

Should parental prohibition of adolescents' peer relationships be prohibited?

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Abstract

Research has revealed inconsistent associations between parents' prohibition of peer relationships and adolescents' deviant peer affiliation. This cross-sectional study examined parents' styles of prohibition to test the hypothesis that an autonomy-supportive style would relate negatively, whereas a controlling style would relate positively, to deviant peer affiliation. Such relations were expected because of the differential relations of styles of prohibition to adolescents' internalization of parental rules for friendships. Structural equation modeling provided support for the hypotheses in a sample of 234 Belgian midadolescents ($M_{\text{age}} = 16.45$ years; 65% female), as the differential relations of autonomy-supportive and controlling styles of prohibition to deviant peer affiliation were mediated by their differential relations to internalization. Implications for research on parental peer management are discussed.

Most parents oppose their adolescent child's affiliation with friends who are involved in problem behaviors (e.g., stealing and drug use), yet there exist multiple ways of addressing this important issue. One possibility is that parents ignore the problem and hope that their child can resist the allure of peer pressure. Children often give in to such pressure and engage in deviant behavior, however, as affiliation with deviant peers is directly related to adolescents' own involvement in problem behaviors (Lacourse, Nagin, Tremblay, Vitaro, & Claes, 2003). A second possibility is that parents intervene in their child's

friendships by prohibiting their child from interacting with deviant peers. Prohibition of friendships also has risks, however, as adolescents may perceive parental attempts to regulate personal issues (e.g., friendships) as illegitimate (Smetana, 1995). Given that this strategy may enhance, rather than diminish, the likelihood of an adolescent further associating with deviant peers, one may wonder whether practitioners should prohibit parental prohibition of adolescents' peer relationships.

The aim of this study was to examine whether all parental prohibition of adolescents' friendships are maladaptive. Using self-determination theory (Deci & Ryan, 2000; Niemiec, Ryan, & Deci, in press; Vansteenkiste, Ryan, & Deci, 2008), we proposed and tested the hypothesis that the relation of parents' prohibition of their child's friendships to the adolescents' affiliation with deviant peers would differ as a function of parents' styles of prohibition. Specifically, we hypothesized that adolescents would be less likely to associate with deviant peers when they perceive their parents as communicating the prohibition using

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an autonomy-supportive, rather than a controlling, style and that adolescents' internalization of their parents' rules concerning friendships would mediate those differential relations of prohibition style to deviant peer affiliation.

Affiliation with deviant peers and parental peer management

Many individuals begin to affiliate with deviant peers during adolescence, and this trend peaks around the age of 15 or 16 years (Lacourse et al., 2003). This is troubling because studies have identified deviant peer affiliation as a consistently strong predictor of adolescents' involvement in problem behaviors, including drug use (Dishion & Owen, 2002), delinquency (Brendgen, Vitaro, & Bukowski, 2000), and antisocial behavior (LaCourse et al., 2003; Patterson, Forgatch, Yoerger, & Stoolmiller, 1998). Accordingly, an important challenge for developmental psychologists is to identify factors that either halt or exacerbate adolescents' affiliation with deviant peers.

Theory and research suggest that parents can protect their children from negative peer influences either by fostering a high-quality parent-child relationship or by making specific interventions in their child's friendships (Ladd & Pettit, 2002; Parke & Bhavnagri, 1989). Parents' rearing style may indirectly affect the processes related to deviant peer affiliation, for example, by reducing susceptibility to peer pressure (Mounts & Steinberg, 1995). Additionally, parents may use peer management strategies that more directly target adolescents' friendships. Recent research, most of which is cross-sectional, has identified several strategies that parents use with adolescent children, including organizing opportunities to spend time with friends, seeking information about adolescents' friendships, and prohibiting certain friendships (Mounts, 2001; Updegraff, McHale, Crouter, & Kupanoff, 2001; Vernberg, Beery, Ewell, & Abwender, 1993). Although scholars typically conceive peer management strategies as parental behaviors that affect children's social development, it is important to acknowledge that

children's social behavior may also influence parents' management of their child's peer relations. Tilton-Weaver and Galambos (2003), for instance, found that mothers more frequently disapproved of their child's friends when the mothers were concerned about their child's affiliation with deviant friends. Such findings suggest that the association between parents' peer management and adolescents' peer affiliation is reciprocal, whereby parents' response to their child's affiliation with deviant peers may subsequently increase (rather than decrease) the child's involvement with peers of whom parents disapprove.

Parental prohibition, deviant peer affiliation, and involvement in problem behaviors

Prohibition refers to the degree to which parents forbid their child from interacting with a friend of whom they do not approve and thus has particular relevance in the context of deviant peer affiliation (Mounts, 2001). Although it seems plausible that parents prohibit particular friendships to protect their child from negative peer influences, research suggests that the associations among parental prohibition, deviant peer affiliation, and involvement in problem behaviors are not straightforward. In an initial examination, Mounts (2001) found that parental prohibition of friendships was unrelated to early adolescents' affiliations with drug-using and delinquent friends, and argued that the association between parental prohibition and deviant peer affiliation might be curvilinear, citing evidence suggesting that moderate levels of prohibition were related to less affiliation with deviant peers. Among midadolescents, Mounts (2002) found positive linear associations between parental prohibition and both affiliation with drug-using friends and actual drug use, although we should note that these associations only showed up in cross-sectional (and not in longitudinal) analyses. Tilton-Weaver and Galambos (2003) found that maternal (but not paternal) communication of disapproval of friendships, which is similar to parental prohibition, related positively to early adolescents' affiliation with deviant peers.

Together, these studies suggest that relations of parental prohibition to deviant peer affiliation and involvement in problem behaviors, if any, are positive, rather than negative. As such, parental prohibition may not represent an effective strategy to reduce adolescents' affiliation with deviant peers and susceptibility to problem behaviors. Given the lack of longitudinal associations between prohibition and outcomes, one should also consider the alternative possibility that parents prohibit friendships in response to their child's problem behavior. As indicated earlier, these alternative views are not mutually exclusive, as prohibition and affiliation with deviant peers may mutually reinforce each other.

Social domain theory (Nucci, 2001; Smetana, 1995) offers one possible explanation for why parental prohibition seems to be a relatively ineffective strategy. According to this theory, the effectiveness of parenting practices is a function of whether the child considers the parental intervention to be legitimate. The perceived legitimacy of parental authority depends on the domain in which parents intervene, such that children generally consider parental interventions in the domains of morality (e.g., lying and stealing) and social convention (e.g., using bad language) to be legitimate because they exist outside the adolescent's personal jurisdiction, whereas they generally consider parental interventions in the personal domain (e.g., friendships) to be illegitimate because such interventions violate the adolescent's personal jurisdiction.

On the basis of social domain theory, it is reasonable to suggest that adolescents would perceive parental prohibition of friendships, which represents an intervention in the personal domain, as illegitimate or even intrusive. To support this reasoning, Brown, Bakken, Nguyen, and Von Bank (2007) reported that adolescents believe that their parents are less entitled to know about their friendships, compared to the amount parents believe they are entitled to know about their child's friendships. Furthermore, Soenens, Vansteenkiste, Smits, Lowet, and Goossens (2007) found that parental prohibition of friendships correlated positively with adolescents' perceptions of their parents as intrusive. Social domain

theory also suggests that if the child perceives parental interference in a particular domain as illegitimate or intrusive, the child is not likely to comply with the parental rules. In line with this, Soenens, Vansteenkiste, Smits, and colleagues (2007) showed that parental prohibition related positively to deviant peer affiliation. Moreover, adolescents' perceptions of their parents as psychologically controlling partially accounted for these relations. These findings are consistent with the idea that adolescents typically perceive parental prohibition as intrusive and controlling. A perception of parents as intrusive, in turn, seems to relate to stronger affiliation with deviant peers. The cross-sectional nature of this study, however, precludes inferences about directionality among the variables. Specifically, it does not allow a test of the alternative possibility that low compliance with parental rules (as expressed in affiliation with deviant peers) may elicit parental prohibition and, more specifically, may elicit intrusive and controlling attempts to prohibit the child's friendships.

Styles of prohibition and the internalization of parental rules

Diverse theoretical perspectives converge to suggest that internalization of parental rules is an important determinant of the likelihood that parental rules will result in desired outcomes (Deci & Ryan, 2000; Grusec & Goodnow, 1994; Kochanska, 2002; Schafer, 1968). Thus, it is not enough to consider only the child's compliance with parental rules to fully understand the consequences of parental prohibition; rather, it is important to consider the child's reasons for compliance, which may be more or less personally endorsed (i.e., internalized).

