

**Varying Association Between Peer Problem Behavior and Adolescent Problem Behavior
as a Function of Parental Rule Obedience**

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I. Introduction

During adolescence, children spend more time with their peers than when they were younger (Larson & Richards, 1991; Larson, Richards, Moneta, Holmbeck, & Duckett, 1996). With this increased peer contact, it is more likely that adolescents will influence one another more than is true for younger children. There has been a great deal of research on peer influence on many different aspects of adolescent development. Peer influence has been found in regard to both positive and negative characteristics of adolescents. For example, adolescents who are with high achieving friends at school are more likely to improve their academic achievement, whereas adolescents associating with delinquent peers are more likely to be involved in delinquent behavior (e.g., Berndt & Keefe, 1995; Vitaro, Tremblay, Kerr, Pagani, & Bukowski, 1997). Peers have also been found to influence adolescents' self-esteem, identity development, attitude towards school, and level of psychological distress (e.g., Akers, Jones, & Coyl, 1998; Hogue & Steinberg, 1995; Kurdek, Fine, & Sinclair, 1995).

Peer influence on problem behavior has been studied more than any other area. There is considerable evidence that association with deviant peers puts adolescents at higher risk for problem behavior. For example, having substance-using friends was found to be related to adolescents' own substance use, and having delinquent friends was found to be related to adolescents' own involvement in delinquent behavior (Hawkins, Catalano, & Miller, 1992; Moffitt, 1993; Snyder, Dishion, & Patterson, 1986). These studies suggest that deviant peer association is a strong predictor of adolescent problem behavior even after considering the fact that adolescents tend to select peers with characteristics similar to their own.

Furthermore, in a longitudinal study of adolescent substance use, Dishion, Capaldi, Spracklen, & Li (1995) demonstrated that having substance-using friends at age 13 or 14 significantly increased adolescent boys' substance use two years later, when they were 15 or 16 years old. This relationship remained significant even after controlling for the earlier level

of problem behavior of the boys. In another longitudinal study, Vitaro et al., (1997) found that boys who had moderate levels of problem behavior became more delinquent later if they had hyperactive and aggressive friends at age 11 or 12, compared to other boys with moderate problem behavior who did not have friends with those negative qualities. In a recent review of adolescent intervention research, Dishion, McCord, & Poulin (1999) showed that intervention programs for adolescents with problem behavior unfortunately worsened their problems if the programs involved group activities. This review indicated that spending time with delinquent peers, even in intervention settings, can have a negative impact on adolescents.

Although peer influence has been well established as a factor in adolescent problem behavior, the process by which peers affect adolescents' problem behavior has been understudied. One approach to use to address this issue is Bronfenbrenner's (1979) ecological perspective. This perspective emphasizes that research on human development should consider the interrelations between the individuals' characteristics and their contexts.

Similarly, Hartup (1999) pointed out that research on peer influence has to consider the factors that can moderate the process of peer influence, such as the characteristics of the peers involved, those of the adolescents who are being influenced, and those of their families.

There have been a few studies on peer influence conducted from an ecological perspective. In these studies, parenting was considered as a factor that can moderate the process through which peers influence adolescent problem behavior. For example, in a longitudinal study of peer influence, Mounts et al. (1995) found that the relationship between having substance-using friends and adolescents' substance use one year later was stronger among adolescents whose parents were less authoritative. In another study of susceptibility to

peer pressure, Steinberg (1986) also found differences in adolescents' susceptibility to negative peer pressure between those who reported their parents to be highly authoritative and those who reported their parents to be less authoritative. This result held true even when the adolescents spent after-school time with peers without parental supervision. These findings indicate that parenting style can make a difference in the ways in which adolescents are influenced by their peers.

