adolescents reported fewer anti-smoking rules at home than non-native responders and reported more smoking-related communication with their parents. Perceived parental smoking was associated with a smaller number of anti-smoking house rules and an increase in adolescent smoking.

Moderation by the Adolescents’ Sex

The model was then compared for boys and girls, to test if the adolescents’ sex influenced the reported findings. Although significant differences in were found, $\Delta\chi^2(14) = 27.80, p < .05$, these differences reflected only differences in stability paths and not in cross-lagged paths. Since the latter were the focus of this study, we will not describe these differences in further detail, as they do not suggest different patterns in bi-directional relations between parenting and adolescent smoking behavior for male and female adolescents.

Moderation by Parental Smoking Status

The model was significantly different for adolescents of smoking and non-smoking parents, $\Delta\chi^2(14) = 41.96, p < .001$. While effects of parenting on adolescent smoking behavior were independent of parental smoking status, effects of adolescent smoking on parenting practices were moderated by parental smoking status. Interestingly, the path from adolescent smoking at T2 to house rules at T3 was stronger if parents smoked, $B_{\text{non-smoking parents}} = -.06$, $B_{\text{smoking parents}} = -.16$; $\Delta\chi^2(1) = 5.09, p < .05$, indicating that if parents smoked, adolescent smoking increase predicted a more pronounced decrease in the number of rules. In addition, adolescent smoking at T2 was only predictive of an increase in communication about smoking at T3 for adolescents of non-smoking parents, $B_{\text{non-smoking parents}} = .22$, $B_{\text{smoking parents}} = .06$; $\Delta\chi^2(1) = 4.1, p < .05$.

Discussion

Studies relating parenting to adolescent problem behavior typically regard parenting as a determinant of adolescent behavior. Nevertheless, the notion of reciprocal relations between parents and children is commonly accepted in developmental psychology and has been confirmed by the few survey studies that accounted for child effects (Kerr & Stattin, 2003; Stice & Barrera, 1995; Van der Vorst et al., 2006). Research findings relating anti-smoking parenting practices to adolescent smoking have been inconsistent. Cross-sectional relations are inconsistent and lack in longitudinal analyses in European as well as North American samples (Den Exter Blokland et al., 2006; Engels et al., 2005; Ennett et al., 2001). In an attempt to explain these inconsistencies by suggesting that child effects have been overlooked, we examined bi-directional relations between anti-smoking parenting practices and adolescent smoking behavior. A longitudinal cross-lagged model was tested, in which anti-smoking house rules, communication about smoking, and adolescent smoking behavior were assessed at three subsequent years. Our findings indicate that not only did adolescent smoking affect parental responses more strongly than the other way around, but parents also reacted to adolescent smoking increase by relaxing anti-smoking rules at home and discussing more smoking-related topics.

The most striking finding was that adolescent smoking behavior was a stronger predictor of anti-smoking parenting practices over time than vice versa. This is in line with the small body of previously published literature on reciprocity between parenting and adolescent substance use (e.g., Stice & Barrera, 1995; Van der Vorst et al., 2006), which now seems to hold for the topic of adolescent smoking as well. With respect to effectiveness of parenting, we found a protective effect of anti-smoking house rules on adolescent smoking behavior. However, this effect was small and was not seen in all analyses, in line with previously reported longitudinal findings (Engels et al., 2005; Huver et al., 2006). Communication did not predict changes in adolescent smoking
behavior (Den Exter Blokland et al., 2006; Engels et al., 2005; Ennett et al., 2001).

Remarkably, we not only found evidence for reverse causality, as Kerr and Stattin (2003) elegantly labeled it, but also found that parental reactions consisted of yielding to adolescent smoking behavior by relaxing their anti-smoking house rules. Several explanations can be suggested for this pattern of parental withdrawal that was more pronounced in smoking parents. First, parents may feel insecure or inadequate about keeping their children from smoking and give up their efforts to do so when the child starts smoking. Previous research has indicated that smoking parents feel less adequate when engaging in anti-smoking practices than non-smoking parents (Clark et al., 1999). This could explain why these parents more easily relax their anti-smoking policy. In more negative terms, their children’s smoking could in fact be an excuse for them to smoke in the house. A second possible explanation is that parental relaxing of house rules is not necessarily a response to adolescent smoking, but could be the result of the adolescents getting older and being granted more autonomy (Steinberg, 1990). Thirdly, parents may in fact think of indulgence as a way to control their children’s smoking behavior, feeling that if their children smoke anyway, they might as well do it supervised.

