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ABSTRACT

HOSTILE-COERCIVE PARENTING, ADOLESCENT DEVIANT BEHAVIOR, AFFILIATION WITH PEERS WHO DRINK, AND ADOLESCENT ALCOHOL USE

by George V. Estonactoc

The purpose of this study was to examine the interrelationships of parent-adolescent relational quality, adolescent behavior, and peer affiliation, and their relative contributions to adolescent alcohol use. It was hypothesized that adolescents with hostile-coercive relationships with their parents are more likely to use alcohol, associate with peers who drink, and engage in deviant behaviors. In addition, adolescents who associate with peer who drink are more likely to use alcohol. Adolescents who report deviant behavior are more likely to associate with peers who drink and use alcohol. Several mediational relationships were investigated. Specifically, it was hypothesized that the relationship between parent-adolescent relational quality and alcohol use is mediated by adolescent deviant behavior. Peer association also was expected to mediate the relationship between parent-adolescent relational quality and alcohol use. Finally, it was predicted that the relationship between parent-adolescent relational quality and peer association is mediated by adolescent deviant behavior. Participants were 206 early adolescent boys ranging in age from 12 to 15 and recruited from two public schools within the greater Los Angeles area. Eighty-nine fathers and 105 mothers also participated in the study. Participants completed several questionnaires regarding parent-adolescent relational quality and adolescent deviant behavior. Analyses revealed significant correlations between relational quality, adolescent deviant behavior, peer affiliation and adolescent alcohol use. Through multiple regression analyses, evidence was found to support the prediction that peer affiliation and adolescent deviant behavior mediates the relationship between parent-adolescent relational quality and adolescent alcohol use. Supplemental analyses suggested that parent monitoring mediates the relationship between parent-adolescent relational quality and peer affiliation, as well as parent-adolescent relational quality and adolescent alcohol use. Findings were discussed with respect to clinical implications, limitations, and implications for future research.

HOSTILE-COERCIVE PARENTING, ADOLESCENT DEVIANT BEHAVIOR,
AFFILIATION WITH PEERS WHO DRINK, AND ADOLESCENT ALCOHOL USE

A DISSERTATION

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HOSTILE-COERCIVE PARENTING, ADOLESCENT DEVIANT BEHAVIOR, AFFILIATION WITH PEERS WHO DRINK, AND ADOLESCENT ALCOHOL USE

Adolescent drinking has been and continues to be a significant societal problem. Coombs, Paulson, and Palley (1988) suggested that early adolescent drinking may lead to chronic impairments in both emotional functioning and social relationships. According to the National Institute on Alcohol Abuse and Alcoholism (1990) adolescent alcohol use increases the risk for physical health problems (e.g., significant injuries due to accidents). Reckless driving, which often involves the abuse of alcohol, is a leading cause of death and disability for youths. In addition to physical and emotional suffering, an enormous monetary weight is being born by society. It is estimated that the annual costs resulting from alcohol abuse in the United States are at least \$14 billion (Heien & Piltman, 1993). To cope with this problem a better understanding of the factors that influence adolescent drinking is needed.

The strongest predictor for adolescent drinking is association with peers who use alcohol (Engels, Knibbe, Vries, Drop, & van Breukelen, 1999; Jackson, 1997; Pilgrim, Luo, Urberg, & Fang, 1999; Schulenberg, Maggs, Dielman, Leech, Kloska, Shope, & Laetz, 1999), although familial factors also are important. For instance, the hostile-coercive parenting has been shown to be both directly associated with adolescent alcohol use (Hundleby & Mercer, 1987) and indirectly associated through affiliation with peers who drink (Conger & Reuter 1996). What is conspicuously lacking in the extant literature is an examination of the processes by which hostile-coercive parenting indirectly influences adolescent drinking through affiliation with peers who drink. Specifically, how do hostile-coercive parenting and association with peer who drink influence adolescent drinking. Investigators have provided evidence that indicate hostile-coercive parenting is associated with both affiliation with peers who drink (Bahr, Marcos, & Maughan, 1995; Conger & Reuter 1996) and adolescent deviant behavior (Brody, Kim, Murry, Simons, Gibbons, Gerrard, & Conger, 2002; Conger and Conger, 1994; Shek, 2002; Shek & Ma, 2001). The relationship between hostile-coercive parenting and adolescent deviant behavior is potentially important given the body of empirical work that has shown an association between adolescent deviant behavior and adolescent alcohol use (Bloch, Crockett, and Vicary, 1991;

Newcomb and McGee, 1989; Webb, Baer, McLaughlin, & McKelvey, 1991) and between adolescent deviant behavior and affiliation with peers who drink (Cairns, Cairns, Neckerman, Gest, & Gariepy, 1988).

The purpose of this study was to examine the interrelationships of hostile-coercive parenting, adolescent deviant behavior, and association with peers who drink, and their relative contributions to adolescent drinking. Given the extant literature, it was hypothesized that adolescents with hostile-coercive relationships with their parents are more likely to use alcohol, associate with peers who drink, and engage in deviant behavior. In addition, adolescents who associate with peers who drink are more likely to use alcohol. It was expected that adolescents who engaged in deviant behaviors are more likely to associate with peers who drink and use alcohol. The role of affiliation with peer who drink and adolescent deviant behavior as mediator variables were investigated. Specifically, it was hypothesized that the relationship between hostile-coercive parenting and adolescent alcohol use is mediated by adolescent deviant behavior. Association with deviant peers was expected to mediate the relationship between hostile-coercive parenting and adolescent alcohol use. Finally, it was predicted that the relationship between hostile-coercive parenting and association with peers who drink be mediated by adolescent deviant behavior.

Association with Peers who Drink and Adolescent Drinking

Several investigators examining adolescent drinking have consistently identified association with peers who drink as the strongest predictor of future drinking (Engels, et al., 1999; Jackson, 1997; Pilgrim et al., 1999; Schulenberg et al., 1999). In an attempt to evaluate which of five variables (adolescents perception of risk, the attitudes of parents, behaviors of parents, attitudes of friends, and behaviors of friends) best predicts alcohol and tobacco use, Chopak, Vicary, and Crockett, (1998) surveyed 548 adolescents. Participants responded to questions regarding personal use of alcohol and tobacco, parents and friends' use of alcohol and tobacco, and perceived risk about use of these substances. Multiple regression analyses indicated that friends' use of alcohol and tobacco was the best predictor of adolescent drinking and smoking.

Dishion and Owen (2002) conducted a longitudinal analysis of the reciprocal relation between association with deviant friends and substance use. Two hundred and six boys were

observed and rated for deviance within friendships through videotaped friendship interactions and global reports of deviant interactions with friends, as well as time spent with friends. Participants provided self-reports of substance use. Through multivariate modeling, the authors found that the strongest proximal correlate of adolescent substance use was the tendency to cluster into peer groups of substance users. In addition, an important secondary function of substance use may have been to connect individuals within peer groups. These findings supported Patterson, Reid, and Dishion's (1992) contention that lifestyle attributes such as drug and alcohol related attitudes and deviant behaviors, were primary criteria used by adolescents to seek out affiliations. These relationships then serve to further shape their attitudes and behaviors. The authors concluded that selection and influence interacted in a reciprocal way and identified deviance as a particularly salient sorting feature in the friendship selection process.

The strong relationship between association with peers who drink and alcohol use was supported by Blanton, Gibbons, Gerrard, Conger, and Smith's (1997) study that addressed the developmental precursors leading to favorable evaluation of substance users. Questionnaires were administered to adolescents, their sibling, and their parents. Four hundred and sixty three adolescents participated on three occasions, each approximately one year apart. By applying structural equation modeling to the longitudinal data, the authors found that association with peers who drank and encouraged drinking was most strongly and directly related to the adolescents positive drinking prototypes (i.e., their image of the stereotypic teenage drinker), their willingness to drink, and their drinking. The investigators concluded that association with high-risk peer groups affected adolescent drinking both directly and indirectly by shaping positive prototypes of drinkers. Adolescents with positive prototypes were more willing to drink and these individuals were more likely to engage in alcohol use. Although association with peers who drink seemed to affect prototypes and willingness to drink, its influence did not fully account for adolescent drinking variance, suggesting other contributing factors. For instance, it may be that affiliation with peers who engage in and encourage drinking may lead to increased opportunities to drink, more positive attitudes and expectations toward drinking, and the reinforcement of counter-normative behaviors.

Hostile-Coercive Parenting and Adolescent Alcohol Use

The literature has verified the critical and preeminent role that peer influence plays in

adolescent drinking. Although it has been a widely held belief that parent-adolescent relationships is related to the development of adolescent alcohol use, the data regarding its direct and indirect influence has been less clear. For example, Elliott, I-Iuizinga, and Ageton, (1985) found that adolescent family involvement had a modest, negative association with involvement with delinquent peers but had no direct effect on the level of drug and alcohol use. Other investigators have reported findings that support the suggestion that family bonds do not have direct effects on the level of adolescent drug and alcohol use (Johnson, Marcos, & Bahr, 1987; Marcos, Bahr, & Johnson, 1986).

Conversely, several investigators have argued for the direct influence of parent-adolescent relationship on adolescent drug and alcohol use. Glynn (1981, 1984) reviewed of the extant literature and concluded that both parents and peers influence adolescent drug and alcohol use. Positive parent-adolescent relationship was found to discourage the use of alcohol, marijuana, and other illicit drugs. It also has been argued that poor bonding to family may be a risk factor in adolescent drug and alcohol use (Hawkins, Catalano, & Miller 1992). Similarly, investigators have provided evidence that support the suggestion that parent-child relationship significantly affect adolescent drug and alcohol use (Andrews, Hops, Ary, & Tildesley, 1985; Barnes, Farrel, & Cairns, 1986; Chassin, Presson, Sherman, Montello, & McGrew, 1986; Coombs & Landsverk, 1988; Dembo, Grandon, Taylor, La Voie, Burgos, & Schmeidler, 1985; Hansen, Graham, Sobel, Shelton, Flay, & Johnson, 1987; Johnson & Padina, 1991).

Blanton et al. (1997), in examining the factors contributing to positive evaluations of the prototypic (stereotypic) teenage drinker, found that neither hostile-coercive parenting nor parental drinking had any significant effect on adolescents' drinker prototype. However, parental drinking and hostile-coercive relationship between parent and adolescent influenced adolescent drinking indirectly by influencing affiliation with peers who drink. The researchers reasoned that although parental drinking and hostile-coercive parenting did not significantly affect drinker prototypes, they exerted their influence on adolescent drinking through its association with peers who drink.

Hostile-Coercive Parenting, Association with Peers Who Drink, and Adolescent Alcohol Use

Inconclusive data has contributed to the prevailing societal belief that peers and the family struggle to influence adolescents in a competitive fashion. However, it may be that both

family and peers exert pressures that work in concert to influence adolescent drug use. Indeed several investigators have argued recently that parents continue to influence their children's lives in part by influencing their choice of friends (Blanton et al., 1997).

Bahr et al. (1995) examined the effects of family, educational commitment, and peer influence on alcohol abuse and provided evidence of the family's indirect influence on adolescent alcohol use. A random sample of 27,000 students in grades 7-12 in Utah was studied in 1989. It was found that family bonds evidenced small significant direct effects but exhibited moderate influence through choice of friends on both amount and frequency of alcohol consumption. The authors concluded that adolescents who had strong familial bonds were less likely to have friends who used alcohol. Consequently, association with friends who did not use alcohol was strongly associated with non-consumption.