Self-determination theory provides a unique and detailed account of the process of internalization and the factors that facilitate or hinder this process. Self-determination theory is a broad theory of motivation and personality development that considers autonomy to be pivotal to optimal human functioning (Deci & Ryan, 2000). Within self-determination theory, *autonomy* refers to the experience of

self-endorsement and volition in one's behavior. Intrinsic motivation is the prototypical example of autonomously regulated behavior because, when intrinsically motivated, people engage in an activity out of pleasure and spontaneous curiosity. Even when not intrinsically motivated, however, people can be more or less autonomous to the extent that they internalize the value of a behavior that is not inherently satisfying (Ryan & Connell, 1989). *Internalization* refers to the natural, active process through which people transform external regulations into personally held values and through which they eventually may integrate regulations into the self (Deci, Eghrari, Patrick, & Leone, 1994).

Self-determination theory distinguishes between several types of behavioral regulation, which differ in the extent to which they reflect internalization into the self. The least internalized form of behavioral regulation is *external regulation*, in which a person behaves only to comply with an external demand in order to receive a reward or to avoid a punishment. Individuals feel pressured and controlled to comply with an externally imposed rule or guideline when their behavior is externally regulated. For instance, adolescents may follow their parents' guidelines for friendships to avoid parental punishment or the withdrawal of privileges by parents. A second type of behavioral regulation is *introjected regulation*, in which the impetus for the previously external regulation originates inside the person, but the person does not fully accept the value of the behavior as his own. As such, individuals feel controlled from within to satisfy the rule or standard, and failure to meet those standards results in feelings of guilt and shame (Assor, Vansteenkiste, & Kaplan, 2009). For instance, adolescents may follow parental guidelines for friendships to avoid feeling guilty about their behavior or to demonstrate their self-worth.

A third type of behavioral regulation is *identified regulation*, in which people understand and accept the value of the rule or standard, which facilitates personal endorsement of the behavior. For instance, adolescents may follow their parents' guidelines for friendships because they understand why their parents ask

them to do so and because they view their behavior as conducive to their self-endorsed goals. People are more likely to experience a sense of psychological freedom and volition in their behavior to the extent that the process of internalization proceeds from external regulation to identification. As such, the process of internalization is essential to autonomous functioning.

Self-determination theory further assumes that the social environment has an important role in affecting the process of internalization (Grolnick, Deci, & Ryan, 1997; Ryan & Deci, 2000). Specifically, *controlling contexts* pressure individuals to think, feel, or behave in particular ways, forestall the internalization process (Deci et al., 1994), whereas *autonomy-supportive contexts* provide opportunities for choice and allow for volitional functioning, facilitate internalization (Soenens, Vansteenkiste, Lens, et al., 2007). At the same time, self-determination theory recognizes the possibility that a lack of internalization and the behavioral problems associated with such a lack may elicit more controlling and less autonomy-supportive parenting (Grolnick, 2003).

To apply these ideas to the domain of peer management, we suggest that parents may prohibit their children using either a controlling or an autonomy-supportive style. For instance, parents may prohibit their child from affiliating with deviant peers by threatening to punish the child or by withdrawing privileges. Such strategies represent overt forms of control. Moreover, parents may pressure their child in a more insidious fashion, by appealing to the child's feelings of guilt and shame or by withdrawing their love and acceptance when the child does not live up to parental standards. These types of covert control are consistent with the concept of psychological control (Assor, Roth, & Deci, 2004; Barber, 1996; Soenens, Vansteenkiste, Luyten, Duriez, & Goossens, 2005). In contrast to controlling styles of prohibition, parents may use an autonomy-supportive style of prohibition, whereby they take the adolescent's frame of reference and provide a relevant and clear rationale for prohibition while also minimizing pressure (Deci et al., 1994).

We suggest that adolescents would be likely to internalize their parents' rules for friendships when they perceive their parents as communicating the prohibition using an autonomy-supportive style (Deci et al., 1994). As a result, adolescents would be more likely to accept those guidelines. In other words, an autonomy-supportive style is facilitative of the process of internalization and thus would be associated with identified regulation. In contrast, we suggest that adolescents would be likely to feel pressured to follow their parents' rules when parents communicate the prohibition using a controlling style. A controlling style of prohibition would thus foster more controlled and less internalized reasons for adopting parents' guidelines for friendships. In line with these hypotheses, studies have shown that, relative to controlling parenting, autonomy-supportive parenting yields higher levels of internalization in domains such as studying (Grolnick, Ryan, & Deci, 1991; Vansteenkiste, Zhou, Lens, & Soenens, 2005), friendships (Soenens & Vansteenkiste, 2005), adoption of parental values (Knafo & Assor, 2007), and emotion regulation (Assor et al., 2004).

On the basis of self-determination theory, we also predicted that the internalization of parental norms would serve as an intervening variable in the relations of parental styles of prohibition to deviant peer affiliation. In line with this, studies have shown that high levels of internalization relate positively to adaptive behavioral outcomes, such as prosocial behavior (Ryan & Connell, 1989) and school results (Black & Deci, 2000). Moreover, research has shown that internalization plays an intervening role in the relations of autonomy-supportive (vs. controlling) parenting to adaptive emotional and behavioral outcomes (Grolnick et al., 1991).

The current study

The aim of this study was to examine the associations among parental prohibition, styles of prohibition (viz., autonomy supportive vs. controlling), internalization of parental rules for friendships, deviant peer affiliation, and involvement in problem behaviors

(i.e., delinquency and antisocial behavior). This study had four specific goals. First, we attempted to develop a measure to assess parental styles of prohibition. With this measure, we sought to provide a new approach to examining the role of parenting styles in the association between prohibition of friendships and adolescent behavior. Previous studies used separate measures for parental prohibition of friendships and for parents' general rearing style (Mounts, 2002; Soenens, Vansteenkiste, Smits, et al., 2007). To examine whether parental styles moderate the association between prohibition of friendships and adolescent behavior, these studies typically examined whether prohibition and general parenting style interact to predict problem behaviors. This approach assumes, for instance, that the interaction of prohibition and a general measure of authoritative parenting reflects the extent to which parents communicate in an authoritative manner in the domain of friendships. Nonetheless, because these studies did not measure authoritative parenting specifically with regard to the prohibition of friendships, they did not provide a direct test of this assumption. Therefore, in the current study we developed an integrated assessment of the degree to which adolescents perceive their parents as autonomy supportive or controlling in the domain of prohibiting friendships. Specifically, we first asked adolescents to indicate the extent to which their parents prohibit friendships. Then we asked them how their parents would communicate those prohibitions of friendships (i.e., in an autonomy-supportive or a controlling manner). The responses from the latter part of the questionnaire thus reflect the extent to which adolescents perceive their parents as autonomy supportive or controlling in direct reference to the issue of prohibiting friendships. On the one hand, the scores obtained from this measure of autonomy-supportive and controlling prohibition represent measures of parenting style because they deal with how parents communicate their prohibition of friendships (rather than with what parents prohibit). On the other hand, this measure differs from Darling and Steinberg's (1993) parenting style concept because it taps into styles

of communication within a specific domain (i.e., prohibiting friendships). As such, this measure is different from general, domain-overarching measures of the quality of parents' rearing style.

Second, we examined the relative contribution of parental prohibition and styles of prohibition to the prediction of internalization of parental rules, deviant peer affiliation, and involvement in problem behaviors. Based on extant research, we hypothesized that parental prohibition itself would be unrelated or slightly positively related to those outcomes. Using self-determination theory, we hypothesized that parents' styles of prohibition would be associated with those outcomes above and beyond the relation of prohibition to those outcomes. Specifically, we expected that a controlling style of prohibition would relate negatively to internalization and positively to both deviant peer affiliation and involvement in problem behaviors, whereas an autonomy-supportive style of prohibition would reveal the opposite pattern of relations. Third, we examined whether the internalization of parental rules for friendships would serve as an intervening variable in the relations of styles of prohibition to deviant peer affiliation. We expected that deviant peer affiliation would, in turn, relate negatively to involvement in problem behaviors (see Figure 1).

Fourth, we examined gender differences in the study variables and whether the structural relations in the hypothesized model would differ by gender. This is important because past research has documented gender differences in both deviant peer affiliation and involvement in behavior problems (Lansford, Criss, Pettit, Dodge, & Bates, 2003). We also explored the relation of gender to parental prohibition and styles of prohibition, although research did not document consistent gender differences in parental involvement with peers. Similarly, because research has shown developmental trends with respect to affiliation with deviant peers and problem behaviors (Lacourse et al., 2003), we examined age differences in the study variables and whether the structural relations in the hypothesized model would differ by age.