Those studies on the moderating effect of parenting on the relationship between association with problem peers and adolescent problem behavior have contributed to the understanding of the peer influence process. However, parenting would not be the only factor that would moderate the relationship. As Bronfenbrenner (1979) maintained, adolescents' individual characteristics should also be considered as a factor that can make a difference in the extent to which adolescents are influenced by their contexts. Adolescents' conception of parental authority can be one such factor to moderate peer influence on adolescent problem behavior.

Conception of parental authority, which is operationally defined, in this study, as individuals' beliefs about whether they are obliged to obey parental rules (rule obedience) (Damon, 1977; Laupa, Turiel, & Cowan, 1995), becomes more important during adolescence. Developing a sense of themselves as distinct individuals with their own ideas and opinions, and growing into autonomous individuals are important tasks that adolescents need to fulfill (Baumrind, 1991; Silverberg & Gondoli, 1996). To achieve these developmental goals, adolescents need to have increasing opportunities to make decisions for themselves. However, adolescents are not yet capable of complete autonomy. Adolescents still need

parental guidance to follow while being granted more autonomy. In that sense, adolescent conception of parental authority (rule obedience) can be especially important in situations where adolescents have to make decisions about whether to become involved in problem behavior. Because adolescents spend a lot of time without parents' direct supervision, it is important that they have internalized parental standards and rules of behavior and that they are willing to make decisions on their behavior according to those standards and rules.

Adolescents' beliefs that they have to obey parental rules could be a protecting factor against negative peer influence on adolescents in situations where they have to make decisions about whether to be involved in problem behavior. It can be reasoned that if adolescents have internalized parental rules of behavior and have strong beliefs that they should behave according to the parental rules, adolescents would be less prone to negative peer influence. On the basis of the possibility that adolescents' conception of parental authority may be a moderating factor of the process of peer influence on adolescent problem behavior, the present study examined whether adolescents' rule obedience can make a difference in the extent of peer influence on adolescent problem behavior. Two kinds of problem behavior, drinking and vandalism (damaging others' property for fun), were examined in this study.

Specifically, this study addressed the following research questions.

Questions 1: Are adolescents whose friends drink more likely to drink themselves?

Questions 2: Does the relationship between peer drinking and adolescent drinking vary as a function of adolescent rule obedience?

Questions 3: Are adolescents whose friends vandalize more likely to vandalize themselves?

Questions 4: Does the relationship between peer vandalism and adolescent vandalism vary as a function of adolescent rule obedience?

II. Methods

1. Participants

Parents of all students attending a middle school in a semi-rural mid-Atlantic community were sent letters explaining the study and asking their consent for their children's participation. After the initial mail recruitment, 65% of parents granted permission for their children to participate in the study (124 sixth graders, 130 seventh graders, and 144 eighth graders; 46.7 % were boys), 6% (33) of parents refused permission, and 29% (171) did not respond. No adolescents refused to participate. Of the 398 participating adolescents, 363 (91.5 %) reported that they were white, 11 (2.8 %) were African-American, and 19 (2.3 %) were Asian-American. Two hundred and seventy-nine (70.1 %) adolescents were living with both biological parents.

2. Procedure

Participants completed the questionnaires in a group setting during non-academic periods. The questionnaires took approximately 35 minutes to complete and focused on parent-adolescent relationships, school-related issues, problem behaviors, and peer relationships. Students who were absent on the day of administration or received parental permission after the day of administration were mailed questionnaires to complete at home and return. It took about 2 weeks, from the 7th to the 20th of February in 1997, to collect the data. Out of the 398 questionnaires that were returned, 48 were excluded from the analysis due to incomplete responses.

3. Measures

Measures used in this study were rule obedience, adolescent drinking and vandalism, and peer drinking and vandalism. As for peer drinking and vandalism, peers' self-reports, rather than adolescents' reports on peers, were used.