In investigating the relationship among family processes, friendship associations, and adolescent drinking, Conger and Reuter (1996) argued that harsh-inconsistent parenting affected adolescent drinking indirectly by affecting affiliation with peers who drink. The study focused on the transition from early to middle adolescence. The investigators proposed a model that over time familial influence on adolescents gives way to the direct effects of peers towards drinking behaviors. Participants were interviewed in four successive years starting in 1989, when the target adolescents were in seventh grade. Parents, siblings, and target adolescents provided information about family practices and alcohol use. In addition, trained observers who rated several dimensions of family interaction and individual member characteristics coded videotaped family interactions. Three indicators of harsh-inconsistent parenting were identified: emotional quality of parenting (hostility), inconsistent discipline, and poor child monitoring. Consistent with past findings, the strongest proximal predictor of adolescent drinking at time four (1992, 10th grade) was association with peers who use alcohol. With respect to parental practices, harsh-inconsistent parenting was significantly related to association with peers who drink, which in turn was significantly related to adolescent alcohol use. It was through this indirect relationship that harsh-inconsistent parenting influenced adolescent drinking. The authors argued that family influences on later risk operated primarily by helping to shape the outside social environment (i.e., association with peers who drink). The resulting environment then played the most significant direct role in affecting adolescent behavior.

Conger and Reuter (1996) reasoned that parenting practices influences association with peers who drink in two ways. First harsh unpredictable parenting decreases the reinforcing nature of the family and makes the peer group a more attractive source of reinforcement. Second, failure to monitor adolescent peer associations increases the risk that the adolescent will develop associations with peers who are engaged in deviant behaviors such as alcohol use. Indeed, numerous studies have shown that parental monitoring exerts significant influence on adolescent affiliations with peers who drink (Dishion, Capaldi, Spracklen, & Li, 1995, Chilcoat & Anthony, 1996, Chilcoat, Dishion, & Anthony, 1995, Bogenschneider, Wu, Raffaelli, & Tsay, 1998). For instance, Dishion, Patterson, Stoolmiller, and Skinner, (1991) found that parents' monitoring and discipline practices significantly predicted later involvement with deviant peers. Yet despite the mounting evidence supporting the suggestion that parenting practices (e.g., hostile-coercive parenting and parental monitoring) exert significant influence on deviant group affiliation, there is a paucity of empirical work that examined this seemingly crucial relationship.

Hostile-Coercive Parenting and Adolescent Deviant Behavior

Parent-adolescent hostile-coercive relationship has been shown by numerous investigators to influence adolescent behaviors. For instance, Shek and Ma (2001) studied the relationships between parent-adolescent conflict and antisocial and prosocial behavior. One hundred and sixty 7th grade and 235 9th grade students completed measures on parent-adolescent conflict and adolescent social behavior (Time 1). Two years later (Time 2) 103 of the original 7th grade and 47 of the original 9th grade participants completed the same measures. Longitudinal analyses indicated that both father-adolescent and mother-adolescent conflict at Time 1 was predictive of adolescent antisocial behavior but not prosocial behavior at Time 2. The investigators concluded that the parent-child conflict influenced adolescent deviant behavior. Moreover, parent-adolescent conflict had a detrimental effect on adolescents.

Brody et al. (2002) investigated the possible amplifying effects of living in disadvantaged neighborhoods on the relationship between conduct problems and harsh-inconsistent parenting, lack of nurturant-involved parenting, and exposure to an older sibling's deviance-prone attitudes and behavior in African American children. The authors found that high levels of harsh-inconsistent parenting, low levels of nurturant-involved parenting, and deviance-prone attitudes and behavior of older siblings contributed uniquely to younger siblings'

conduct problems. In addition, through Lisrel analyses the authors found that living in disadvantaged neighborhoods amplified the association between parental practices, older siblings' orientation, and younger siblings' conduct disorder.

Shek (2002) examined the relationship between adolescents' perceived parental qualities, adolescent well being, school adjustment, and problem behavior. Parental quality was conceptualized to include perceived parenting styles, parental support, perceived help from parents, parent-adolescent conflict, and parent-adolescent relationship. Adolescent adjustment was conceptualized as positive mental health. School adjustment was measured through perceived academic performance, satisfaction with academic performance, and conduct. Problem behaviors included delinquency and substance abuse. Two hundred and twenty nine adolescents participated in the study. Shek found support for the hypothesis that adolescent perceptions of parental qualities were in general related to adolescent problem behaviors.

Conger and Conger (1994) investigated the effects of parental hostility on siblings' delinquency over time. It was hypothesized that siblings who were treated in a relatively more hostile manner by their parents would be more likely to engage in delinquent behaviors, than would siblings treated in a less hostile manner. In wave 1 of the study 451 families participated. Three years later (wave 2) 359 of the original participants completed the same measures and tasks. Data was collected through adolescent self-reports and observer ratings of parental hostility. Based on their findings the authors argued that over time differential parental hostility directly affected changes in sibling delinquency.

Adolescent Deviant Behavior and Adolescent Alcohol Use

Adolescents who have engaged in one form of deviant behavior are more likely to engage in other forms of contranormative acts. For instance, numerous researchers have established an association between deviant behavior and alcohol use (Bloch et al., 1991; Newcomb & McGee, 1989; Webb et al., 1991). Ellickson and Hays (1991) tested the effects of cognitive, social, and behavioral antecedents on adolescent drinking. Seventh grade users and non-users completed self-administered surveys during three waves of data collection over a 12-month time period (Wave 2 and 3 at three months and 12 months). Results indicated that although prior deviant behavior did not predict onset of alcohol use, it did foster subsequent frequency of alcohol use and heavy drinking.

Among the broad range of delinquent behaviors, aggressive behaviors have been consistently shown to be associated with adolescent alcohol use (Bukstein, 1996; Duncan, Alpert, Duncan, & Hops, 1997; Grunbaum, Basen-Engquist, & Pandey, 1998; Milgram, 1993; Moss & Kirisci, 1995; White, Hansell, & Brick, 1993). Lochman and Wayland (1994) examined a longitudinal sample of 114 boys to assess the relative contribution of aggression, low peer acceptance, and race in predicting a broad range of adolescent outcomes and behaviors. Data included self-reports, reports by peers and teachers, and ratings by independent observers. It was found that preadolescent levels of aggression were predictive of boys' subsequent adolescent involvement with alcohol, marijuana, and drugs, and in delinquent activity. The authors argued that aggressive boys are at risk for engaging in a progressive series of behaviors that increase their engagement in contranormative behaviors.

White and Hansell (1996) studied the relationship between aggression and alcohol use for both males and females. The sample consisted of 12, 15, and 18 year old adolescents. Participants completed self-report questionnaires during three visits, each three years apart. The interrelationships between alcohol use, aggressive behavior, and episodes of acute alcohol-related aggression over time were examined. The authors found that for the entire sample, both prior aggressive behavior and prior alcohol use predicted later episodes of acute alcohol-related aggression. In addition, early aggression predicted later alcohol use but alcohol use was not related to subsequent increases in aggressive behavior. For females, prior alcohol use was a better predictor than alcohol use in explaining alcohol related aggression. However, for males prior aggression was a better predictor of alcohol related aggression than alcohol use. The authors asserted that the nature and direction of the relationship between alcohol use, aggression, and alcohol-related aggression over time were affected by gender.

Huang, White, Kosterman, Catalano, and Hawkins (2001) studied the association between alcohol use and interpersonal aggression from early to late adolescence. Using data from 808 males and females from the Seattle Social Development Project the investigators found a reciprocal effect of interpersonal aggression and alcohol use in later adolescence. Although their findings were consistent with White and Hansell's (1996) findings of an effect of interpersonal aggression on alcohol use, they additionally found an effect of alcohol use on interpersonal aggression.

Adolescent Deviant Behavior and Association with Peers who Drink

Researchers have reasoned that the impact of peers on adolescent drinking is exacerbated by deviant peers' tendency to be drawn to one another creating a reciprocal loop, which further increases the likelihood that an adolescent will drink. Cairns et al. (1988) examined the roles that highly aggressive children and adolescents play in peer social networks. In addition, they attempted to clarify the function that networks of peers play in the support of aggressive patterns. Six hundred and ninety five students were recruited from seven public schools in two cohorts (220 fourth-grade and 475 seventh-grade participants). The investigators found that aggressive subjects tended to affiliate with aggressive peers. They also found that highly aggressive adolescents usually were solid members of peer clusters and had a network of friends. Dishion et al., (1991) also found that early associations with deviant peers lead to continued contact with deviant peers.

Haynie (2002) investigated the influence of peer groups on individual behavior. Using data from the National Longitudinal Study of Adolescent Health, Haynie constructed carefully defined networks of adolescent friendships. Results revealed that friendship networks were heterogeneous with respect to delinquent behavior. Most adolescents belonged to networks constituted by both delinquent and non-delinquent friends. The proportion of delinquent friends in a respondent's network was most strongly associated with respondents' subsequent delinquency. The proportion of delinquent friends appeared to be more informative than the individual members' delinquent behavior. The author argued for the importance of the presence of network members who offer alternative motivations and behavioral patterns for the network members to follow.

Statement of Purpose

The purpose of this study was to examine the interrelationships of hostile-coercive parenting, adolescent deviant behavior, and affiliation with peers who drink, and their relative contributions to adolescent alcohol use. It was hypothesized that adolescents with hostile-coercive relationships with their parents are more likely to use alcohol, associate with peers who drink, and engage in deviant behaviors. In addition, adolescents who associate with peers who drink are more likely to use alcohol. Adolescents who engage in deviant behaviors are more likely to associate with peers who drink and use alcohol. Several mediational relationships were

investigated. Specifically, it was hypothesized that the relationship between hostile-coercive parenting and alcohol use is mediated by adolescent deviant behaviors. Association with peers who drink was also expected to mediate the relationship between hostile-coercive parenting and adolescent alcohol use. Finally, it was expected that the relationship between hostile-coercive parenting and association with peers who drink is mediated by adolescent deviant behavior.

Hypotheses

Given the extant literature, the following hypotheses were tested:

1. Adolescents with hostile-coercive relationships with their parents are more likely to use alcohol (Hundleby & Mercer, 1987; Glynn, 1981, 1984)
2. Adolescents with hostile-coercive relationships with their parents associate with more peers who drink (Rosenstein & Horowitz, 1996; Conger & Reuter, 1996).
3. Adolescents with hostile-coercive relationships with their parents engage in more deviant behaviors (Brody et al., 2003; Conger et al., 1994; Shek, 2002; Shek & Ma, 2001).
4. Adolescents who associate with peers who drink are more likely to use alcohol (Engels et al., 1999; Pilgrim et al., 1999; Chopak et al., 1998).
5. Adolescents who engage in deviant behaviors associate with more peers who drink (Cairns et al., 1988).
6. Adolescents who engage in deviant behaviors are more likely to use alcohol (Bloch et al., 1991; Webb et al., 1991; Newcomb & McGee, 1989; Ellickson & Hays 1991)
7. The association between hostile-coercive parenting and adolescent alcohol use is mediated by adolescent deviant behavior (Cairns et al., 1988; Engels et al., 1999; Pilgrim et al., 1999)
8. The relationship between hostile-coercive parenting and adolescent alcohol use is mediated by association with peers who drink (Rosenstein & Horowitz, 1996; Conger & Reuter, 1996; Bahr et al., 1995).
9. The relationship between hostile-coercive parenting and association with peers who drink is mediated by deviant adolescent behavior (Cairns et al., 1988).

Methods

Participants

The suitability of using a sample consisting of both adolescent boys and girls comes into question when studying associations between deviant behaviors such as aggression and

adolescent alcohol use. Frieze and Schafer (1984) argued that whereas physical aggression is a frequent response of males when they consume alcohol, it is uncommon for females. Indeed, few studies have examined the relationship between alcohol use and aggression for females, and these studies reported inconsistent findings (Gustafson, 1991; Rohsenow & Bachorowski, 1984). Given these findings along with the absence of hypotheses related to gender, only adolescent boys were recruited for the study.