Method

Participants and procedure

Participants were 234 adolescents (81 boys and 153 girls) from a secondary school in a midsized Belgian city. We examined our hypotheses in a convenience sample because this study was the first to provide a test of the conceptual model depicted in Figure 1 and because to date there is little evidence that the processes examined in this study would differ depending on whether one uses a convenience sample or a less easily accessible and more

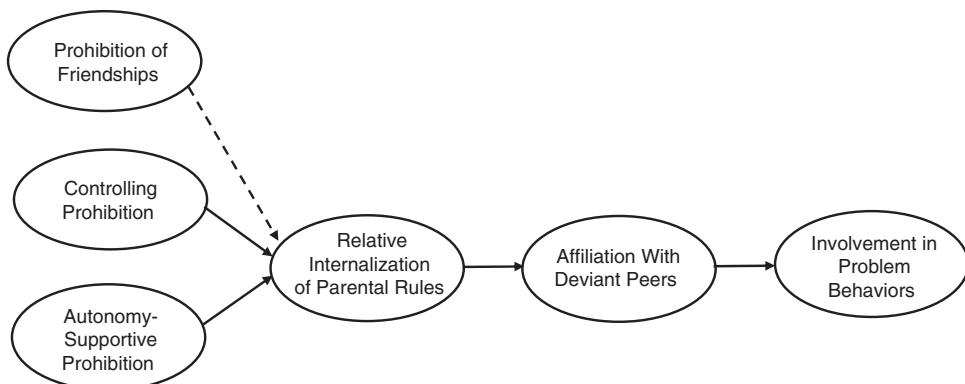


Figure 1. The hypothesized structural model of the associations among parental prohibition, styles of prohibition, internalization of parental rules for friendships, deviant peer affiliation, and involvement in problem behaviors.

heterogeneous sample (e.g., a clinical sample with youth displaying high levels of problem behavior). The mean age of the participants was 16.45 years ($SD = 0.85$), with a range from 15 to 19 years. Sixty-three students (27%) were in 10th grade, 113 students (48%) in 11th grade, and 58 students (25%) in 12th grade. In addition, 124 students (53%) attended a high school with an academic track and 110 students (47%) attended a trade or vocational school. The majority of the participants came from intact families (82%), whereas 16% had divorced parents and 2% came from a family in which one of the parents was deceased. All participants were White and were of Belgian nationality. The questionnaires took approximately 45 min to complete and we administered them during a class period. Participation in the study was voluntary and we guaranteed anonymity. Prior to the administration of the surveys, we asked adolescents to fill out an active consent form. None of the adolescents refused participation.

Measures

Parental prohibition and styles of prohibition

We used a modified version of Mounts's (2002) prohibition scale. Sample items from Mounts's original scale are as follows: "My parents tell me that they don't like my friends" and "My parents tell me that they do not approve of the things my friends do." Because Tilton-Weaver and Galambos (2003) argued that such items may not assess parental prohibition per se, but rather may assess parental disapproval of friendships, we selected four items from Mounts's scale and reworded those items so that they would more directly reflect active parental prohibition (see Table 1). This is important because some parents may disapprove of their child's friendships without actively forbidding their child to associate with those friends. Participants responded on a 5-point Likert-type scale, ranging from 1 (*totally disagree*) to 5 (*totally agree*). To examine the level of convergence between Mounts's original scale and our adaptation of this scale, we additionally administered Mounts's six-item prohibition

scale. The estimate of internal consistency (Cronbach's α) for this scale was .66. The correlation between both scales was significant ($r = .47$, $p < .001$). The magnitude of this correlation suggests that both scales overlap substantially but still have somewhat different content.

Directly following each of the four prohibition items, we asked participants, "If your parents would do this, how would they discuss this with you?" and we presented them with three items tapping parental styles of prohibition (one item assessed overt control, one item assessed covert control, and one item assessed autonomy support; see Table 1 for the items). Participants made responses on a 5-point Likert-type scale, ranging from 1 (*totally disagree*) to 5 (*totally agree*). We provide information about the psychometric quality and internal structure of these measures in the Results section.

To validate the distinction between a controlling and an autonomy-supportive style of prohibition externally, participants completed general assessments of parental psychological control (i.e., the Psychological Control Scale–Youth Self-Report; Barber, 1996; eight items; e.g., "My parents are less friendly with me if I do not see things their way") and parental autonomy support (i.e., the Perceptions of Parents Scale; Grolnick et al., 1991; seven items; e.g., "Whenever possible, my parents allow me to choose what to do"). Participants responded on a 5-point Likert-type scale, ranging from 1 (*totally disagree*) to 5 (*totally agree*). The reliability for both scales was as follows: psychological control $\alpha = .75$, autonomy-support $\alpha = .74$.

Internalization

We assessed participants' reasons for following parental rules for friendships using the Self-Regulation Questionnaire (SRQ; Ryan & Connell, 1989), which presented adolescents with the following stem:

Sometimes parents introduce a rule concerning friendships. For instance, they may forbid you to hang out with certain friends that they disapprove of. They may also set rules for how long and where you hang out

Table 1. Factor loadings (pattern matrix) of the principal factor analysis following oblique (promax) rotation on the prohibition and styles of prohibition measures

Items	Component		
	I	II	III
My parents ...			
... do not allow me to hang out with some friends (PROH1)	-.13	-.06	.93
... forbid me to hang out with certain friends (PROH2)	.30	-.05	.45
... do not want me to get involved with friends who do bad things (PROH3)	.05	.27	.48
... want me to put an end to certain friendships (PROH4)	.38	-.02	.45
... would yell at me and tell me that I will be punished if I keep seeing these friends (OC1) ^a	.69	-.07	.03
... would become angry and oblige me to behave as they say (OC2) ^b	.72	-.07	.04
... would threaten to give me harsh punishment (OC3) ^c	.76	.02	-.02
... would force me by saying that severe consequences will follow if I do not do what they want (OC4) ^d	.89	-.01	-.10
... would say that they will be very disappointed with me if I keep seeing these friends (CC1) ^a	.47	.05	.10
... would be less friendly with me for a while, until I give in and do not meet with these friends anymore (CC2) ^b	.76	.04	-.06
... would make me feel guilty as long as I hang out with these friends (CC3) ^c	.49	.03	.10
... would avoid looking at me as long as I do not do what they want (CC4) ^d	.85	.08	-.12
... would give a meaningful explanation for why they think it is important that I do not hang out with these friends (AS1) ^a	.04	.68	.04
... would give a clear and sensible reason as to why they do not want me to hang out with those friends (AS2) ^b	.03	.80	.08
... would be prepared to listen to my opinion and ask me if I see a way to change something about these friendships myself (AS3) ^c	-.11	.84	.00
... would show understanding for my situation and explain why they think it is important for me to put an end to these friendships (AS4) ^d	.05	.89	-.08

Note. PROH = prohibition; OC = overtly controlling; CC = covertly controlling; AS = autonomy-supportive.

^aItems following the first prohibition item.

^bItems following the second prohibition item.

^cItems following the third prohibition item.

^dItems following the fourth prohibition item.

with your friends. You may have different motives for following such rules. Please rate the following reasons or motives for following your parents' rules concerning friendships. I follow my parents' rules concerning friendships because . . .

Following this single stem, participants rated 18 preselected responses that reflect three types of regulation: external (six items), introjected (six items), and identified (six items). We provide the items in Table 2. Participants responded on a 5-point Likert-type scale, ranging from 1 (*totally disagree*) to 5 (*totally agree*). We provide information about the internal structure of this measure in the Results section.

Affiliation with deviant peers

We administered two scales to assess the extent to which participants' best friends (five items; e.g., "My best friend gets in trouble at school") and peer group (five items; e.g.,

"Members of my group get in trouble at school") were involved in antisocial behavior (Lansford et al., 2003). Participants responded on a 5-point Likert-type scale, ranging from 1 (*totally disagree*) to 5 (*totally agree*). The reliability for each scale was as follows: best friend antisocial behavior $\alpha = .81$, peer group antisocial behavior $\alpha = .76$. In line with previous studies (Lansford et al., 2003; Soenens, Vansteenkiste, Smits, et al., 2007), we computed an overall index of deviant peer affiliation by averaging those two scales. The positive correlation between both scales in this study ($r = .52$, $p < .001$) justifies this approach. Moreover, as we will detail below, both scales had significant loadings on a common latent construct.