1) Rule Obedience

Adolescents' rule obedience was measured using a modification of a set of stimuli that Smetana (1988) developed for studies of adolescents' and parents' reasoning about everyday issues. This modified scale consisted of 26 items covering issues of adolescents' everyday lives. Adolescents were asked whether "they have to obey" parental rules about issues such as "the type of TV show or videos you watch," "where you go with your friends," "what you do after school," and "drinking alcohol." For each of the issues, responses indicating that they should obey the rule were assigned a score of one, and responses indicating that they did not have to were assigned a score of zero. The rule obedience scores were obtained by calculating the mean of the 26 responses ($\alpha = .94$; $M = .57$; $SD = .29$).

2) Drinking

Drinking was measured using two items, frequency of drinking and frequency of having five or more drinks in a row for the past 6 months. Responses were 0 = "never" 1 = "once," 2 = "twice," and 3 = "3 times or more." Items were averaged to create a single scale score ($\alpha = .78$; $M = 1.51$; $SD = .81$).

3) Vandalism¹⁾

Vandalism was measured using a single item asking about frequency of damaging property for fun (graffiti, breaking windows, scratching cars, etc.). Responses were 0 = “never” 1 = “once,” 2 = “twice,” and 3 = “3 times or more” ($M = 1.4$; $SD = .84$).

4) Peer Drinking and Peer Vandalism^{m)}

The participants were asked to name up to five closest friends at school. Peer drinking and vandalism were measured by matching the friends’ names to the named adolescents’ surveys and averaging peer reports on the target behavior: drinking ($\alpha = .75$; $M = 1.55$; $SD = .56$), and vandalism ($M = 1.42$; $SD = .57$). It has been found that friends’ self-reports are more valid sources of information about peer problem behavior than adolescents’ reports of their friends’ behavior because adolescents may overestimate the similarity between their friends and themselves (Kandel, 1996).

4. Data Analysis

In order to examine if adolescents whose friends drink are more likely to drink (Question 1) and if adolescents’ rule obedience moderates the relationship between peer drinking and adolescent drinking (Question 2), hierarchical multiple regression was used. Two sets of regression analyses were performed. In the first regression model, peer drinking, and rule obedience were entered as predictors of adolescent drinking. In the second model, an interaction term of peer drinking and rule obedience were added. Gender was controlled because adolescent drinking varied systematically by gender.

In order to examine if adolescents whose friends vandalize are more likely to

¹⁾, ²⁾ Cronbach’s alpha reliability coefficient could not be calculated for vandalism and peer vandalism because these were measured with a single item.

vandalize (Question 3), and if adolescents' rule obedience moderates the relationship between peer vandalism and adolescent vandalism (Question 4), hierarchical multiple regression was used. Two sets of regression analyses were performed. In the first regression model, peer vandalism, and rule obedience were entered as predictors of adolescent vandalism. In the second model, an interaction term of peer vandalism and rule obedience were added. Gender was controlled because adolescent vandalism varied by gender. The predictors were centered before they entered the regression equation in order to minimize problems due to collinearity and to facilitate interpretation of interaction terms (Aiken & West, 1991).

III. Results

1. Drinking

As shown in Table 1, results from the first set of regression analysis (Model 1) indicated that peer drinking and rule obedience were significant predictors of adolescent drinking. That is, adolescents whose peers reported higher drinking and who reported lower rule obedience reported higher drinking themselves. However, results from the second set of analysis (Model 2) indicated that the interaction between peer drinking and rule obedience was significant. The significant interaction indicated that the effect of peer drinking on adolescent drinking is moderated by rule obedience.