One thousand two hundred and twenty students from two public schools within the greater Los Angeles area were approached for the study. Two hundred and six (16.9%) early adolescents boys ranging in age from 12 to 15 participated. The mean participant age was 14.08 (SD = .819). The adolescent participants consisted of 135 (65.5%) Latino Americans, 35 (17%) Caucasian Americans, 19 (9.2%) Asian/Pacific Islander Americans, 10 (4.9%) African Americans, 3 (1.5%) Native Americans, 3 (1.5%) other racial classification, and 1 (0.5%) did not provide racial information. One hundred and seventy-seven (85.9 %) were born in the United States and 24 (11.8%) were born in foreign countries.

The adolescent participants provided some data about 202 male caregivers [176 (87.1%) biological fathers, 20 (9.9%) stepfathers, and 6 (3%) other types of primary caregivers] and 206 female caregivers [200 (97.1%) biological mothers, 2 (1%) stepmothers, and 4 (2%) other types of primary caregivers].

Eighty-nine fathers participated in the study, 74 (83.1%) biological fathers, 9 (10.1%) stepfathers, 3 (3.4%) adoptive fathers, 3 (3.4%) other types of primary caregivers). Racial makeup of the father sample consisted of Latino Americans (55, 61.8%), Caucasian Americans (21, 23.6%), Asian/Pacific Islander Americans (8, 9%), African Americans (4, 4.5%), and other races (1, 1.1%). Thirty-five fathers (39.3%) were born in the United States, 28 (31.5%) in Mexico, 17 (19.1%) in South America, 7 (7.9%) in Asia or the Pacific Islands, 1 (1.1%) in Egypt, and 1 (1.1%) in the United Kingdom. Twelve of the participating fathers (13.5%) completed some form of post-graduate training, 32 (36%) college, 38 (42.7%) high school, 4 (4.5%) junior high school, and 3 (3.4%) completed elementary school. With respect to marital status, 77 (86.5%) were married, 3 (1.7%) separated, 4 (4.5%) divorced, 1 (1.1%) single, 3 (3.4%) single with significant other, and 1 (1.1%) indicated he was in another type of relationship.

A total of 105 mothers participated in the study [97 (92.4%) biological mothers, 4 (3.8%) stepmothers, 4 (3.9%) other types of primary caregivers]. This group included Latino Americans (69, 65.7%), Caucasian Americans (20, 19%), Asian/Pacific Islander Americans (9, 8.6%), African Americans (6, 5.7%), and other races (1, 1%). Thirty-five (33.3%) were born in the United States, 28 (26.7%) in Mexico, 17 (16.2%) in South America, 7 (6.7%) in Asia or the Pacific Islands, 1 (1%) in Egypt, and 1 (1%) in the United Kingdom.

Five (4.8%) of the mothers completed some form of post-graduate training, 47 (44.8%) college, 44 (42%) high school, 6 (5.7%) junior high school, and 3 (2.9%) elementary school. The marital status of those who participated included 80 (76.2%) currently married, 8 (7.6%) separated, 11 (10.5%) divorced, 1 (1%) single, 3 (2.9%) single with significant other, and 2 (1.9%) who were in other types of relationships.

Four high school and two junior high school teachers provided information about the behavior of the 205 students.

Measures

Hostile-coercive Parenting

Hostile-coercive parenting was measured using the hostile-coercive subscale of Blanton et al.'s (1997) Parent-child relationship scale. The subscale assesses hostile-coercive parenting using 12 items evaluating excessively punitive and hostile parenting (i.e., getting angry, criticizing, yelling or shouting, ignoring, threatening, making one feel guilty, blaming, fighting, pushing, grabbing, or shoving, arguing, crying, whining, or nagging, and noncompliance). Each item utilized a seven point Likert scale to rate the respondent's perception of the frequency of each behavior (i.e., 1 = always, 2 = almost always, 3 = fairly often, 4 = about half of the time, 5 = not too often, 6 = almost never, 7 = never). The average test retest reliability over four years for mothers and fathers rating their hostile-coercive parenting and adolescents rating their mothers' and fathers' hostile-coercive parenting were .90, .90, .91, and .91, respectively. The internal consistency coefficients for adolescents rating hostile-coercive relationship with fathers and mothers were $\alpha = .85$ and $\alpha = .84$, respectively.

Both parents and adolescents responded to the same items regarding the parent-adolescent hostile-coercive relationship. The instructions and wording were altered to reflect the perspective of each respondent. To provide their perceptions of their relationship with their son,

mothers completed the Parent-Adolescent Hostile-Coercive Relationship Scale (Mother) (see Appendix A) and fathers completed the Parent-Adolescent Hostile-coercive relationship Scale (Father) (see Appendix B). Adolescents completed the Parent-Adolescent Hostile-coercive relationship Scale (Mom) (see Appendix C) and Parent-Adolescent Hostile-coercive relationship Scale (Dad) (see Appendix D) to rate his relationship with his mother and father. The internal consistency coefficients for the Parent-Adolescent Hostile-coercive relationship Scale (Mother), Parent-adolescent Hostile-coercive relationship Scale (Father), Parent-adolescent Hostile-coercive relationship Scale (Mom), and Parent-adolescent Hostile-coercive relationship Scale (Dad) were $\alpha = .86$, $\alpha = .87$, $\alpha = .91$, and $\alpha = .89$, respectively.

Adolescent Deviant Behavior

Adolescent behavior was measured using the aggressive and delinquent subscales of the Achenbach Child Behavior Checklist, Youth Self-Report, and Teacher's Report Form (Achenbach, 1991 a, b, c). The aggressive subscales consisted of items describing behaviors such as bragging, bullying, attention seeking, destroying personal possessions as well as others', disobeying at home and school, jealousy, fighting, physically attacks, excessive screaming, showing off, irritability, sudden mood changes, excessive talking, teasing, tantrums, threatening people, and being unusually loud. The delinquent subscales assessed behaviors such as lack of guilt for misbehavior, association with deviant and older peers, lying or cheating, running away from home, stealing, swearing, truancy, vandalism, and preoccupation with sexual thoughts. All items were endorsed using a three-point scale (0 indicating "Not True," 1 corresponding to "Somewhat or Sometimes True," 2 denoting "Very True or Often True") describing how closely each statement described the target adolescent's behavior.

The Achenbach Child Behavior Checklist subscales were completed separately by mothers and fathers. The Achenbach Youth Self-Report subscales were completed by all adolescent participants. Finally, Teacher Report Form subscales were completed by teachers. The internal consistency coefficients for mothers', fathers', adolescents', and teacher's reports of adolescent deviant behavior were $\alpha = .82$, $\alpha = .87$, $\alpha = .92$, and $\alpha = .94$, respectively

Adolescent and Peer Alcohol Use

Adolescent alcohol use was measured using the Self-Report Alcohol Use Questionnaire (see Appendix E). This questionnaire consisted of all five alcohol use related items of the State

and Local Standard High School Questionnaire utilized in the Youth Risk Behavior Surveillance System (YRBSS) (Centers for Disease Control and Prevention, 2002). The YRBSS was developed to monitor health risk behaviors that contribute to the leading causes of death, disability, and social problems among youth and adults in the United States. The survey is conducted once every two years in participating States across the United States. The five alcohol related items used measured onset, total life time use, frequency and amount per occasion during the past 30 days, and frequency of drinking on school property during the past 30 days. To assess onset the target adolescent chose from five responses (i.e., never, less than nine years old, 9 or 10, 11 or 12, 13 or 14) to indicate the age he first drank alcohol. To indicate the total number of days they have had at least one drink of alcohol during their lifetime, participants were asked to choose from seven options (0 days, 1 or 2, 3 to 9, 10 to 19, 20 to 39, 40 to 99, and 100 days or more). Adolescents were asked to indicate how many days during the past 30 days they had at least one drink by choosing from seven options (0 days, 1 to 2, 3 to 5, 6 to 9, 10 to 19, 20 to 29, and all 30 days). They were also asked to report how many days during the past 30 days they had five or more drinks of alcohol in a row (i.e., within a couple of hours). The choices for this item ranged from 0 days, 1, 2, 3 to 5, 6 to 9, 10 to 19, and 20 or more days. Finally, the adolescents were asked to indicate the number of days they have had at least one drink of alcohol on school property. Respondents chose from seven choices (0 days, 1 or 2, 3 to 5, 6 to 9, 10 to 19, 20 to 29, all 30 days).

As an estimate of peer group drinking patterns, target adolescents were asked to provide their perceptions of their friends alcohol use. Participants completed the Peer-Report Alcohol Use Questionnaire (see Appendix F), which employed the same items in the Self-report Alcohol Use Questionnaire. However, the items were phrased in such a way as to elicit the adolescent's beliefs regarding the drinking behaviors of the friends they interact with most often. For instance, to assess onset participants were asked to respond to "How old do you believe most of your friends were when they had their first drink of alcohol other than a few sips?"

Parental Monitoring

Given the apparent impact of parental monitoring on adolescent behavior (Dishion et al., 1995; Chilcoat and Anthony, 1996; Chilcoat et al., 1995; Bogenschneider et al., 1998) a monitoring scale used by Dishion (1990) was included. The scale has an internal consistency

alpha of .80. It consists of five items inquiring about how much an adolescent's parents really know about who their friends are, how they spend their money, where they are after school, where they go at night, and what they do with their free time. Adolescent participants responded on a three-point Likert scale (don't know, know a little, know a lot) and completed a monitoring questionnaire separately for their mother and father (see Appendix G & H). The computed alphas for Parental Monitoring Questionnaire Mom and Parental Monitoring Questionnaire Dad were .75 and .86.

Procedure

Data were collected in groups ranging from 5 to 12 students. The participants were excused from their Health class and completed all tasks in the school cafeteria, which was absent of any other students. The entire administration lasted from 15 to 30 minutes. To safeguard confidentiality, the participants were not allowed to converse. Each participant was given a packet containing a total of nine questionnaires (Parent-Adolescent Hostile-coercive relationship Scale Mom, Parent-Adolescent Hostile-coercive relationship Scale Dad, Youth Self Report, Peer Behavior Questionnaire, Self-Report Alcohol Use, Peer-Report Alcohol Use, Parental Monitoring Questionnaire Mom, Parental Monitoring Questionnaire Dad, and Demographic Questionnaire Student (see Appendix I) along with instructions on how to complete each section (see Appendix J). Upon completion of the questionnaires, participants were given debriefing information (see Appendix K) and also were instructed verbally not to discuss the study with their friends so as not to compromise the responses of subsequent participants.

The parents were mailed a packet that contained six questionnaires [Parent-Adolescent Hostile-coercive relationship Scale (Mother), Parent-Adolescent Hostile-coercive relationship Scale (Father), Child Behavior Checklist (Mother), Child Behavior Checklist (Father), Demographic Questionnaire (Mother) (see Appendix L), Demographic Questionnaire (Father) (see Appendix M)] an instruction sheet (see Appendix N), a self-addressed stamped envelope, and a debriefing sheet which was sealed in a separate envelope (see Appendix O). After completion of the questionnaires, the parents returned the questionnaires using the included self-addressed stamped envelope and reviewed the debriefing materials.

Participating teachers were given blank Teacher Report forms and a list of students from their class who participated in the study with corresponding participant numbers. The teachers

rated the behaviors of each student and placed the corresponding participant number on the questionnaire. They were instructed not to place any other identifying information on the measures. The investigator collected the completed questionnaires at a prearranged time and verified that all confidentiality procedures were followed.

Results

Descriptive Statistics

Table 1 presents descriptive information about the study variables. Several of the variables were skewed. Spearman correlations were computed for each of the variables (see Appendix P) and compared to corresponding Pearson correlations (see Table 2). The pattern of relationship was not affected generally. A number of non-significant Pearson correlations were significant when computed as Spearman correlations suggesting that findings reported using Pearson correlations offer a more conservative depiction of results.