Despite these patterns, parents did not simply give in to adolescent smoking. Increased adolescent smoking was followed by more parent-child communication about smoking. And parents apparently did not talk to their children more often but discussed more topics. This was more pronounced if parents did not smoke themselves. Perhaps non-smoking parents were more set upon deterring adolescent smoking (Clark et al., 1999). Notably, associations of parenting with both indicators of adolescent smoking, namely lifetime consumption of cigarettes and smoking stage, were similar.

Bi-directional relations between parenting and adolescent smoking behavior did not depend on adolescent sex. Although rarely subject to study, effects of non-smoking agreements, house rules, availability of cigarettes, and communication about smoking have been found to be equal for boys and girls (Harakeh et al., 2005; Huver et al., 2006). Likewise, effects of parental expectations of smoking have been found to be independent of adolescent gender (Simons Morton et al., 1999). Apparently, the way in which parents influence their children’s smoking and the way in which children’s smoking affects parenting is the same for boys and girls.

This study had its strengths and limitations. It was innovative in considering bi-directional relations between anti-smoking parenting practices and adolescent smoking behavior. This was studied using a large sample of adolescents, an age group where transitions in smoking behavior take place rapidly (USDHHS, 1994), and used structural equation modeling techniques. However, our data were based on self-reports. First, adolescents thus reported on their own smoking behavior. A bogus pipeline procedure could have been used, whereby subjects are led to believe that physiological measurements will assess their true smoking behavior, to improve the truthfulness of their self-reports (Aguinis, Pierce, & Quigley, 1993). However, data were checked for inconsistent and improbable answering patterns and longitudinally validated where possible. Moreover, previous research has confirmed the validity and reliability of self-report measures (Kentala et al., 2004). Second, the design of this study did not allow us to collect data among multiple informants and, as such, we were limited to adolescent reports on parenting behaviors. There are indications, though, that adolescent reports on these behaviors may actually be more reliable than parents’ own reports (e.g., Engels, Finkenauer, Meues, & Dekovic, 2001) as social desirability strongly affects parental responses to questions on child rearing (Brown, Mounts, Lamborn, & Steinberg, 1993). Moreover, adolescents are not necessarily influenced by what their parents do, but by how they perceive their parents’ actions (Chassin et al., 2005). Taking it one step further, in future research it would be interesting to study not only the presence of house rules, but also whether adolescents comply with these rules by studying the places in the house where they actually smoke.

Our findings showed that adolescent behavior was more predictive of parental behavior than vice versa. While in response to adolescent smoking increase parents dropped the number of anti-smoking house rules, they also intensified smoking-related communication. These acts of parenting only marginally influenced adolescent smoking, in turn. While it may seem that parents have little control over their children’s smoking, this is not necessarily so. First, we studied only two forms of smoking-specific parenting, and other anti-smoking socialization strategies, such as reducing the availability of cigarettes and parental monitoring of substance use, may well matter too (Huver et al., 2007; Jackson & Henriksen, 1997). Also, anti-smoking socialization may be more effective under certain circumstances. For example, in addition to the content and frequency of communication, its quality may contribute to effectiveness (Harakeh et al., 2005). Second, the fact that house rules and communication hardly seemed to influence adolescent smoking in these Dutch adolescents does not imply that these strategies will not be effective in other populations. Finally, although parental smoking status may not influence effectiveness of anti-smoking parenting practices (Huver et al., 2006; Jackson & Henriksen, 1997), one particularly effective strategy parents can adopt to prevent adolescent smoking is not to smoke themselves (Chassin et al., 1998). Interventions targeting parents to reduce adolescent smoking should involve multiple anti-smoking parenting practices for specific populations, and parents should be motivated not to smoke.

Our findings underline the need for caution in interpreting cross-sectional findings. A cross-sectional interpretation of our data would appear to indicate that anti-smoking house rules are effective in deterring adolescent smoking and that parental communication about smoking actually leads to increased adolescent smoking. Our prospective results, however, paint a different picture, in which parents in fact adapted to adolescent smoking by reducing the number of anti-smoking rules in the house and increasing communication about smoking. Future research relating parenting to adolescent smoking should account for bi-directional effects.

References


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