Involvement in problem behaviors

We administered two scales to assess adolescents' involvement in problem behaviors. First, we assessed delinquency with a well-validated

Table 2. Factor loadings (pattern matrix) of the principal factor analysis following oblique (promax) rotation on the internalization measure

Items	Component		
	I	II	III
I follow my parents' rules concerning friendships because . . .			
. . . otherwise I will be punished (ER)	-.02	.81	-.03
. . . I feel pressured to do so (ER)	.00	.85	-.04
. . . I am afraid that I will lose the privileges that my parents give me (ER)	.09	.92	-.19
. . . I feel obliged to do so (ER)	-.02	-.85	-.01
. . . otherwise I will be criticized (ER)	-.08	.66	.23
. . . I would disappoint my parents if I would not do so (ER)	.03	.47	.29
. . . it makes me feel proud about myself (INTROJ)	.14	-.15	.47
. . . I would feel guilty if I would not do so (INTROJ)	.00	.23	.59
. . . I owe this to myself (INTROJ)	.15	-.07	.70
. . . I would be ashamed if I would not do so (INTROJ)	-.05	.20	.64
. . . it makes me feel better about myself (INTROJ)	.29	.05	.51
. . . otherwise I would feel bad about myself (INTROJ)	-.05	.05	.80
. . . I find these rules personally meaningful (ID)	.75	-.05	.04
. . . I fully stand behind this choice (ID)	.91	.04	-.13
. . . I understand why these rules are important (ID)	.74	.14	-.01
. . . I fully endorse this decision (ID)	.84	-.03	-.05
. . . these rules match with my values (ID)	.73	-.05	.12
. . . these rules are an expression of my personal values (ID)	.72	-.03	-.05

Note. ER = external regulation; INTROJ = introjected regulation; ID = identified regulation.

questionnaire (Houtzager & Baerveldt, 1999). Participants indicated the number of times they committed 23 offenses during the past 12 months, such as shoplifting, petty theft, vandalism, and unarmed fights. Participants responded on a 4-point Likert-type scale, ranging from 0 (*never*) to 3 (*4 times or more*). The reliability for this measure was $\alpha = .87$. Second, we assessed antisocial behavior using five items from the Dutch translation (Verhulst, van der Ende, & Koot, 1996) of the Antisocial Behavior Scale from Achenbach's (1991) Youth Self-Report (e.g., "I get into many fights"). The reliability for this measure was $\alpha = .74$. Because both scales were positively correlated ($r = .56, p < .001$), we computed an overall index of involvement in problem behaviors by averaging those two scales.

Results

Data analysis proceeded in three steps. First, using principal factor analysis (PFA), we examined the internal structure of the newly developed or modified measures that assessed (a) perceived parental prohibition and styles of prohibition and (b) the internalization of parental rules for friendships. Second, we examined the associations among relevant background variables (*viz.*, gender, type of education, family structure, and age) and the study variables, as well as the interrelations among the study variables. Third, we tested the hypothesized structural model using structural equation modeling (SEM) with latent constructs.

Internal structure and validation of the measure assessing parental prohibition and styles of prohibition

We performed a PFA with oblique (*i.e.*, pro-max) rotation on the 16 items that assessed parental prohibition, overt control, covert control, and autonomy support. We performed an oblique rotation because previous studies have suggested that prohibition of friendships and parental styles is substantially correlated (Mounts, 2002; Soenens, Vansteenkiste, Smits, et al., 2007). Prior to performing the PFA, we calculated Bartlett's Test of Sphericity, which tests the null hypothesis that the

16 items are, as a whole, uncorrelated. We rejected this null hypothesis of uncorrelated items, $\chi^2(120) = 1,749.44, p < .001$, indicating that it was appropriate to perform a PFA. The number of missing values on those items ranged from 5 to 18 and we eventually performed the PFA on 216 participants with full data on all items. Most missing values occurred on the items assessing perceived style of prohibition (and not on the items assessing prohibition *per se*). Specifically, 4% of the participants who responded to the prohibition items did not respond to the items tapping style of prohibition, perhaps because they scored low on the prohibition measure and felt that the style of prohibition items did not apply to them. We also note that a substantial number of items (*i.e.*, 10 of 16) were skewed. As is outlined below, we corrected for this deviation from normality in the main analyses. The PFA yielded three factors with eigenvalues larger than 1. Moreover, the scree plot clearly indicated the presence of three factors and the three-factor solution explained 55% of the variance in the items. The first factor, which had an eigenvalue of 5.14 and explained 32% of the variance, was composed of the eight items that assessed a controlling (*i.e.*, overt and covert) style of prohibition; the second factor, which had an eigenvalue of 2.64 and explained 17% of the variance, was composed of the four items that assessed an autonomy-supportive style of prohibition; and the third factor, which had an eigenvalue of 1.00 and explained 6% of the variance, was composed of the four items that assessed parental prohibition. All items had factor loadings equal to or greater than .45 on their primary factor and, with one exception, none of the items had cross-loadings larger than .30 on any other factor. We provide the pattern matrix of factor loadings in Table 1.¹ The reliability for each factor was

1. Research on self-determination theory typically uses the term *relative autonomy index* (RAI) to refer to the composite index of autonomy. Most often, researchers compute this index as a combination of external, introjected, and identified regulation, as well as intrinsic motivation (with weights of -2, -1, 1, and 2, respectively; Ryan & Connell, 1989). Unlike typical self-determination theory studies, however, we did not

as follows: controlling style (eight items) $\alpha = .87$, autonomy-supportive style (four items) $\alpha = .88$, and parental prohibition (four items) $\alpha = .70$.

We computed a number of correlations to examine the external validity of our measure of parental styles of prohibition. First, our controlling prohibition measure related positively to psychological control ($r = .46$, $p < .001$) and negatively to general autonomy support ($r = -.39$, $p < .001$). Second, our autonomy-supportive prohibition measure related negatively to psychological control ($r = -.17$, $p < .01$) and positively to general autonomy support ($r = .26$, $p < .001$). Together, these analyses supported the psychometric properties, as well as the external validity, of our measures that assessed parental styles of prohibition.

Internal structure of the measure assessing internalization of parental rules for friendships

We performed a PFA with oblique (i.e., promax) rotation on the 18 items that assessed adolescents' external, introjected, and identified reasons for following parental rules for friendships. We chose for oblique rotation because previous research documented substantial correlations between the different motivational regulations (Neyrinck, Vansteenkiste, Lens, Hutsebaut, & Duriez, 2006; Ryan & Connell, 1989). Bartlett's Test of Sphericity was again highly significant, $\chi^2(231) = 3,151.89$, $p < .001$. The number of missing values on those items ranged from six to eight, and we eventually performed the PFA on 225 participants with full data on all items. Again, a substantial number of items (i.e., 7 of 18) were skewed. The PFA yielded three factors with eigenvalues larger than 1. Although the scree plot did not clearly

differentiate between a two-factor solution and a three-factor solution, we preferred the three-factor solution over the two-factor solution (a) on the basis of substantive reasons (i.e., the theoretical expectation of three factors and the theoretically plausible pattern of loadings obtained in a three-factor solution; see Table 2) and (b) on the basis of the Kaiser criterion (i.e., eigenvalues larger than 1). The three-factor solution explained 60% of the variance in the items. The first factor, which had an eigenvalue of 6.45 and explained 36% of the variance, was composed of the six items that assessed identification; the second factor, which had an eigenvalue of 3.81 and explained 20% of the variance, was composed of the six items that assessed external regulation; and the third factor, which had an eigenvalue of 1.04 and explained 4% of the variance, was composed of the six items that assessed introjected regulation. All items had loadings greater than .45 on their primary factor and none of the items had cross-loadings larger than .30 on any other factor. We provide the pattern matrix of factor loadings in Table 2. The reliability for each factor was as follows: external regulation (six items) $\alpha = .90$, introjected regulation (six items) $\alpha = .84$, and identified regulation (six items) $\alpha = .91$.