Data from the most recent administration (2001) of the Youth Risk Behavior Surveillance System (YRBSS) questionnaire was compared with this data. The YRBSS reported that 34.6% of male students Los Angeles had first drunk alcohol (other than a few sips) before age 13 (initiation). In this study 33% of participants reported having drunk alcohol (other than a few sips) before the age of 13. It was reported by the YRBSS that 73.7% of male students Los Angeles had had one or more drinks of alcohol in their lifetime (lifetime use). In this study lifetime use was found to be 48.6%. It was also found that 37.4% of male students in Los Angeles had had one or more drinks of alcohol on at least one occasion during the 30 days prior to the survey (current alcohol use) as compared to this sample's 21.9%. Of the Los Angeles sample, 20.5% of male students had had at least five drinks of alcohol on at least one occasion during the 30 days preceding the survey (episodic heavy drinking) compared to this study's findings of 10.2% for episodic drinking. Finally, the YRBSS reported that 9.1% of male students in Los Angeles had had at least one drink of alcohol on school property on at least one occasion within the 30 days preceding the survey as compared to this surveys findings of 6.8%. On the surface it seemed that there was relatively less alcohol related behaviors reported in this study than the YRBSS. However, the YRBSS survey included 9th, 10th, 11th, and 12th grade students whereas this study included 8th and 9th grade students. This was significant given the YRBSS findings of a grade effect on alcohol use. For instance, with respect to nationwide

lifetime alcohol use students in 11th and 12th grades (80.4% and 85.1%, respectively) were significantly more likely than 9th grade students (73.1%) to report lifetime alcohol use. Moreover, students in 12th grade (85.1%) were significantly more likely than 10th grade students (76.3%) to report lifetime alcohol use.

Finally, although the YRBSS survey conducted in Los Angeles provides a reference, it may not be representative of this study's sample data. The YRBSS findings of wide range of findings across local surveys (10.6% to 26.1%) supports this argument.

Hypothesis 1

Four ratings of parent-adolescent relationships (adolescent perception of his relationship with his father and mother, and each parents' perception of his/her relationship with their son) were analyzed to assess association between hostile-coercive relationships and adolescent alcohol use. As predicted, alcohol use was positively correlated to adolescent perceived hostile-coercive relationships with father $r[196] = .203, p < .01$ and mother $r[201] = .198, p < .01$. Alcohol use was also positively correlated with fathers' perception of hostile-coercive relationship with his son, $r[87] = .227, p < .05$ (see Table 2 for correlation matrix).

Hypothesis 2

A relationship was found between peer alcohol use and adolescent perceived hostile-coercive relationships with father $r[196] = .187, p < .01$ and mother $r[201] = .189, p < .01$, and fathers' perception of hostile-coercive relationship with his son $r[87] = .432, p < .001$

Hypothesis 3

Ratings of delinquent and aggressive behaviors were summed to acquire a single deviant behavior score. To assess associations between parent-adolescent hostile-coercive relationships and adolescent deviant behaviors, adolescents self-ratings, fathers, mothers, and teachers ratings of adolescent behavior were compared to relational quality ratings provided by the adolescents, mothers, and fathers (see Table 2). Hostile-coercive relationship between adolescent and father as rated by the adolescent was positively correlated to self-report $r[197] = .355, p < .001$, mother $r[103] = .222, p < .05$, and father $r[88] = .273, p < .05$ ratings of deviant behaviors. Mother-adolescent hostile-coercive relationship as rated by the adolescent was related to self-report of deviant behavior $r[202] = .311, p < .001$. Fathers' perception of father-adolescent hostile-coercive relationship was positively correlated with self-report $r[88] = .343, p < .001$, mother

$r[77] = .576, p < .001$, and father $r[88] = .659, p < .001$ ratings of adolescent deviant behavior. Mothers' ratings of mother-adolescent hostile-coercive relationship was positively correlated with mother $r[105] = .534, p < .001$ and father $r[77] = .379, p < .01$ rating of adolescent deviant behavior.

Hypothesis 4

Consistent with prediction, association with peers who drink was related to adolescent alcohol use $r[205] = .618, p < .001$.

Hypothesis 5

Reports by adolescents, fathers, mothers, and teachers regarding adolescent deviant behavior were assessed with respect to adolescent reports of peer alcohol use. An association was found between adolescent self-ratings $r[205] = .573, p < .01$, mother-reports $[104] = .294, p < .01$, father-reports $[87] = .405, p < .001$, and teacher-reports $r[204] = .164, p < .05$ of adolescent deviant behavior and adolescent reports of peer alcohol use.

Hypothesis 6

Associations between self-report of alcohol use and ratings of adolescent deviant behavior were assessed. Consistent with prediction, self-report of alcohol use was positively correlated with self-ratings of deviant behavior $r[205] = .573, p < .001$ and teacher ratings of adolescent deviant behavior $r[204] = .164, p < .05$.

Mediational Hypotheses 7 through 9

To evaluate hypotheses 7 through 9 the criteria proposed by Baron and Kenny (1986) for assessing mediation were used. They argued that for a variable to function as a mediator four conditions must be met. Specifically, 1) the independent variable must be correlated with the mediator variable, 2) the mediator must be correlated with the dependent variable, 3) the independent variable and the dependent variables must be correlated, and 4) when the effect of the mediator variable is statistically controlled the previously significant relation between the independent and dependent variable is no longer significant.

With respect to hypotheses 7, which proposed that adolescent deviant behavior mediates the relationship between parent-adolescent hostile-coercive relationship and alcohol use, three mediation effects were confirmed. Specifically, three independent variables (adolescent ratings of both father-adolescent and mother-adolescent hostile-coercive relationship, and father ratings

of father-adolescent hostile-coercive relationship) were significantly correlated with self ratings of adolescent deviant behavior (mediator) ($r[197] = .355, p < .001, r[202] = .311, p < .001, r[88] = .343, p < .001$, respectively) and adolescent alcohol use (dependent variable) ($r[196] = .203, p < .01, r[201] = .198, p < .01, r[87] = .227, p < .05$, respectively). Self ratings of adolescent deviant behavior also was significantly correlated with adolescent alcohol use ($r[205] = .573, p < .001$). A partial correlation was computed by statistically controlling self ratings of adolescent deviant behavior. The resulting relationships between the three independent variables (adolescent ratings of both father-adolescent and mother-adolescent hostile-coercive relationship, and father ratings of father-adolescent hostile-coercive relationship) and the dependent variable (adolescent alcohol use) were reduced and not significant $pr[193] = .0055, p > .05, pr[198] = .0322, p > .05, pr[84] = .0516, p > .05$, respectively.

Hypothesis 8 proposed that association with peers who drink mediates the relationship between parent-adolescent hostile-coercive relationship and alcohol use. Once again, three mediation effects were demonstrated. Specifically, three independent variables (adolescent ratings of both father-adolescent and mother-adolescent hostile-coercive relationship, and father ratings of father-adolescent hostile-coercive relationship) were significantly correlated with peer alcohol use (mediator) and adolescent alcohol use (dependent variable) (see Table 2). Peer alcohol use also was significantly correlated with adolescent alcohol use. A partial correlation was computed by statistically controlling peer alcohol use. The resulting relationships between the three independent variables (adolescent ratings of both father-adolescent and mother/adolescent hostile-coercive relationship, and father ratings of father-adolescent hostile-coercive relationship) and the dependent variable (adolescent alcohol use) were reduced and not significant $pr[193] = .1140, p > .05, pr[198] = .1058, p > .05, pr[84] = .0255, p > .05$, respectively.

The same criteria and statistical procedures were applied to hypothesis 9 which proposed that deviant adolescent behavior mediates the relationship between parent-adolescent hostile-coercive relationship and association with peers who drink. Analyses yielded four mediation effects.

Both adolescent ratings of father-adolescent and mother-adolescent hostile-coercive relationship (independent variables) were significantly correlated to self ratings of adolescent

deviant behavior (mediator) and association with peers who drink (dependent variable) (see Table 2). Self-rated adolescent deviant behavior and affiliation with peers who drink also were significantly correlated. A partial correlation was computed by statistically controlling self ratings of adolescent deviant behavior. The resulting relationships between adolescent ratings of both father-adolescent and mother-adolescent hostile-coercive relationship and affiliation with peers who drink were reduced to non-significant levels $pr[193] = .0389$, $p > .05$, $pr[198] = .0057$, $p > .05$, respectively.

Adolescent ratings of father-adolescent hostile-coercive relationship was significantly correlated with mother ratings of adolescent deviant behavior and affiliation with peers who drinks (see Table 2). Mother ratings of adolescent deviant behavior and affiliation with peers who drinks were also significantly correlated. A partial correlation was computed by statistically controlling mother ratings of adolescent deviant behavior. The resulting relationship between adolescent ratings of father-adolescent hostile-coercive relationship and affiliation with peers who drinks was not significant $pr[99] = .1558$, $p > .05$. Similarly, adolescent ratings of father-adolescent hostile-coercive relationship were significantly correlated with father ratings of adolescent deviant behavior and affiliation with peers who drink (see Table 2). Father ratings of adolescent deviant behavior and affiliation with peers who drink also were significantly correlated. A partial correlation was computed by statistically controlling father ratings of adolescent deviant behavior. The relationship between adolescent ratings of father-adolescent hostile-coercive relationship and affiliation with peers who drinks was reduced to a non-significant level $pr[84] = .0875$, $p > .05$.

Supplemental Analyses

Supplemental analyses were conducted to evaluate parental monitoring as a mediating variable. Consistent with hypothesis 7 and 8, parental monitoring was examined as a possible mediator between hostile-coercive parenting and adolescent alcohol use. Four mediational relationships involving parental monitoring were identified.

Specifically, adolescent ratings of father-adolescent and mother-adolescent hostile-coercive relationship were significantly correlated with self-report alcohol use, $r[196] = .203$, $p < .01$ and $r[201] = .198$, $p < .01$, respectively (see Table 3). Adolescent ratings of father-adolescent and mother-adolescent hostile-coercive relationship were correlated significantly with

mother monitoring, $r[195] = .147, p < .05$, $r[202] = .254, p < .001$, respectively. Self-report alcohol use was associated with mother monitoring $r[202] = .297, p < .001$. The resulting partial correlation, that is, after statistically controlling mother monitoring, resulted in non-significant relationships between adolescent ratings of father-adolescent hostile-coercive relationship and self-report alcohol use $pr[191] = -.14, p > .05$, and adolescent ratings of mother-adolescent hostile-coercive relationship and alcohol use $pr[198] = -.13, p > .05$.

Similarly, adolescent ratings of father-adolescent hostile-coercive relationship and father ratings of father-adolescent hostile-coercive relationship were correlated significantly with self-reported alcohol use (see Table 2). Adolescent ratings of father-adolescent and father ratings of father-adolescent hostile-coercive relationship were correlated significantly with father monitoring. Self-reported alcohol use was associated with father monitoring. After statistically controlling for the effects of father monitoring, the resulting partial correlation yielded non-significant relationships between adolescent ratings of father-adolescent hostile-coercive relationship and alcohol use $pr[193] = .14, p > .05$, and father ratings of father-adolescent hostile-coercive relationship and alcohol use $pr[84] = -.16, p > .05$.

Parental monitoring also was evaluated as a mediator variable between hostile-coercive relationship and peer drinking. Three mediational relationships were identified. Adolescent ratings of father-adolescent and mother-adolescent hostile-coercive relationship were associated significantly with peer alcohol use and mother monitoring (see Table 3). Peer alcohol use was related significantly to mother monitoring. Partial correlations controlling mother monitoring yielded non-significant relationships between adolescent ratings of father-adolescent and mother-adolescent hostile-coercive relationship and peer alcohol use, $pr[191] = -.14, p > .05$, $pr[198] = -.12, p > .05$, respectively.

Adolescent-rated father-adolescent hostile-coercive relationship was correlated significantly with peer alcohol use and with father monitoring (see Table 3). Peer alcohol use was associated with father monitoring. The resulting partial correlation, controlling for father monitoring, was not significant $pr[193] = -.14, p > .05$.