Table 1 Hierarchical Regression of Adolescent Drinking on Gender, Peer Drinking, Rule Obedience, and the Interaction between Peer Drinking and Rule Obedience

Variable	B	SE _B	b	t
Model 1 ($R^2 = .26$)				
Gender	-.11	.08	-.07	-1.37
Peer Drinking	.32	.07	.22	4.64***
Rule Obedience	-1.11	.13	-.40	-8.25***
Model 2 ($R^2 = .27$)				
Gender	-.10	.08	-.06	-1.27
Peer Drinking	.28	.07	.20	4.05***
Rule Obedience	-1.10	.13	-.39	-8.21***
Peer Drinking x Rule Obedience	-.53	.23	-.11	-2.37*

*** $p < .001$, * $p < .05$.

To examine the nature of the interaction, line graphs depicting the relationship between peer drinking and adolescent drinking were drawn separately for adolescents with relatively higher rule obedience and for those with lower rule obedience as recommended by Aiken & West (1991). As presented in Figure 1, peer drinking was more influential in adolescent drinking among adolescents who reported lower rule obedience.

Figure 1 The Relationship between Peer Drinking and Adolescent Drinking
as a Function of Adolescent Rule Obedience

In addition to the graphs, strength of the relationship between peer drinking and adolescent drinking was compared between a group of adolescents with lower parental rule obedience and a group with higher parental rule obedience in terms of the standardized regression coefficient (b). The participants were divided into two groups by median split on

their parental rule obedience scores. Regression predicting adolescent drinking with peer drinking as the independent variable and gender as a control variable was conducted separately for the two adolescent groups. Results confirmed that the peer drinking was a stronger predictor of adolescent drinking among adolescents with lower parental rule obedience ($b = .28, p < .001$) than among adolescents with higher parental rule obedience ($b = .20, p < .01$).

2. Vandalism

Results for vandalism were same as those for drinking. As shown in Table 2, results from the first set of regression analysis (Model 1) indicated that gender, peer vandalism, and rule obedience were significant predictors of adolescent vandalism. That is, adolescents whose peers reported higher level of vandalism and who reported lower rule obedience reported higher vandalism themselves. Also, the significant regression coefficient of gender indicated that boys tend to vandalize more than girls do. Results from the second set of analysis (Model 2) indicated that the interaction between peer vandalism and rule obedience was significant. The significant interaction indicated that the effect of peer vandalism on adolescent vandalism is moderated by rule obedience.

Table 2 Hierarchical Regression of Adolescent Vandalism on Gender, Peer Vandalism, Rule Obedience, and the Interaction between Peer Vandalism and Rule Obedience

Variable	B	SE _B	b	t
Model 1 ($R^2 = .30$)				
Gender	-.31	.08	-.19	-3.85***
Peer Vandalism	.19	.07	.14	2.67**
Rule Obedience	-1.20	.13	-.42	-9.02***

Model 2 ($R^2 = .34$)				
Gender	-.32	.08	-.19	-4.10***
Peer Vandalism	.13	.07	.10	2.1*
Rule Obedience	-1.14	.13	-.40	-8.66***
Peer Vandalism x Rule Obedience	-.85	.20	-.19	-4.18***

*** $p < .001$, * $p < .05$.

Figure 2 The Relationship between Peer Vandalism and Adolescent Vandalism as a Function of Adolescent Rule Obedience

As with the analysis of drinking, two line graphs depicting the relationship between peer vandalism and vandalism were drawn separately for adolescents with higher rule obedience and for those with lower rule obedience to further examine the nature of the interaction. As shown in Figure 2, peer vandalism was more influential in adolescent vandalism among adolescents who reported lower rule obedience.

As with drinking, strength of the relationship between peer vandalism and adolescent vandalism was compared between a group of adolescents with lower parental rule obedience and a group with higher parental rule obedience in terms of the standardized regression

coefficient (b). Same procedure was used with vandalism as with drinking. Regression results confirmed also that the peer vandalism was a stronger predictor of adolescent vandalism among adolescents with lower parental rule obedience ($b = .21, p < .01$) than among adolescents with higher parental rule obedience ($b = .15, p < .05$).

To summarize, results revealed that adolescent drinking and vandalism were affected by the level of peer drinking and vandalism, respectively. Adolescents were more likely to drink and vandalize when their peers reported that they drink and vandalize at a higher level. However, the extent to which adolescents are influenced by the peers varied as a function of adolescent rule obedience.