Based on Ryan and Connell (1989), we expected the three behavioral regulation subscales to form a quasi-simplex pattern (Guttman, 1954), in which constructs that are more adjacent to each other on the underlying internalization continuum should correlate positively, whereas constructs more distant to each other should be less positively (or negatively) correlated. Results confirmed this quasi-simplex pattern. Specifically, external regulation related positively to introjected regulation ($r = .53$, $p < .001$) and was unrelated to identified regulation ($r = .05$, $p > .05$). Introjected and identified regulation were positively correlated ($r = .53$, $p < .001$). This pattern of correlations suggests that introjected regulation lies between external and identified regulation, which provides further evidence for the internal validity of the scale and justifies the creation of a summary index that reflects adolescents' overall level

assess intrinsic motivation (i.e., engaging in an activity for its own sake). By definition, reasons for following parental rules have a means-end structure such that the concept of intrinsic motivation is not relevant. As the present study only assessed different types of extrinsic motivation that vary in their degree of internalization, it seemed conceptually more appropriate to use the label *RII* (Neyrinck et al., 2006).

of internalization (Vallerand, Fortier, & Guay, 1997). To create this index, we assigned each behavioral regulation a weight depending on its placement along the internalization continuum (Ryan & Connell, 1989). We weighted external, introjected, and identified forms of regulation as -2 , -1 , and $+3$, respectively, and we summed the weighted scores to create an overall composite score. This weighting procedure guarantees that the sum of the assigned weights is zero (Ryan & Connell, 1989). Previous studies used a similar weighting procedure (Neyrinck et al., 2006; Ryan & Connell, 1989; Vansteenkiste et al., 2005). Following Neyrinck and colleagues (2006), we refer to this score as the relative internalization index (RII).²

Descriptive statistics

Table 3 presents means and standard deviations for the study variables. We used the Mahalanobis distance measure to identify multivariate outliers. On the basis of this measure, we removed 3 participants. Due to missing values, we could not compute scale scores for some of the participants. Accordingly, *ns* varied somewhat between scales, as indicated in Table 3. Given the relatively limited number of missing values, we did not estimate or impute missing values. Full data on all scales were available for 215 participants. As shown in Table 3, the mean score on the prohibiting scale was 1.87 on a 5-point scale, indicating that prohibition of friendships does not occur frequently in parent–adolescent relationships. This is further reflected in the finding that 85% of the participants obtained a score lower than 3 (i.e., the scale's midpoint) on the prohibition scale. Despite this low mean, it is worth noting that the full range of scores was present in our sample, with at least some participants obtaining scores close to or at the maximum of the prohibition scale. Further, we found that the mean score for a controlling style of prohibition ($M = 1.63$) was substantially lower

than the mean for an autonomy-supportive style of prohibition ($M = 3.59$), $t(215) = 20.16$, $p < .001$, which most likely reflects the fact that we obtained our data in a community sample in which parent–adolescent relationships were rather positive.

We performed a series of analyses of variance (ANOVAs) to examine whether the study variables differed by gender, type of education (viz., academic track vs. vocational school), and family structure (viz., intact vs. nonintact). Those analyses revealed that type of education and family structure were unrelated to the study variables. As indicated in Table 3, however, gender related significantly to several study variables. Specifically, girls reported higher identified regulation than boys did. In contrast, boys, relative to girls, reported higher best friend antisocial behavior, group antisocial behavior, and total deviant peer affiliation. Boys, relative to girls, also reported higher delinquency, antisocial behavior, and total involvement in problem behaviors. We computed a series of correlations to examine the associations between age and the study variables. None of those correlations was significant (*r*s ranged from .01 to .13). Thus, we controlled for gender in the primary analyses because it was the only background variable that systematically related to the study variables.

Table 4 presents correlations among the study variables. As shown, parental prohibition related positively to a controlled style of prohibition and was unrelated to an autonomy-supportive style of prohibition. Therefore, on average, adolescents perceived parental prohibition of friendships as controlling; however, parental prohibition was orthogonal to an autonomy-supportive style of prohibition, indicating that adolescents did not necessarily perceive prohibition as autonomy inhibiting. Contrary to expectations, the correlation between an autonomy-supportive style of prohibition and a controlling style of prohibition was not significant.

Parental prohibition of friendships related positively to external regulation, antisocial behavior, and involvement in problem behaviors. Moreover, parents' styles of prohibition, relative to prohibition itself, related more

2. We did not report the structure matrix of this PFA and the PFA performed on the internalization items here for reasons of parsimony. Readers interested in this matrix can obtain it from the first author upon request.

Table 3. Descriptive statistics for the full sample and separately by gender

Variable	Valid N	Full sample			Boys		Girls		Gender difference	
		M (SD)	Possible range	Observed range	M (SD)	M (SD)	M (SD)	F(1, 213)	η^2	
Prohibition	224	1.87 (0.78)	1.0-5.0	1.0-5.0	1.77 (0.69)	1.99 (0.82)	3.60	.02		
Controlling prohibition	216	1.63 (0.73)	1.0-5.0	1.0-5.0	1.50 (0.61)	1.70 (0.79)	3.69	.02		
Autonomy-supportive prohibition	216	3.59 (1.16)	1.0-5.0	1.0-5.0	3.42 (1.26)	3.63 (1.09)	1.43	.01		
Relative internalization index	225	2.23 (3.57)	-8.0 to 12.0	-7.0 to 1.0	1.66 (3.28)	2.67 (3.76)	3.78	.02		
External regulation	225	1.99 (0.93)	1.0-5.0	1.0-4.7	1.99 (0.88)	1.98 (0.97)	0.00	.00		
Introjected regulation	225	2.16 (0.83)	1.0-5.0	1.0-5.0	2.05 (0.77)	2.22 (0.86)	1.89	.01		
Identified regulation	225	2.79 (1.07)	1.0-5.0	1.0-5.0	2.57 (0.98)	2.95 (1.08)	5.29*	.02		
Deviant peer affiliation	228	1.82 (0.71)	1.0-5.0	1.0-3.8	2.20 (0.70)	1.61 (0.63)	31.40***	.12		
Best friend antisocial	228	1.73 (0.77)	1.0-5.0	1.0-4.6	2.06 (0.81)	1.56 (0.71)	5.78*	.03		
Peer group antisocial	228	1.98 (0.83)	1.0-5.0	1.0-4.2	2.36 (0.86)	1.74 (0.70)	33.86***	.12		
Involvement in problem behaviors	230	0.72 (0.30)	0.5-4.0	0.5-3.0	0.84 (0.38)	0.66 (0.22)	18.36***	.08		
Delinquency	230	0.12 (0.23)	0.0-3.0	0.0-1.6	0.20 (0.31)	0.08 (0.10)	19.79***	.06		
Antisocial behavior	231	1.32 (0.44)	1.0-5.0	1.0-4.3	1.48 (0.54)	1.24 (0.36)	12.23***	.05		

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4. Correlations among study variables

	1	2	3	4	5	6	7	8	9	10	11	12
1. Prohibition												
2. Controlling prohibition	.49***											
3. Autonomy-supportive prohibition	.04	-.11										
4. Relative internalization index	-.10	-.37***	.32***									
5. External regulation	.16*	.52***	-.22***	-.61***								
6. Introjected regulation	.03	.17*	.04	-.03	.53***							
7. Identified regulation	-.01	-.07	.24***	.75***	.05	.53***						
8. Deviant peer affiliation	.11	.15*	-.25***	-.33***	.29***	.09	-.18**					
9. Best friend antisocial	.08	.11	-.29***	-.24***	.26***	.09	-.09	.88***				
10. Peer group antisocial	.13	.25***	-.18*	-.37***	.27***	.08	-.22**	.88***	.52***			
11. Involvement in problem behaviors	.13*	.22**	-.17**	-.21**	.18**	-.01	-.13	.48***	.34***	.53***		
12. Delinquency	.09	.13*	-.05	-.15*	.14*	.00	-.09	.44***	.32***	.45***	.79***	
13. Antisocial behavior	.13*	.23***	-.21***	-.20**	.19**	-.01	-.11	.43***	.31***	.50***	.94***	.56***

* $p < .05$. ** $p < .01$. *** $p < .001$.

systematically and strongly to the levels of internalization and the outcomes. As expected, a controlled style of prohibition related positively to external and introjected regulation and negatively to the RII. A controlled style of prohibition also related positively to peer group antisocial behavior, deviant peer affiliation, delinquency, antisocial behavior, and involvement in problem behaviors. Also as expected, an autonomy-supportive style of prohibition related negatively to external regulation and positively to identified regulation. Further, an autonomy-supportive style of prohibition related negatively to best friend antisocial behavior, group antisocial behavior, deviant peer affiliation, delinquency, antisocial behavior, and involvement in problem behaviors.

Finally, the associations among the levels of internalization and the problem behavior outcomes largely confirmed our hypotheses. The relations of the three regulatory styles to the outcome variables tended to follow a simplex pattern because they related less positively and more negatively as they moved along the internalization continuum from external to identified regulation. In line with this, the RII related negatively to each of the scales that assessed deviant peer affiliation and involvement in problem behaviors. Finally, as expected, there were strong and consistent associations between the scales that assessed deviant peer affiliation and involvement in problem behaviors.