Discussion

During childhood parents represent the single most important and powerful direct influence on children. However, movement into early adolescence brings new sources of

influence. Specifically, peers increasingly play a larger role in an adolescent's life. Although the importance of peer influence is apparent, the relative role of parents at this stage of development is less clear. Inconclusive findings have contributed to the prevailing societal notion that peers and parents are locked in a competitive struggle to influence adolescents. This study sought a better understanding of parent and peer influence, by examining the interrelationships of hostile-coercive parenting, adolescent deviant behavior, and affiliation with peers who drink, and their relative contributions to adolescent alcohol use.

Summary and Discussion of Major Findings

As expected adolescents who associated with peers who drink were more likely to use alcohol. This was not surprising considering that associations with peers who drink has been advanced by many investigators as the strongest predictor of future drinking (Chopak et al., 1998; Blanton et al., 1997). These findings provide further support for the seemingly preeminent role that peers play in adolescent drinking. Although the direct influence of the family on adolescent alcohol use has been less conclusive in the extant literature, in this study adolescents with hostile-coercive relationships with their parents were more likely to affiliate with peers who drink. Further analysis revealed that association with peers who drink acts as a mediator between parent-adolescent hostile-coercive relationships and adolescent alcohol use. Hostile-coercive parenting was not associated with adolescent alcohol use directly, but indirectly through the adolescent's choice of peers who drink.

In light of these findings, it is critical to ascertain the processes by which hostile-coercive parenting affect affiliation with peers who drink, particularly since this seems to be a primary means by which the family is related with an adolescent's likelihood of drinking. In this investigation adolescent deviant behavior played a pivotal role with respect to the interaction of hostile-coercive parenting, affiliation with peers who drink, and adolescent alcohol use. It was found that hostile-coercive parenting was associated with adolescent drinking and affiliation with peers who drink through adolescent deviant behavior. Specifically, adolescent deviant behavior mediated the association between hostile-coercive parenting and adolescent alcohol use. Adolescent deviant behavior also mediated the association between hostile-coercive parenting and association with peers who drink. These findings suggest that hostile-coercive parenting is associated with adolescent drinking and affiliation with peers who drink through its relation with

adolescent deviant behavior.

These findings are critical given evidence suggesting that adolescents who display deviant behaviors seem to be drawn to one another creating a reciprocal loop, which further increases the likelihood that an adolescent will engage in contranormative behaviors such as drinking (Cairns et al., 1988). A critical component of affiliating with peers who drink is the process of mutual selection. Dishion et al. (1995, 2002) argued that one function of selecting a similar peer is to guarantee support for one's behavior and values. The selection process is subtle but powerful. Through jokes, clothes, nonverbal behaviors, grooming, and gestures one exudes a particular social orientation. Selection is then based on perceived similarities to others. It was also proposed that these behaviors were a means of shopping for an environment that meets the individual's needs. Unfortunately, placing oneself within a homogeneous peer group serves only to solidify one's behavior by providing reinforcement from others and preventing exposure to alternative behaviors. Indeed, in this investigation, adolescents who reported past deviant behaviors were more likely to associate with peers who consumed alcohol. These findings suggested that adolescents in hostile-coercive relationships with their parents are at a particularly high risk of alcohol use. They are more likely to engage in deviant behaviors such as adolescent drinking, and they are prone to gravitate towards others who display similar high risk behaviors, creating an environment in which the use of alcohol is not only high but also in some respects normative.

This investigation provided support for the importance of two parenting practices, hostile-coercive parenting and monitoring. Both father and mother monitoring was negatively correlated with adolescent alcohol use and association with peers who drink (see Table 3). These findings are consistent with studies that identified parent monitoring as a protective variable with respect to adolescent alcohol use and affiliation with peers who drink (Dishion, Capaldi, Spracklen, & Li, 1995, Chilcoat & Anthony, 1996, Chilcoat, Dishion, & Anthony, 1995, Bogenschneider, Wu, Raffaelli, & Tsay, 1998).

In this study parent monitoring increased as hostile-coercive parenting increased. Specifically, adolescent ratings of father monitoring was correlated with adolescent ratings of father and mother hostile-coercive parenting and father ratings of hostile-coercive parenting. Similarly, adolescent ratings of mother monitoring was associated with adolescent ratings of

father and mother hostile-coercive parenting. In light of the positive correlation between hostile-coercive parenting and adolescent alcohol use and association with peers who drink, these findings are difficult to reconcile. It may be that coercive parents also engage in high levels of monitoring in an attempt to increase their level control over their adolescent. However, this would suggest that parental monitoring would be positively correlated with adolescent alcohol use and association with peers who drink, which was contrary to the findings in this study. Alternatively, it may be that the manner in which the monitoring is conducted influences its effects. Unfortunately, more sensitive and in depth instruments than those utilized in this study are required to explain these findings.

Parental monitoring was found to mediate the relationship between hostile-coercive parenting and both affiliation with peers who drink and adolescent alcohol use. These findings suggest that parental awareness as to what adolescents do, where they go, when they go, and with whom they associate is related to adolescent drinking. This is consistent with Reifman, Barnes, Dintcheff, Farrell, and Uhteg's (1998) findings, which identified parental monitoring as one of the most important elements of the parent-adolescent relationship in deterring heavy drinking by adolescents.

It is noteworthy that although data were collected from four different sources (mother, father, teacher, and self reports), most significant findings involving hostile-coercive relationship, adolescent deviant behavior, affiliation with peers who drinks, and adolescent alcohol use lacked external validation. Adolescent self-report data accounted for most of the significant findings. However, father ratings of his relationship with his son were an exception. This alludes to a unique relationship between father and son. Indeed, several investigators have provided empirical support for the unique and important contributions fathers make in families. Flouri and Buchanan (2002) conducted a longitudinal study, which investigated the effects of early father involvement in juvenile delinquency. The effects of mother involvement and other protective factors were controlled. Data from three sweeps of the NCDS, a continuing longitudinal study of some 17000 children born between March 3 and 9, 1958, in England, Scotland, and Wales, were used. Results indicated that for boys, early father involvement protected against later delinquency. The relationship was not weakened by the level of mother involvement or growing up in a non-intact family.

Similarly, Culp, Schadle, Robinson, and Culp, (2000) examined the relationships between father involvement and children's self-competence, social acceptance, and children's behavior problems. Twenty-five kindergarten and first-grade children from intact, dual-career families, and their parents participated in the study. The investigators found that as both mothers and fathers perceived more father involvement in childcare, mothers reported fewer externalizing behaviors. Similarly, perceptions of father involvement were associated with fewer father reports of externalizing behavior problems. These studies highlight the important contributions fathers make within a family unit and the unique relationship between father and son. It may be that a unique interaction exists between mother and daughter. It will be critical for future studies to include adolescent girls to assess any gender effects.

Culturally prescribed gender roles may also explain the significant findings related to father-reports and the lack of significant findings related to mother-reports. Traditionally, fathers have been expected to be the family disciplinarian and mothers have taken the role of nurturant caregiver. Consequently, fathers and adolescents may engage in more hostile-coercive interaction at least partially based on societal expectations. In contrast, adolescent-mother interactions have been characterized by more warm-supportive interactions.

If gender roles significantly influenced the findings in this study then cultural effects may have also affected the results. The large proportion of Latino participants (65.5%) may have contributed to the significant findings related to father-reports. The Latino culture is a patriarchal system where fathers are seen as the head of the household. Fathers take a more authoritarian stance. In this role a harsh-coercive parenting style is much more likely.

Given the recent influx of Latino immigrants into California, acculturation conflict may also be a factor. Fathers attempting to maintain their patriarchal role come into conflict with their sons who are struggling to reconcile their native culture and the more democratic culture in the United States. Fathers may experience a feeling of failure in imparting their cultural heritage and may react desperately by being more hostile and coercive. Moreover, fathers may see conflict with their sons as a challenge to their masculinity and take a more hostile stance.

Clinical Implications

In general, efforts at prevention have focused on convincing children and adolescents to "Just say no." Unfortunately, this strategy has proven uniformly ineffective. The roots of

adolescent drinking are too complex. Based on this research one variable to target would be hostile-coercive parenting. An excessively punitive or hostile interaction style with adolescents should be avoided. Coercion, which in many cases becomes a default reaction by stressed and desperate parents, would likely serve to further alienate the adolescent and reinforce feelings of rejection and hostility. The adolescent will be drawn closer to his peer group and will likely place more weight on the group's value system. In contrast, a warm and emotionally supportive parenting style will serve to create an inviting environment for the adolescent drawing him closer to his caregivers emotionally. The adolescent in this situation is more likely to identify with the caregivers' values and less likely to be influenced by his peers.

Investigators have found that targeting the family for intervention affects adolescent behavior and affiliation. Dishion, Bullock, and Granic, (2002) presented evidence for the efficacy of family-centered intervention in reducing deviant peer affiliation. During a four-year period, beginning in the first year of middle school, 671 adolescent participants and their families participated in a multi-tiered family-centered intervention. Adolescent behaviors were assessed at baseline and at the end of each subsequent year. Results indicated that multi-level, family-centered intervention significantly reduced growth in affiliation with deviant peers. The magnitude of this effect was correlated with the intensity of the parents' involvement with the multi-level, family-centered intervention. The authors proposed that the findings supported the idea that targeting parenting skills (particularly monitoring) reduces involvement with deviant peers for both moderately and high-risk youths. In addition, the findings highlighted the importance of adults' structuring the environment within which children develop their social network, particularly during early adolescence.

As exhibited by this study a critical component to address in treatment is adolescent deviant behavior. Traditionally, this has come in the form of peer group interventions for children with social skills deficits. However, such interventions should be undertaken cautiously, because they can have iatrogenic effects (Dishion, McCord, & Poulin, 1999). Longitudinal analyses revealed that participation in peer-group interventions increased adolescent problem behaviors and negative life outcomes in adulthood compared to control group. Moreover, those characterized as high-risk were particularly vulnerable to iatrogenic effects compared to low-risk individuals.

In light of Haynie's (2002) findings that the proportion of non-delinquent to delinquent group members was most strongly associated with adolescent delinquency, one may naively conclude that simply introducing more non-delinquent peers into a network will be effective in influencing members to act in more desirable ways. However, before implementing such treatment strategies any possible harmful consequences to non-delinquent peers must be assessed. Hektner, August, and Realmuto, (2003) strategically paired moderately aggressive children with nonaggressive peers. The level of affiliation prior to the study (i.e., friends or not friends) between pairs was manipulated. Dyads were observed while playing foosball and results indicated that when low affiliated participants interacted nonaggressive children increased their disruptiveness whereas aggressive children decreased theirs. Conversely, when a nonaggressive child was paired with an aggressive "buddy" the nonaggressive participants' behavior was not influenced by the aggressive partner. However, the aggressive child evidenced a decrease in disruptive behavior during the interaction. The authors argued that unidirectional influence is possible in a peer dyad provided the participants are "buddies".

Based on this study interventions targeting hostile-coercive parenting and adolescent deviant behavior will be fruitful avenues to pursue. However, efficacy of these treatments will be limited by societal factors that place stress on the family system and the individual. Changes must be made on a governmental and societal level. Obstacles such as job security, maternal or paternal leave, work hour flexibility, child care, affordable insurance, divorce, and so on must be addressed to better accommodate the family. The implication here is that in addressing premature drinking or other substance abuse in general, a comprehensive approach where all concerned adults (parents, teachers, psychologists, etc.) participate is likely to be the most effective.

Limitations and Implications for Future Research

The findings in this study must be interpreted with some caution. The generalizability of the results is limited when one considers the racial makeup of the sample. Although most major racial groups were represented, a large majority of participants were Latino Americans (65.5%) and an unusually small percentage was African American (4.9%). Given the composition of the sample, not having used questionnaires translated into Spanish was a considerable obstacle. It was noteworthy that a number of participants requested questionnaires in Spanish for their

parents. An estimate of how many people chose not to participate due to the language barrier cannot be determined at this time. However, in speaking with all adolescent participants during debriefing it was noted that they all spoke English with no discernable accent, which suggests that at least for the adolescent participants language was not a significant problem. Given the rapidly changing cultural makeup in the United States it would be worthwhile in future research to offer administrations of questionnaires in multiple languages.