IV. Discussion

The results of the regression analyses suggest that adolescent drinking and vandalism are influenced by their friends. Adolescents whose friends reported relatively higher level of drinking reported higher level of drinking themselves than did adolescents whose friends reported lower level of drinking. Likewise, adolescents whose friends reported relatively higher level of vandalism reported higher level of vandalism themselves. These findings are in line with previous research that has found negative peer influence on adolescent problem behavior (Dishion et al., 1995; Vitaro et al., 1997).

In addition to providing additional support for the previous research findings showing that adolescents' problem behavior is influenced by peer problem behavior, the present study expands the literature on peer influence by examining a factor that can moderate the process of peer influence. Results of the present study suggest that adolescent rule obedience (feeling of obligation to obey parental rules) may be one individual characteristic of adolescents that can make a difference in the process of negative peer influence. Adolescents whose friends reported higher levels of drinking and higher levels of vandalism reported higher levels of drinking and vandalism themselves. However, the influence of peer drinking and vandalism on adolescent drinking and vandalism varied depending on the level of adolescent rule obedience. Adolescents who believed more strongly that they should follow parental rules were affected less by their friends regarding drinking and vandalism than were adolescents who believed less strongly so. These findings suggest that adolescents' rule obedience may protect adolescents against negative peer influence. These findings provide support for Hartup's (1999) notion that individual differences should be considered in peer influence research, and for Bronfenbrenner's (1979) notion that human development research should pay careful attention to factors that can interact with developing individuals' contexts. Findings from the present study also have implications for parenting. While adolescents, as they grow older, have increasing opportunities to make decisions about their behaviors on their own, they are not yet able to be completely autonomous. They need some rules on which they can base their decision-making, and it is important that they feel obliged to follow those rules. In the present study, it was suggested that adolescents' strong beliefs that they should

obey parental rules are beneficial to them in situations of negative peer influence. Because adolescents' rule obedience seems to be higher among adolescents who have authoritative parents (Darling & Steinberg, 1993), it can be said that authoritative parenting, in which balance between parents' behavioral control and support is maintained, would protect adolescents from negative peer influence by leading them to have stronger rule obedience. However, more empirical evidence is required to establish the association between parenting style and rule obedience.

Although the present study expands the current literature on peer influence on adolescent problem behavior, it is not without limitations. First, because the sample used in the present study was cross-sectional, causal relationships cannot be determined. Even though it was conceptualized, in this study, that peer problem behavior influences adolescent problem behavior, it is also possible that adolescents who are involved in problem behavior chose friends that are similar to them. A definitive conclusion on this issue cannot be made until studies with experimental designs that can clarify the causal relationships.

Second, adolescents' rule obedience was not examined separately for mothers and fathers because the data were collected at the family level. Since there have been findings indicating that there are differences between the nature of the father-adolescent relationship and that of mother-adolescent relationship (Youniss & Smollar, 1985), adolescents' beliefs about their obligation to obey parental rules may be different for mothers and fathers.

Distinguishing between adolescents' rule obedience about maternal and paternal rules may yield different findings.

Third, because all participants are from one school in a small semi-rural town, results may not generalize backgrounds.

Finally, only 65% of the adolescents who were initially contacted for data collection were actually able to be found in previous research (e.g., Weinberger, Tublin, Ford, & Feldman, 1990), it is possible that adolescents who participated in the study may be involved in problem behavior at lower levels than those who did not participate.

Despite these limitations, the present study furthers the understanding of the process of negative peer influence on adolescent problem behavior by showing that adolescent rule

obedience moderates the relationship between peer problem behavior and adolescent problem behavior. The findings of the present study suggest that adolescents are influenced by peers to be involved in problem behavior but individual characteristics such as rule obedience can make a difference in the process of peer influence.

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