Primary analyses

We used SEM with latent constructs to examine the hypothesized conceptual model depicted in Figure 1. We preferred SEM with latent constructs over SEM with observed variables because the former approach allows the analyst to control for measurement error. We used LISREL 8.54 (Jöreskog & Sörbom, 1996) to conduct analysis of the covariance matrices and to generate solutions on the basis of maximum-likelihood (ML) estimation. Although ML estimation assumes multivariate normality, simulation studies have shown that the values of parameter estimates that ML generates are relatively robust

against nonnormality (Kline, 2005), which is important because a substantial number of indicators in this study violated the assumption of normality (see below). We modeled six latent constructs (i.e., parental prohibition, controlling style of prohibition, autonomy-supportive style of prohibition, internalization, deviant peer affiliation, and involvement in problem behaviors). The four items that assessed each of these constructs indicated the latent constructs parental prohibition and autonomy-supportive style of prohibition. Four parcels indicated the latent construct controlling style of prohibition. A parcel is an aggregate-level indicator composed of the sum or average of two or more individual items. In this study, we created four parcels for the controlling style of prohibition construct by computing the mean of one overt and one covert control item. Three parcels indicated the latent construct internalization. To create these parcels, we randomly selected two external, two introjected, and two identified regulation items. Next, we weighted each item according to its theoretical position along the continuum of internalization. We then computed each of the three RII parcels as the mean of two external regulation items (weighted -2), two introjected regulation items (weighted -1), and two identified regulation items (weighted $+3$). We used parcels, rather than the observed item scores, as indicators of both a controlling style of prohibition and internalization to reduce the ratio between the number of parameters in the models and the sample size. The latent construct deviant peer affiliation had two indicators: the scale scores for best friend antisocial behavior and peer group antisocial behavior. Finally, the latent construct involvement in problem behaviors had two indicators: the scale scores for delinquency and antisocial behavior. To control for the relation of gender, we regressed each parcel onto gender and used the residual scores as indicators.

Data screening of the observed indicators revealed data nonnormality, both at the univariate and at the multivariate levels. At the univariate level, 13 of 20 observed indicators were skewed and 8 indicators showed deviations in kurtosis. The multivariate tests

for skew ($z = 36.94$, $p < .001$) and kurtosis ($z = 15.35$, $p < .001$) also showed significant deviations from normality. Therefore, in all subsequent models we used the asymptotic covariance matrix between all indicators as input and inspected the Satorra–Bentler scaled chi-square (SBS- χ^2 ; Satorra & Bentler, 1994). We selected the comparative fit index (CFI) and the root mean square error of approximation (RMSEA) to evaluate model goodness of fit, with combined cut-off values close to .95 for CFI and .06 for RMSEA indicating good model fit (Hu & Bentler, 1999).

Measurement model

As Anderson and Gerbing (1988) recommend, we first tested a measurement model comprised of all latent constructs involved in this study prior to examining the structural associations among the latent constructs. Estimation of the measurement model with 20 observed indicators and six latent constructs yielded an acceptable model fit, SBS- $\chi^2(137) = 252.20$, $p < .001$; CFI = .96; RMSEA = .06. All indicators had significant ($p < .001$) loadings on their respective latent constructs, ranging from .50 to .94 (mean lambda = .71).

Structural models

In a first set of structural models, we assessed the relative contribution of parental prohibition and styles of prohibition to the prediction of internalization, deviant peer affiliation, and involvement in problem behaviors. These models allowed us to test the hypothesis that parental styles of prohibition are more strongly related to internalization, deviant peer affiliation, and involvement in problem behaviors, compared to prohibition itself. We estimated separate models for internalization, deviant peer affiliation, and involvement in problem behaviors as dependent variables. In each model, we modeled prohibition, controlling style of prohibition, and autonomy-supportive style of prohibition as simultaneous predictors. Each of the three models approached the criteria for acceptable fit (CFIs $> .95$ and RMSEAs $< .08$). Prohibition was unrelated to each of the three outcome variables (standardized path coefficient

$\beta = .16$, $\beta = .10$, and $\beta = .07$, respectively, all $ps > .05$). A controlling style of prohibition was negatively related to internalization ($\beta = -.47$, $p < .001$) and positively related to deviant peer affiliation and involvement in problem behaviors ($\beta = .24$, $p < .05$, and $\beta = .27$, $p < .01$, respectively). By contrast, an autonomy-supportive style of prohibition was positively related to internalization ($\beta = .32$, $p < .001$) and negatively related to deviant peer affiliation and involvement in problem behaviors ($\beta = -.27$, $p < .01$, and $\beta = -.18$, $p < .05$, respectively). Together, these findings suggest that parental prohibition does not have unique relations to internalization, deviant peer affiliation, or involvement in problem behaviors after accounting for the styles of prohibition.

In the second set of structural models, we examined the full hypothesized model depicted in Figure 1, which posits an intervening role for internalization in the relations of styles of prohibition to deviant peer affiliation. We did not include prohibition in this phase of model testing because it was unrelated to each of the intervening and dependent variables. We followed Holmbeck's (1997) recommendations to test the intervening role of internalization using three steps. First, we tested a direct effects model that included direct relations of styles of prohibition to deviant peer affiliation. Second, we tested a full mediation model in which the styles of prohibition related indirectly to deviant peer affiliation through internalization. Third, we tested a partial mediation model that included direct relations of styles of prohibition to deviant peer affiliation, in addition to the indirect relations through internalization. Full mediation is evident when the partial mediation model does not fit the data better than the full mediation model (Holmbeck, 1997).

The direct effects model included relations of controlling and autonomy-supportive styles of prohibition to deviant peer affiliation, which related to involvement in problem behaviors. This model yielded adequate fit, SBS- $\chi^2(50) = 92.12$, $p < .001$; CFI = .96; RMSEA = .06, and showed that both controlling and autonomy-supportive styles

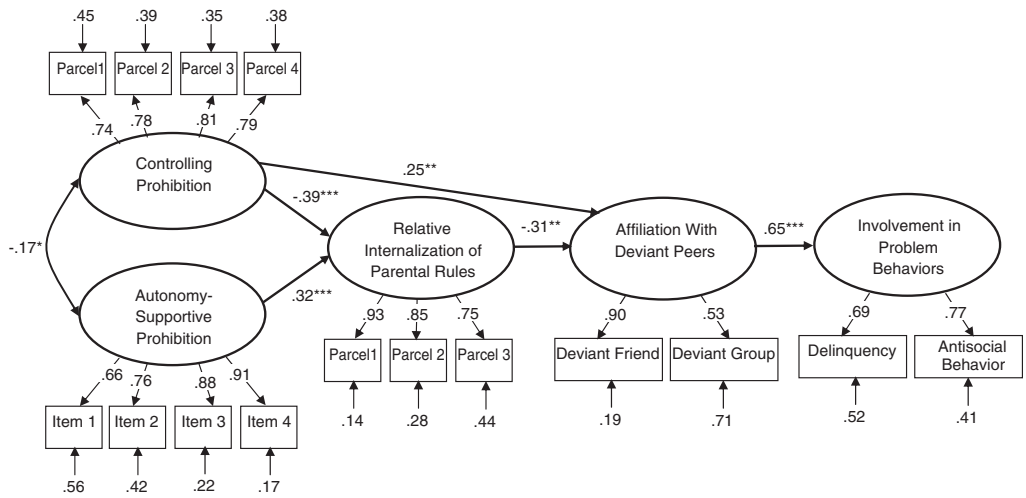


Figure 2. The structural model, with standardized parameter estimates, of the associations among styles of prohibition, internalization of parental rules for friendships, deviant peer affiliation, and involvement in problem behaviors.

** $p < .01$. *** $p < .001$.

of prohibition related to deviant peer affiliation ($\beta = .37, p < .001$, and $\beta = -.23, p < .01$, respectively), and deviant peer affiliation related positively to involvement in problem behaviors ($\beta = .70, p < .001$). Adding direct relations of the styles of prohibition to involvement in problem behaviors did not result in a significant improvement in model fit, $\Delta\text{SBS-}\chi^2(2) = 1.52, p > .05$, and both paths were nonsignificant ($ps > .05$). Thus, we did not include these paths in subsequent analyses.

The full mediation model included relations of the styles of prohibition to internalization, internalization to deviant peer affiliation, and deviant peer affiliation to involvement in problem behaviors. This model yielded an acceptable fit, $\text{SBS-}\chi^2(85) = 151.72, p < .001$; CFI = .97; RMSEA = .06, and all path coefficients were significant ($ps < .001$).