Self-report alcohol use data collected in this study was compared to the YRBSS data to assess any significant racial/ethnic differences. Because of the unusually small number of African American (10, 4.9%) participants, only the Latino and Caucasian information was compared. According to the YRBSS nationwide data, 33.3% of Caucasian males and 40.8% of Latino males had drunk prior to turning 13 years old (initiation prior to age 13). In this sample 40% of Caucasian males and 35.5% of Latino males had their first drink before their thirteenth birthday. Nationwide 80.7% of Caucasian males and 81.6 of Latino males reported having had at least one drink their entire life (lifetime use) as compared to 57.2% of Caucasian males 48.8% of Latino males in this sample. Overall, 52.6% of Caucasian males and 49.5% of Latino males indicated that they had had at least one drink in the past 30 days (current use). In this investigation 31.5% of Caucasian males and 20.8% of Latino males reported current alcohol use. As reported by the YRBSS, 26.2% of Caucasian males and 37.7% of Latino males indicated having drunk five or more drinks of alcohol in a row on at least one occasion within the past 30 days (episodic heavy drinking). Of the participants in this study, 20.1% of Caucasian males and 8.9% of Latino males reported episodic heavy drinking. Finally, 6.3% of Caucasian males and 5.3 % of Latino males in the YRBSS survey reported consuming at least one drink of alcohol on school property within the past 30 days. It was found that 25.7% of Caucasian males and 3.7% of Latino males have drunk on school property within the past 30 days.

The YRBSS sample reported higher rates of alcohol use, with the exception of initial alcohol use and consumption of alcohol on school property as reported by Caucasian males in this sample. Given that the YRBSS sample included students in 9th through 12th grade and this study included participants in 8th and 9th grade, it can be argued that age differences may account for the difference in findings. However, it may also be the case that the data has captured a unique sample that limits generalizability of the findings but provides valuable information about

a specific segment of the population.

It is unavoidable to encounter significant resistance when requesting sensitive information such as parenting and drinking practices. Although significant efforts were made to maintain confidentiality and to convey this to all those approached to participate, it is likely that a number of potential participants chose not to participate because of confidentiality issues. This reticence may be at least partly to blame for the low response rate. It may be that adolescents did not feel safe in divulging their drinking behaviors. It is also likely that some parents refused to participate in an attempt to avoid divulging any potentially compromising information regarding their parenting practices.

In future research, it would be fruitful to more closely examine whether there are critical criteria that adolescents use to select peers with whom they associate. For instance, are physical attributes more important than intelligence? Also it would be instructive to study whether an adolescent can change affiliation once settled into a peer group.

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Table 1
Descriptive Statistics

Variables	N	Range	Minimum	Maximum	Mean	Standard Deviation
Adolescent Parenting Ratings						
Mom	202	59	25	84	67.98	13.47
Dad	197	67	17	84	69.25	12.11
Parent Parenting Ratings						
Mother	105	39	45	84	68.94	9.79
Father	88	44	40	84	70.83	9.39
Adolescent Alcohol Ratings						
Self	205	21	5	26	8.39	4.47
Peer	205	29	5	34	10.24	5.22
Monitoring Rated by Adolescent						
Mom	203	10	0	10	7.11	2.41
Dad	202	10	0	10	5.23	3.27
Adolescent Behavior Rated by						
Self	206	54	0	54	11.30	9.54
Mother	105	25	0	25	7.44	5.62
Father	88	32	0	32	7.27	6.36
Teacher	205	49	0	49	4.89	7.99

Table 2

Correlation Matrix Parent-Adolescent Relationship Quality, Adolescent Behaviors, Peer Associations, Adolescent Alcohol Use

	Adolescent Deviant Behavior				Adolescent Report	
	Self Reports	Mother Reports	Father Reports	Teacher Reports	Peer Alcohol Use	Adolescent Alcohol Use
Adolescent Ratings						
Father Parenting	$r = .355^{***}$ N = 197	$r = .222^*$ N = 103	$r = .273^*$ N = 88	$r = .016$ N = 196	$r = .187^{**}$ N = 196	$r = .203^{**}$ N = 196
Mother Parenting	$r = .311^{***}$ N = 202	$r = .134$ N = 104	$r = .065$ N = 85	$r = .055$ N = 201	$r = .189^{**}$ N = 201	$r = .198^{**}$ N = 201
Peer Alcohol Use	$r = .6^{***}$ N = 205	$r = .294^{**}$ N = 104	$r = .405^{***}$ N = 87	$r = .154^*$ N = 204	$r = 1$ N = 205	$r = .618^{***}$ N = 205
Adolescent Alcohol Use	$r = .573^{***}$ N = 205	$r = .168$ N = 104	$r = .148$ N = 87	$r = .164^*$ N = 204	$r = .618^{**}$ N = 206	$r = 1$ N = 205
Parental Ratings						
Father Parenting by Father	$r = .343^{**}$ N = 88	$r = .576^{***}$ N = 77	$r = .659^{***}$ N = 88	$r = .121$ N = 88	$r = .432^{***}$ N = 87	$r = .227^*$ N = 87
Mother Parenting by Mother	$r = .157$ N = 105	$r = .534^{***}$ N = 105	$r = .379^{**}$ N = 77	$r = .049$ N = 104	$r = .185$ N = 104	$r = .062$ N = 104

Note. All analyses are two-tailed
 * $p < .05$ ** $p < 0.01$ *** $p < .001$

Table 3

Hostile-Coercive Parenting, Parent Monitoring, Peer Alcohol Use,
Adolescent Alcohol Use Correlation Matrix

	Adolescent Ratings of	
	Monitoring Father	Monitoring Mother
Adolescent Ratings		
Father Parenting	$r = .277^{***}$ N = 197	$r = .147^*$ N = 195
Mother Parenting	$r = .245^{***}$ N = 199	$r = .254^{***}$ N = 202
Peer Alcohol Use	$r = -.268^{***}$ N = 201	$r = -.305^{***}$ N = 202
Adolescent Alcohol Use	$r = -.233^{**}$ N = 201	$r = -.297^{***}$ N = 202
Parental Ratings		
Father Parenting by Father	$r = .258^*$ N = 88	$r = .036$ N = 86
Mother Parenting by Mother	$r = .104$ N = 104	$r = .112$ N = 104

Note. All analyses are two-tailed

* $p < .05$ ** $p < 0.01$ *** $p < .001$

Appendix A

Parent-Adolescent Relationship Scale (Mother)

Please think about times during the past month when you and your adolescent have spent time talking or doing things together. Indicate how often your adolescent acted in the following ways towards you during the past month. During the past month, how often did your adolescent.

- 1 = Always
- 2 = Almost Always
- 3 = Fairly Often
- 4 = About half of the time
- 5 = Not too often
- 6 = Almost never
- 7 = Never

	Always	Almost Always	Fairly often	About Half of the Time	Not too Often	Almost Never	Never
1. Get angry at you	1	2	3	4	5	6	7
2. Ask you for your pinion about an important matter	1	2	3	4	5	6	7
3. Listen carefully to your point-of-view	1	2	3	4	5	6	7
4. Let you know he really cares about you	1	2	3	4	5	6	7
5. Criticize you or your ideas	1	2	3	4	5	6	7
6. Shout or yell at you because he was mad at you	1	2	3	4	5	6	7
7. Ignore you when you tried to talk to him	1	2	3	4	5	6	7
8. Threaten to do something that would upset you if you didn't do what he wanted	1	2	3	4	5	6	7
9. Try to make you feel guilty	1	2	3	4	5	6	7
10. Act loving and affectionate toward you	1	2	3	4	5	6	7
11. Let you know that he appreciated you, your ideas or the things you do	1	2	3	4	5	6	7
12. Help you do something that was important to you	1	2	3	4	5	6	7

13. Say you made him unhappy	1	2	3	4	5	6	7
14. Have a good laugh with you about something that was funny	1	2	3	4	5	6	7
15. Get into a fight or argument with you	1	2	3	4	5	6	7
16. Hit, push, grab or shove you	1	2	3	4	5	6	7
17. Argue with you whenever you disagreed about something	1	2	3	4	5	6	7
18. Cry, whine or nag to get his way	1	2	3	4	5	6	7
19. Not do things you asked him to do	1	2	3	4	5	6	7
20. Act supportive and understanding toward you	1	2	3	4	5	6	7

Appendix B

Parent-Adolescent Relationship Scale (Father)

Please think about times during the past month when you and your adolescent have spent time talking or doing things together. Indicate how often your adolescent acted in the following ways towards you during the past month. During the past month, how often did your adolescent.

- 1 = Always
- 2 = Almost Always
- 3 = Fairly Often
- 4 = About half of the time
- 5 = Not too often
- 6 = Almost never
- 7 = Never

	Always	Almost Always	Fairly often	About Half of the Time	Not too Often	Almost Never	Never
1. Get angry at you	1	2	3	4	5	6	7
2. Ask you for your opinion about an important matter	1	2	3	4	5	6	7
3. Listen carefully to your point-of- view	1	2	3	4	5	6	7
4. Let you know he really cares about you	1	2	3	4	5	6	7
5. Criticize you or your ideas	1	2	3	4	5	6	7
6. Shout or yell at you because he was mad at you	1	2	3	4	5	6	7
7. Ignore you when you tried to talk to him	1	2	3	4	5	6	7
8. Threaten to do something that would upset you if you didn't do what he wanted	1	2	3	4	5	6	7
9. Try to make you feel guilty	1	2	3	4	5	6	7
10. Act loving and affectionate toward you	1	2	3	4	5	6	7
11. Let you know that he appreciated you, your ideas or the things you do	1	2	3	4	5	6	7
12. Help you do something that was important to you	1	2	3	4	5	6	7

13. Say you made him unhappy	1	2	3	4	5	6	7
14. Have a good laugh with you about something that was funny	1	2	3	4	5	6	7
15. Get into a fight or argument with you	1	2	3	4	5	6	7
16. Hit, push, grab or shove you	1	2	3	4	5	6	7
17. Argue with you whenever you disagreed about something	1	2	3	4	5	6	7
18. Cry, whine or nag to get his way	1	2	3	4	5	6	7
19. Not do things you asked him to do	1	2	3	4	5	6	7
20. Act supportive and understanding toward you	1	2	3	4	5	6	7

Appendix C

Parent-Adolescent Relationship Scale (Mom)

Please think about times during the past month when you and your MOM have spent time talking or doing things together. Indicate how often your MOM acted in the following ways towards YOU during the past month.

- 1 = Always
- 2 = Almost Always
- 3 = Fairly Often
- 4 = About half of the time
- 5 = Not too often
- 6 = Almost never
- 7 = Never

	Always	Almost Always	Fairly often	About Half of the Time	Not too Often	Almost Never	Never
1. Get angry at you	1	2	3	4	5	6	7
2. Ask you for your opinion about an important matter	1	2	3	4	5	6	7
3. Listen carefully to your point-of-view	1	2	3	4	5	6	7
4. Let you know she really cares about you	1	2	3	4	5	6	7
5. Criticize you or your ideas	1	2	3	4	5	6	7
6. Shout or yell at you because she was mad at you	1	2	3	4	5	6	7
7. Ignore you when you tried to talk to her	1	2	3	4	5	6	7
8. Threaten to do something that would upset you if you didn't do what she wanted	1	2	3	4	5	6	7
9. Try to make you feel guilty	1	2	3	4	5	6	7
10. Act loving and affectionate toward you	1	2	3	4	5	6	7
11. Let you know that she appreciated you, your ideas or the things you do	1	2	3	4	5	6	7
12. Help you do something that was important to you	1	2	3	4	5	6	7

13. Say you made her unhappy	1	2	3	4	5	6	7
14. Have a good laugh with you about something that was funny	1	2	3	4	5	6	7
15. Get into a fight or argument with you	1	2	3	4	5	6	7
16. Hit, push, grab or shove you	1	2	3	4	5	6	7
17. Argue with you whenever you disagreed about something	1	2	3	4	5	6	7
18. Cry, whine or nag to get her way	1	2	3	4	5	6	7
19. Not do things you asked her to do	1	2	3	4	5	6	7
20. Act supportive and understanding toward you	1	2	3	4	5	6	7

Appendix D

Parent-Adolescent Relational Quality Scale (Dad)

Please think about times during the past month when you and your DAD have spent time talking or doing things together. Indicate how often your DAD acted in the following ways towards YOU during the past month.

- 1 = Always
- 2 = Almost Always
- 3 = Fairly Often
- 4 = About half of the time
- 5 = Not too often
- 6 = Almost never
- 7 = Never

	Always	Almost Always	Fairly Often	About Half of the Time	Not too Often	Almost Never	Never
1. Get angry at you	1	2	3	4	5	6	7
2. Ask you for your opinion about an important matter	1	2	3	4	5	6	7
3. Listen carefully to your point-of-view	1	2	3	4	5	6	7
4. Let you know he really cares about you	1	2	3	4	5	6	7
5. Criticize you or your ideas	1	2	3	4	5	6	7
6. Shout or yell at you because he was mad at you	1	2	3	4	5	6	7
7. Ignore you when you tried to talk to him	1	2	3	4	5	6	7
8. Threaten to do something that would upset you if you didn't do what he wanted	1	2	3	4	5	6	7
9. Try to make you feel guilty	1	2	3	4	5	6	7
10. Act loving and affectionate toward you	1	2	3	4	5	6	7
11. Let you know that he appreciated you, your ideas or the things you do	1	2	3	4	5	6	7
12. Help you do something that was important to you	1	2	3	4	5	6	7

13. Say you made him unhappy	1	2	3	4	5	6	7
14. Have a good laugh with you about something that was funny	1	2	3	4	5	6	7
15. Get into a fight or argument with you	1	2	3	4	5	6	7
16. Hit, push, grab or shove you	1	2	3	4	5	6	7
17. Argue with you whenever you disagreed about something	1	2	3	4	5	6	7
18. Cry, whine or nag to get his way	1	2	3	4	5	6	7
19. Not do things you asked him to do	1	2	3	4	5	6	7
20. Act supportive and understanding toward you	1	2	3	4	5	6	7

Appendix E

Self-Report Alcohol Use

The next five questions ask about drinking alcohol. This includes drinking beer, wine, wine coolers, and liquor such as rum, gin, vodka, or whiskey. For these questions, drinking alcohol does not include drinking a few sips of wine for religious purposes.

1. How old were you when you had your first drink of alcohol other than a few sips?
 - a. I have never had a drink of alcohol other than a few sips.
 - b. Less than 9 years old.
 - c. 9 or 10 years old.
 - d. 11 or 12 years old.
 - e. 13 or 14 years old.
 - f. 15 or 16 years old.
2. During your life, on how many days have you had at least one drink of alcohol?
 - a. 0 days.
 - b. 1 or 2 days.
 - c. 3 to 9 days.
 - d. 10 to 19 days.
 - e. 20 to 39 days.
 - f. 40 to 99 days.
 - g. 100 days or more.
3. During the past 30 days, on how many days did you have at least one drink of alcohol?
 - a. 0 days.
 - b. 1 to 2 days.
 - c. 3 to 5 days.
 - d. 6 to 9 days.
 - e. 10 to 19 days.
 - f. 20 to 29 days.
 - g. all 30 days.
4. During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?
 - a. 0 days.
 - b. 1 day.
 - c. 2 days.
 - d. 3 to 5 days.
 - e. 6 to 9 days.
 - f. 10 to 19 days.
 - g. 20 or more days.
5. During the past 30 days, on how many days did you have at least one drink of alcohol on school property?
 - a. 0 days.
 - b. 1 or 2 days.
 - c. 3 to 5 days.
 - d. 6 to 9 days.
 - e. 10 to 19 days.
 - f. 20 to 29 days.
 - g. All 30 days.

Appendix F

Peer-Report Alcohol Use

In answering the next five questions please think about the group of friends with whom you hang out the most. Specifically, think about what you know about their drinking behaviors. This includes drinking beer, wine, wine coolers, and liquor such as rum, gin, vodka, or whiskey. For these questions, drinking alcohol does not include drinking a few sips of wine for religious purposes.

1. How old do you believe most of them were when they had their first drink of alcohol other than a few sips?
 - a. They have never had a drink of alcohol other than a few sips.
 - b. Less than 9 years old.
 - c. 9 or 10 years old.
 - d. 11 or 12 years old.
 - e. 13 or 14 years old.
 - f. 15 or 16 years old.
2. During their life, on how many days do you believe most of them had at least one drink of alcohol?
 - a. 0 days.
 - b. 1 or 2 days.
 - c. 3 to 9 days.
 - d. 10 to 19 days.
 - e. 20 to 39 days.
 - f. 40 to 99 days.
 - g. 100 days or more.
3. During the past 30 days, on how many days do you believe most of them had at least one drink of alcohol?
 - a. 0 days.
 - b. 1 to 2 days.
 - c. 3 to 5 days.
 - d. 6 to 9 days.
 - e. 10 to 19 days.
 - f. 20 to 29 days.
 - g. all 30 days.
4. During the past 30 days, on how many days do you believe most of them had 5 or more drinks of alcohol in a row, that is, within a couple of hours?
 - a. 0 days.
 - b. 1 day.
 - c. 2 days.
 - d. 3 to 5 days.
 - e. 6 to 9 days.
 - f. 10 to 19 days.
 - g. 20 or more days.

5. During the past 30 days, on how many days on average do you believe most of them had at least one drink of alcohol on school property?
- a. 0 days.
 - b. 1 or 2 days.
 - c. 3 to 5 days.
 - d. 6 to 9 days.
 - e. 10 to 19 days.
 - f. 20 to 29 days.
 - g. All 30 days.

Appendix G

Parental Monitoring Questionnaire (Mom)

Instructions: For the following items please indicate your Mom's familiarity with your friends and habits now or within the past six months. Please circle the 2 if she really knows a lot, 1 if she knows a little, or 0 if she doesn't know about the item.

	0 = Don't Know 1 = Know a Little 2 = Know a Lot	Don't Know	Know a Little	Know a Lot
1. How much does your Mom really know about who your friends are		0	1	2
2. How much does your Mom really know about how you spend your money		0	1	2
3. How much does your Mom really know about where you go after school		0	1	2
4. How much does your Mom really know about where you go at night		0	1	2
5. How much does your Mom really know about what you do with your free time		0	1	2

Appendix H

Parental Monitoring Questionnaire (Dad)

Instructions: For the following items please indicate your Dad's familiarity with your friends and habits now or within the past six months. Please circle the 2 if he really knows a lot, 1 if he knows a little, or 0 if he doesn't know about the item.

	0 = Don't Know 1 = Know a Little 2 = Know a Lot	Don't Know	Know a Little	Know a Lot
1. How much does your Dad really know about who your friends are		0	1	2
2. How much does your Dad really know about how you spend your money		0	1	2
3. How much does your Dad really know about where you go after school		0	1	2
4. How much does your Dad really know about where you go at night		0	1	2
5. How much does your Dad really know about what you do with your free time		0	1	2

Appendix I

DEMOGRAPHIC QUESTIONNAIRE (Student)

1. How old are you? _____
2. What is your race?
 - a. Caucasian
 - b. African American
 - c. Asian/Pacific Islander American
 - d. Latino
 - e. Native American
 - f. other (specify) _____
3. Where were you born?
country _____ state _____ city _____
4. In the questions that follow, some will be asking about your mother and father. When answering about your “father,” to whom will you be referring? (circle one)
 - a. biological father
 - b. stepfather
 - c. adoptive father
 - d. other. (specify) _____
5. When answering about your “mother,” to whom will you be referring? (circle one)
 - a. biological mother
 - b. stepmother
 - c. adoptive mother
 - d. other. (specify) _____
6. What is your father’s career/job/profession? _____
7. What is your mother’s career/job/profession? _____
8. What is the highest level of education achieved by your father? (circle one)
 - a. elementary
 - b. junior high
 - c. high school
 - d. college
 - e. graduate school
9. What is the highest level of education achieved by your mother? (circle one)
 - a. elementary
 - b. junior high
 - c. high school
 - d. college
 - e. graduate school

Appendix J

Introduction and General Directions (Students)

Please make certain that the packet you have just received contains the following nine questionnaires titled: Demographics Questionnaires (Student), Parent-Adolescent Relational Quality Scale (Mom), Parent-Adolescent Relational Quality Scale (Dad), Peer Behavior Questionnaire, Youth Self-Report, Self-Report Alcohol Use, Peer-Report Alcohol Use, Monitoring Questionnaire (Mom), Monitoring Questionnaire (Dad). If you find that your packet is lacking a questionnaire please inform the proctor(s) immediately.

There are specific instructions for each of the sub-sections. Please read and follow the directions as best you can. Feel free to ask for any clarification.

After you have completed all questionnaires you will receive debriefing information, which will describe the study in more detail and provide a means of communicating with the investigator to request additional information. Please retain the debriefing form for your records.

This study is being conducted as part of a Dissertation under the direction of faculty members from the Department of Psychology of Miami University. All of the information you provide will remain completely confidential. Your identity will not be revealed at any time. Your questionnaire will be identified numerically rather than by name. Therefore, any information you provide (e.g., illegal behavior) cannot be linked to you personally.

Appendix K

Debriefing (Students)

The study you have just completed was designed to examine the interrelationships of parent-adolescent relational quality, adolescent deviant behavior, and peer associations and their relative contributions to adolescent drinking.

Perhaps the strongest predictor for adolescent drinking is association with peers who use drugs, although familial factors also are important. For instance, the quality of parent-adolescent relationship has been shown to be both directly associated with adolescent alcohol use and indirectly associated through peer associations. What is conspicuously lacking in the extant literature is an examination of the processes by which familial factors indirectly influence adolescent drinking through choice of friends. Specifically, how do the relational quality between parents and adolescents and peer group affiliation influence adolescent drinking. Studies have shown that children exposed to harsh-coercive parenting are more likely to engage in undesirable behavior. Adolescents tend to gravitate towards other who display similar characteristics such as deviant behaviors. Affiliation with deviant peer groups then increases the likelihood that the adolescent will drink. In this study, it is postulated that adolescents with hostile-coercive relationships with their parents engage in more deviant behaviors (i.e., aggression, truancy, destruction of property) and affiliate more often with deviant peers. Participation in contranormative behaviors and association with deviant peer groups, in turn, increase the likelihood of alcohol use. Hence, parent-adolescent relational quality impacts adolescent drinking through peer group affiliation. Similarly, relational quality influences peer group affiliation by affecting adolescent behavior.

Please do not discuss the contents of this study with your friends or acquaintances until after the semester, since such discussion may influence their answers if they participate in the study. More importantly, please do not discuss any of the items on the questionnaires with your parents until after they mail them back to the researchers because it may influence their responses.

Again it must be emphasized that all information you provided will remain confidential. Numbers were assigned to participants at the beginning of the study, and no other identifying information was attached to the data. Therefore, any information you, your parent(s), and teacher provide (e.g., personal information, illegal behavior) cannot be linked to you or your parent(s) personally.

It happens from time to time that in the course of completing materials similar to those you have just completed certain emotions or issues are raised that may cause some discomfort or concern. If you experience strong reactions and wish to discuss them further please feel free to contact the primary investigator at (562) 861-9342 and leave a message for Cy Estonactoc, or alternatively contact my Dissertation Chair Dr. Carl Paternite, (513) 529-2416 you will be contacted. If you are interested in any additional information, relevant readings will be made available by calling (562) 861-9342.