Adding a direct relation of an autonomy-supportive style of prohibition to deviant peer affiliation (i.e., testing the partial mediation model for an autonomy-supportive style of prohibition) did not improve model fit, $\Delta\text{SBS-}\chi^2(1) = 1.52, p > .05$, and this relation was no longer significant ($\beta = -.12, p > .05$). A Sobel (1982) test showed that the indirect relation of an autonomy-supportive

style of prohibition to deviant peer affiliation through internalization was significant ($z = -2.94, p < .01$). In contrast, adding a direct relation of a controlling style of prohibition to deviant peer affiliation improved model fit significantly, $\Delta\text{SBS-}\chi^2(1) = 3.86, p < .05$, and this relation remained significant ($\beta = .25, p < .01$). The indirect relation of a controlling style of prohibition to deviant peer affiliation through internalization was significant ($z = 2.90, p < .01$). In sum, whereas internalization fully mediated the relation of an autonomy-supportive style of prohibition to deviant peer affiliation, internalization was a partial mediator in the relation of a controlling style of prohibition to deviant peer affiliation. The best fitting model, $\text{SBS-}\chi^2(84) = 146.86, p < .001$; CFI = .98; RMSEA = .06, is depicted in Figure 2.³

3. In an additional set of regression analyses, we examined whether styles of prohibition would predict internalization of parental rules for friendships after controlling for general dimensions of parenting style (i.e., autonomy support and psychological control). This is important because we wanted to show that it is parents' specific style in the friendship domain (rather than their domain-general style) that matters for the internalization of rules for friendships. In Step 1, we entered prohibition and the styles of prohibition in the prediction of the three internalization measures and

Moderation by gender and age

We conducted two multigroup analyses to examine whether gender and age moderated the structural relations found in the final model. Multigroup analysis compares a constrained model, in which the structural coefficients of the model are set equal across gender or age, to an unconstrained model, in which we allowed those coefficients to vary across gender or age. We compared models using the difference in chi-square that corresponds to the difference in the number of degrees of freedom between the unconstrained and the constrained models. A significant difference implies that the model differs significantly across gender or age. To test for the moderating role of adolescents' age, we created two groups based on a median split of the age variable, namely younger adolescents ($M_{\text{age}} = 15.77$, $SD = 0.47$) and older adolescents ($M_{\text{age}} = 17.14$, $SD = 0.54$). Multigroup analysis showed that gender and age did not moderate the five structural relations in Figure 2, $\Delta\text{SBS-}\chi^2(5) = 7.65$, $p > .05$, and $\Delta\text{SBS-}\chi^2(5) = 2.01$, $p > .05$, respectively.

Discussion

Most research on the role of parents in the processes related to deviant peer affiliation during adolescence has examined either parents' rearing style (e.g., authoritarianism; Brown, Mounts, Lamborn, & Steinberg, 1993) or specific parenting practices (e.g., prohibition; Mounts, 2001). The aim of this study was to add to the body of research by (a) simultaneously assessing the amount of prohibition and styles of prohibition; (b) examining the associations among parental prohibition, styles of prohibition, deviant peer affiliation, and involvement in problem behaviors; and (c) examining the intervening role of

adolescents' internalization of parental rules for friendships among these associations. Several interesting findings emerged.

First, using factor analysis we demonstrated that parental prohibition of friendships and parental styles of prohibition (i.e., autonomy supportive and controlling) are distinct constructs, although we should note that at least one of the prohibition items tended to cross-load on the controlling style factor (see Table 1). The mean prohibition score was fairly low, indicating that prohibition of friendships does not occur frequently, at least in this community sample. The low mean of prohibition of friendships is consistent with the idea that parents are reluctant to intervene in the personal domain because they anticipate that children would perceive their intervention as illegitimate (Smetana & Daddis, 2002). Interestingly, whereas parental prohibition itself related positively to a controlling style of prohibition, it was unrelated to an autonomy-supportive style of prohibition. Thus, it appears that when parents do prohibit friendships, on average, they communicate such prohibitions in a more controlling way. This is in line with previous research showing that adolescents typically perceive peer management strategies, such as prohibition and guiding, as controlling (Soenens, Vansteenkiste, Smits, et al., 2007). Also this finding is consistent with social domain theory's assertion that adolescents typically experience parental interventions in the personal domain (e.g., friendships) as illegitimate and intrusive (Smetana & Daddis, 2002). The finding that parental prohibition did not relate negatively to an autonomy-supportive style of prohibition is interesting because it contradicts the widespread notion within developmental psychology that parental rule setting is necessarily inhibitive of autonomy. This confusion stems mainly from the tendency among developmental psychologists to equate autonomy with granting unrestricted freedom and with a permissive, "laissez faire" approach (Sierens, Vansteenkiste, Goossens, Soenens, & Dochy, 2009; Soenens, Vansteenkiste, Lens, et al., 2007). According to self-determination theory, parents can support their child's autonomy even when they

the RII. In Step 2, we added the general dimensions of parenting style (i.e., autonomy support and psychological control). All associations between styles of prohibition and internalization remained significant. In general, the styles of prohibition were more strongly and consistently related to internalization than the general dimensions of parenting style, indicating that the styles of prohibition have specific relevance for internalization and that the general dimensions of parenting style cannot explain their relations.

communicate rules for behavior, which limits the child's ability to make independent decisions (Grolnick, 2003). This can be done by taking the child's perspective (e.g., acknowledging that it may not be easy to terminate certain friendships) and by providing a meaningful rationale for following the parental guidelines. An autonomy-supportive style of communicating a clear parental expectation for behavior (e.g., not hanging out with a particular friend) does not grant the child unrestricted freedom; however, it is still likely that the adolescent would feel understood by the parents, internalize the parents' rules, and, hence, experience some degree of volition in sticking to their parents' rules. Apart from the possibility that autonomy-supportive parenting increases the likelihood of internalization, the possibility also exists that parents respond in a more autonomy-supportive manner when their children are more inclined to internalize parental rules.

One unexpected finding was the nonsignificant association between autonomy-supportive and controlling styles of prohibition ($r = -.11$). This correlation is surprising because, theoretically, autonomy-supportive parenting and controlling parenting represent rather incompatible parenting dimensions that should be strongly negatively correlated (Grolnick, 2003) and because research with domain-general assessments of both dimensions has indeed obtained strong negative correlations (Soenens, Vansteenkiste, & Sierens, 2009). The nonsignificant correlation obtained in the current study suggests that in the friendship domain, some parents are either autonomy-supportive or controlling, whereas other parents are simultaneously autonomy-supportive and controlling. Most likely, the latter parents sometimes engage in autonomy-supportive tactics and sometimes engage in controlling tactics, such that those tactics come to coexist in their parenting style across time. It remains unclear, however, why this would be specifically the case in the domain of friendships and not at the general (domain-overarching) level. Clearly, research needs to explore this issue further. Another interesting area for future research would be an in-depth, qualitative analysis of the reasons

parents provide to prohibit friendships. It is unlikely that all rationales from parents are equally meaningful or child centered. Some rationales may emanate from an authentic parental concern for the child's welfare (e.g., developing mutually satisfying relationships), whereas others may reflect parents' own agendas (e.g., when parents want their child to affiliate with friends that fit with the family's reputation and status). It would be interesting to examine whether adolescents perceive the former type of rationale as more meaningful and autonomy supportive than the latter.

A second set of findings concerns the differential relations of prohibition and parental styles of prohibition to the measures of deviant peer affiliation and involvement in problem behaviors. Parental prohibition itself was unrelated to the dependent variables. If anything, the amount of prohibition related positively to involvement in problem behaviors, which is consistent with earlier reports (Mounts, 2001, 2002; Tilton-Weaver & Galambos, 2003). Parental styles of prohibition did relate systematically to the behavioral outcomes, as an autonomy-supportive style of prohibition related negatively, and a controlling style of prohibition related positively, to deviant peer affiliation and involvement in problem behaviors. These findings are in line with Darling and Steinberg's (1993) claim that parents' style of communicating specific practices (e.g., prohibition) is essential to understanding whether such practices will protect against maladaptive behavioral outcomes. Another possible interpretation of these findings is that parents may respond to their adolescents' deviant peer affiliation with a more controlling and a less autonomy-supportive style of prohibition.

Third, the present study goes beyond the observation that different styles of prohibition relate differentially to deviant peer affiliation by examining the process of internalization as an intervening variable in those associations. As such, this study is among the first to assess adolescents' internalization of parental rules for friendships. In line with self-determination theory, we found evidence for a distinction between three motives for following parental rules that one can order along an underlying

continuum of internalization (viz., external, introjected, and identified regulation). More important, adolescents' relative position on this continuum (as their score on the RII indicates) at least partially accounted for the relations of parental styles of prohibition to deviant peer affiliation. Adolescents who reported that their parents communicated prohibition using an autonomy-supportive style scored higher on our measure of internalization, whereas adolescents who reported that their parents communicated prohibition using a controlling style scored lower on this measure. A lack of internalization related positively to deviant peer affiliation, likely because adolescents who follow parental rules primarily to avoid punishment or parental criticism lack a reason to comply with those rules once they are outside of the parental supervision. It is only when adolescents endorse their parents' rules that they are likely to follow these guidelines in the absence of parental supervision.

It is worthwhile to note that gender and age did not moderate the hypothesized associations among the styles of prohibition, internalization, and the behavioral outcomes. Not only do these findings testify to the robustness of the hypothesized model, they also support the claim made within self-determination theory that high-quality internalization allows individuals to satisfy the basic psychological needs for autonomy, competence, and relatedness (Ryan & Deci, 2000). Because these needs are universal (Ryan & Deci, 2000), one can expect that the process of internalization and the interpersonal factors that facilitate internalization invariantly relate to adaptive outcomes across age and gender.

Interestingly, taking into account internalization did not fully reduce the relation of a controlling style of prohibition to deviant peer affiliation. That is, a controlling style of prohibition had both direct and indirect relations to deviant peer affiliation, which suggests that additional processes may account for this relation. One possibility is that a controlling style of prohibition both inhibits internalization and elicits an unpleasant affective response by adolescents, who may feel that prohibition is a threat to their personal

jurisdiction and who may rebel against their parents' rules (Brehm, 1966). Future research may examine the intervening role of defiant or rebellious reactions. Another possibility is that the remaining direct association between controlling prohibition and deviant peer affiliation reflects a child effect, rather than a parent effect. Parents of adolescents who are involved with deviant peers may become highly concerned about the consequences of their children's deviant peer affiliation. Driven by such concerns, parents may resort to a punitive response as the most direct way to put an end to the child's problematic peer relationships. This punitive response may in turn further undermine adolescents' internalization of their parents' rules for friendships and increase their problem behavior over time. Longitudinal research should examine these presumed reciprocal dynamics.

Another direction for future research is to extend the model proposed in this study to other life domains. Friendships typically represent a personal issue (Smetana, 1995). Accordingly, it may be worthwhile to examine the validity of our model in the domains of morality or social convention. Based on social domain theory, it is likely that adolescents would perceive parental rule setting within the moral domain (e.g., stealing and fighting) as less controlling compared to rule setting in the friendship domain. Also, adolescents may more easily internalize parental rules for moral issues compared to personal issues because they perceive the former rules as more legitimate. If our conceptual model holds any truth, however, then the structural relations posited among the concepts of parental styles, internalization, and adaptive behavior should hold in other life domains. Even though adolescents may be less likely to perceive their parents as controlling when parents prohibit particular behaviors in the moral domain (e.g., stealing), when parents do pressure their children to comply with their moral rules both a lack of internalization and less engagement in adaptive moral behavior are likely to follow.

Limitations

This study provided only a preliminary test of our proposed conceptual model. As such, it has a number of important limitations. First, our data were self-reported, and as a consequence, some of the associations obtained may be overestimated due to shared method variance. An important aim for future research is to obtain parental reports of prohibition and styles of prohibition. This multi-informant approach would increase the validity of our assessments of prohibition and styles of prohibition, and would allow for an examination of the discrepancies between parents' and children's reports of styles of prohibition and the role of these discrepancies in the children's functioning (Mounts, 2007). Future research may also use a multi-informant approach to assess deviant peer affiliation and involvement in problem behaviors (e.g., through teacher and peer nomination). This is important because the correlation between deviant peer affiliation and adolescents' own involvement in problem behaviors may be inflated due to the use of self-reports (Mounts, 2001). Second, although our new and integrated measure of parental prohibition and styles of prohibition yielded interesting results, it has a number of shortcomings. The reliability of the prohibition measure was modest, which may explain why prohibition as such was less strongly related to the outcomes than the styles of prohibition. Moreover, one of the prohibition items tended to cross-load with the controlling prohibition factor.⁴ Further, a number of participants who scored low on the prohibition items did not fill out the style of prohibition items, possibly because they felt that the latter items did not apply to them. Future research may address these shortcomings, for instance, by formulating more items (thereby increasing scale reliability) and formulating items that distinguish

even better between prohibition and controlling style of prohibition.

A third limitation is the cross-sectional design of this study, which prevented an examination of the longitudinal dynamics involved in the relations within our conceptual model. Based on extant research and theory (Tilton-Weaver & Galambos, 2003), it is likely that the relations in our model are reciprocal. For instance, although we modeled prohibition, styles of prohibition, and internalization as predictors of deviant peer affiliation and involvement in problem behaviors, adolescents' behaviors may affect parents' styles of responding as well. Indeed, parental prohibition may not even initiate adolescents' affiliations with deviant peers; rather, other factors (e.g., disadvantaged neighborhood, temperament, general lack of parental monitoring) may contribute more directly to a susceptibility to deviant peer affiliation (Lacourse et al., 2003). Once adolescents become involved with deviant peers, however, parents' styles of responding may be important to the determination of adolescents' subsequent behavior. When adolescents get in trouble because of their affiliation with deviant peers, parents may become highly concerned with their children's friendships. Driven by concern and worry, parents may become more likely to respond not just with prohibitions but also with a more controlling (i.e., punitive) style. A controlling style of prohibition may in turn relate in a cyclical manner to less internalization, more involvement in problem behaviors, and again more controlling prohibition; in contrast, an autonomy-supportive response may halt this trajectory of increasing affiliation with deviant peers. Given the importance of the outcomes involved in this transactional process (e.g., drug use, school success), a large-scale longitudinal study should examine these presumed longitudinal dynamics.

A fourth limitation is that the sample was not representative of any known population and therefore cannot be generalized beyond the one studied. In particular, the lack of heterogeneity in our sample in terms of important socioeconomic variables such as educational level, family structure, and ethnicity limits the generalizability of this study. As such, it is

4. To examine how the fourth prohibition item (which tends to cross-load on the controlling style of prohibition factor) affected our results, we performed additional analyses in which we omitted this item from the scale score. Analyses both with and without this item in the prohibition scale score yielded highly similar results.

unclear whether the model that we tested in this study will be generally applicable to populations that are less homogeneous in terms of these variables. Although there is a need to replicate this study in populations similar to the one here to determine whether the findings will be similar in another sample of the same population, there is also a particular need for future research to rely on samples with more ethnic heterogeneity. There are indications that parents in highly family-focused cultures (e.g., Latino and African American families) are less encouraging of friendships, possibly because they want to keep their children away from influences outside the family (Way, Greene, & Mukherjee, 2007). Accordingly, in cultures with a strong orientation toward the family, parents may often prohibit friendships and typically use a more controlling style when doing so. An important aim for future research, however, will be to go beyond the study of mean-level differences and to assess whether the structural relations obtained in this study generalize to samples of non-Western children and adolescents. On the basis of extant research (Chirkov, Ryan, Kim, & Kaplan, 2003; Vansteenkiste et al., 2005), we hypothesize that, in spite of mean-level differences, autonomy-supportive and controlling styles of prohibition would relate in similar ways to internalization and adolescent outcomes across nations and cultures. More generally, there is a need to replicate our findings using samples that are more heterogeneous in terms of family structure, educational level, and socioeconomic status. This is important because we obtained the current findings by studying a community sample of relatively well-adjusted adolescents. As such, it remains to be examined whether our findings are generally applicable to samples of more deviant adolescents.

Conclusion

The initial question that guided this research was whether practitioners working with parents and families (e.g., family therapists and counselors) should prohibit parental prohibition of friendships. Our answer is no. Nonetheless, if parents aim to prohibit their

adolescents' friendships, they would do well to pay attention to their style of communicating prohibitions. When adolescents perceive their parents as prohibiting friendships in a pressuring way, adolescents only seem to adopt their parents' rules for friendships out of obligation. This lack of full internalization is unlikely to protect against the susceptibility to deviant peer affiliation. Moreover, the disruptive behaviors that follow from this lack of internalization may further elicit and reinforce a controlling parental response to their children's friendships. Conversely, adolescents who perceive their parents as managing their friendships in an autonomy-supportive manner seem to be more likely to accept their parents' rules for friendships. The adaptive behavioral outcomes associated with this high-quality internalization may in turn leave room for parents to regulate their children's friendships in an autonomy-supportive manner.

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