Appendix L

DEMOGRAPHIC QUESTIONNAIRE (Mother)

1. How old are you? _____
2. What is your race?
 - a. Caucasian
 - b. African American
 - c. Asian/Pacific Islander American
 - d. Latino
 - e. Native American
 - f. other (specify) _____
3. Where were you born?
country _____ state _____ city _____
4. In the questions that follow, some will be asking about your son.
When answering about your son, to whom will you be referring? (circle one)
 - a. biological son
 - b. stepson
 - c. adoptive son
 - d. other. (specify) _____
5. What is your career/job/profession? _____
6. What is the highest level of education you achieved? (circle one)
 - a. elementary
 - b. junior high
 - c. high school
 - d. college
 - e. graduate school
7. What is your marital status?
 - a. married
 - b. separated
 - c. divorced
 - d. single
 - e. single with significant other
 - f. other: (specify) _____

Appendix M

DEMOGRAPHIC QUESTIONNAIRE (Father)

1. How old are you? _____
2. What is your race?
 - a. Caucasian
 - b. African American
 - c. Asian/Pacific Islander American
 - d. Latino
 - e. Native American
 - f. other (specify) _____
3. Where were you born?
country _____ state _____ city _____
4. In the questions that follow, some will be asking about your son.
When answering about your son, to whom will you be referring? (circle one)
 - a. biological son
 - b. stepson
 - c. adoptive son
 - d. other. (specify) _____
5. What is your career/job/profession? _____
6. What is the highest level of education you achieved? (circle one)
 - a. elementary
 - b. junior high
 - c. high school
 - d. college
 - e. graduate school
7. What is your marital status?
 - a. married
 - b. separated
 - c. divorced
 - d. single
 - e. single with significant other
 - f. other: (specify) _____

Appendix N

Introduction and General Directions (Parents)

Please make certain that the packet you have just received contains two sets of individually stapled questionnaires, one for the mother/stepmother/female guardian and another for the father/stepfather/male guardian. Each set contains three questionnaires. The first questionnaire designed to collect some general information about you and your family is titled Demographic Questionnaire. The following two questionnaires titled Parent-Adolescent Relational Quality Scale and Child Behavior Checklist are designed to collect data regarding your relationship with your son and your perceptions of his behaviors (e.g., truancy, fighting, disobedience), respectively.

There are specific instructions for each of the sub-sections Please read and follow the directions as best you can. Because I am interested in your individual opinions please complete the questionnaires without discussing the items with your spouse/significant other. It is not necessary for both parent/guardians to participate in order to be included in the study, but at least one parent/guardian must complete their respective questionnaires.

****A self-addressed stamped envelope is included in your packet. Please return all completed questionnaires by using this envelop. Make certain to SEAL the envelope and mail it as soon as possible.****

In addition, a debriefing form is contained within a separate envelope. Please read this document after you have completed the questionnaires. This will describe the study in more detail and provide a means of communicating with the investigator to request additional information. Please retain the debriefing form for your records.

This study is being conducted as part of a Dissertation under the direction of faculty members from the Department of Psychology of Miami University. All of the information you provide will remain completely confidential. Your identity will not be revealed at any time. Your questionnaires will be identified numerically rather than by name. Therefore, any information you provide (e.g., personal and sensitive information) cannot be linked to you personally.

Appendix O

Debriefing (Patents)

The study you have just completed was designed to examine the interrelationships of parent-adolescent relational quality, adolescent deviant behavior, and peer associations and their relative contributions to adolescent drinking.

Perhaps the strongest predictor for adolescent drinking is association with peers who use drugs, although familial factors also are important. For instance, the quality of parent-adolescent relationship has been shown to be both directly associated with adolescent alcohol use and indirectly associated through peer associations. What is conspicuously lacking in the extant literature is an examination of the processes by which familial factors indirectly influence adolescent drinking through choice of friends. Specifically, how do the relational quality between parents and adolescents and peer group affiliation influence adolescent drinking. Studies have shown that children exposed to harsh-coercive parenting are more likely to engage in undesirable behavior. Adolescents tend to gravitate towards other who display similar characteristics such as deviant behaviors. Affiliation with deviant peer groups then increases the likelihood that the adolescent will drink. In this study, it is postulated that adolescents with hostile-coercive relationships with their parents engage in more deviant behaviors (i.e., aggression, truancy, destruction of property) and affiliate more often with deviant peers. Participation in contranormative behaviors and association with deviant peer groups, in turn, increase the likelihood of alcohol use. Hence, parent-adolescent relational quality impacts adolescent drinking through peer group affiliation. Similarly, relational quality influences peer group affiliation by affecting adolescent behavior.

Again it must be emphasized that all information you provided will remain confidential. Numbers were assigned to participants at the beginning of the study, and no other identifying information was attached to the data. Therefore, any information you, your parent(s), and teacher provide (e.g., personal information, illegal behavior) cannot be linked to you or your parent(s) personally.

It happens from time to time that in the course of completing materials similar to those you have just completed certain emotions or issues are raised that may cause some discomfort or concern. If you experience strong reactions and wish to discuss them further please feel free to contact the primary investigator at (562) 861-9342 and leave a message for Cy Estonactoc, or alternatively contact my Dissertation Chair Dr. Carl Paternite, (513) 529-2416 you will be contacted. If you are interested in any additional information, relevant readings will be made available by calling (562) 861-9342.

Appendix P

Spearman Correlations to Assess Skewed Data

	Adolescent Deviant Behavior				Adolescent Report	
	Self Reports	Mother Reports	Father Reports	Teacher Reports	Peer Drinking	Adolescent Alcohol Use
Adolescent Ratings						
Father Parenting	$r = .399^{***}$ N = 197	$r = .160$ N = 103	$r = .228^*$ N = 88	$r = .018$ N = 196	$r = .210^{**}$ N = 196	$r = .167^*$ N = 196
Mother Parenting	$r = .444^{***}$ N = 202	$r = .262^{**}$ N = 104	$r = .218^*$ N = 85	$r = .055$ N = 201	$r = .255^{***}$ N = 201	$r = .186^{**}$ N = 201
Peer Alcohol Use	$r = .541^{***}$ N = 205	$r = .306^{**}$ N = 104	$r = .457^{***}$ N = 87	$r = .160^*$ N = 204	$r = 1$ N = 205	$r = .620^{***}$ N = 205
Adolescent Alcohol Use	$r = .411^{**}$ N = 205	$r = .221^*$ N = 104	$r = .219^*$ N = 87	$r = .212^{**}$ N = 204	$r = .620^{***}$ N = 205	$r = 1$ N = 205
Parental Ratings						
Father Parenting by Father	$r = .331^{**}$ N = 88	$r = .578^{***}$ N = 77	$r = .620^{***}$ N = 88	$r = .109$ N = 88	$r = .426^{***}$ N = 87	$r = .248^*$ N = 87
Mother Parenting by Mother	$r = .219^*$ N = 88	$r = .551^{***}$ N = 105	$r = .432^{***}$ N = 77	$r = .013$ N = 104	$r = .172$ N = 104	$r = .119$ N = 104

Note. All analyses are two-tailed
 * $p < .05$ ** $p < 0.01$ *** $p < .001$

Appendix Q

Hello,

My name is Cy Estonactoc and I graduated from East Middle School in 1984 and from Downey High School in 1988. I received my bachelors from the University of California Santa Barbara where I majored in psychology. I am currently a graduate student at Miami University and in the process of completing my Ph.D. in clinical psychology. At this time, I am conducting a research study as part of my dissertation under the direction of faculty members from Miami University Psychology Department.

The East Middle School Administration has agreed to assist me with my research project. My study examines the associations of adolescent relationships, behaviors, and alcohol use. I am collecting information from several sources (i.e., adolescent boys 12 to 15, parent(s)/guardian(s), and teacher(s)).

You will be asked to provide general demographic information such as age as well as more specific information regarding important relationships, alcohol use, and behaviors (e.g., truancy and fighting). Your parents will be asked to complete two questionnaires, which take approximately five minutes to complete. Information regarding their relationship with you and their observations of your behaviors (e.g., truancy, fighting, disobedience) as well as general demographic information (i.e., age, marital status) are requested. Your teacher will provide their perceptions of your school behaviors (e.g., compliance and energy level).

It must be emphasized that participation of both your parent(s) and your teacher is strictly dependent upon your consent and that no one is obliged to participate in the study.

I would also like to reassure you that all information provided by participants will remain strictly confidential. Numbers will be assigned to participants at the beginning of the study, and no other identifying information will be attached to the data. Therefore, any information you, your parent(s), and teacher provide (e.g., personal information, illegal behavior) cannot be linked to you or your parents(s) personally.

I hope that you decide to be a part of this important research and allow your parent(s) and your health teacher to participate. If you wish to participate please complete the attached consent form making certain that you sign it and return it to the proctor. However, if you do not wish to participate please leave the consent form blank and return it to the proctor. For any questions, please do not hesitate to contact me at (562) 861-9342, or my dissertation advisor, Dr. Carl E. Paternite, at (513) 529-2416.

Sincerely,

Cy V. Estonactoc

Participant Consent Form

Name: (please print) _____

Teacher's name _____ Period _____

Address: _____

Street Number

Street Name

City

State

Zip Code

1. I hereby volunteer to participate in the following investigation to study the associations of adolescent relationships, behaviors, and alcohol use.
2. I also give consent for my parent(s)/guardian(s) to participate by providing information regarding our relationships, behaviors, and alcohol use.
3. I also give consent for my health teacher to participate by providing their impressions of my school behavior.
4. Cy Estonactoc has discussed with me to my satisfaction the reasons for this investigation and its possible adverse and beneficial consequences.
5. This consent is voluntary and has been given under circumstances in which I can exercise free power of choice. I have been informed that I may at any time revoke my consent and withdraw from the experiment without prejudice and that the investigator may terminate the experiment at any time regardless of my wishes.

Participant Signature

Date

Investigator

Date

Appendix R

Dear Parent(s) or Guardian(s),

My name is Cy Estonactoc and I graduated from East Middle School in 1984 and from Downey High School in 1988. I received my bachelors from the University of California Santa Barbara where I majored in psychology. I am currently a graduate student at Miami University and in the process of completing my Ph.D. in clinical psychology. At this time, I am conducting a research study as part of my dissertation under the direction of faculty members from Miami University Psychology Department.

The East Middle School Administration has agreed to assist me with my research project. My study examines the associations of adolescent relationships, behaviors, and alcohol use. I am collecting information from several sources (i.e., adolescent boys 12 to 15, parent(s)/guardian(s), and teacher(s)).

Adolescents are asked to provide general demographic information such as age as well as more specific information regarding important relationships, alcohol use, and behaviors (e.g., truancy and fighting). You will be asked to complete two questionnaires, which take approximately five minutes to complete. Information regarding your relationship with and observations of your son's behaviors (e.g., truancy, fighting, disobedience) as well as general demographic information (i.e., age, marital status) are requested. Your son's teacher will provide their perceptions of your school behaviors (e.g., compliance and energy level).

It must be emphasized that participation of both your son and his teacher is strictly dependent upon your consent and that no one is obliged to participate in the study. The fact that you have received this letter indicates that your son has already agreed to participate and all that is needed to proceed at this time is your written consent.

I would also like to reassure you that all information provided by participants will remain strictly confidential. Numbers will be assigned to participants at the beginning of the study, and no other identifying information will be attached to the data. Therefore, any information you, your son, and his teacher provide (e.g., personal information, illegal behavior) cannot be linked to you or your son personally.

I hope that you decide to be a part of this important research and allow your son and his teacher to participate. At this time I would like to ask you to complete the attached consent form and ask your son to return it to his teacher by the next school day. Please be sure to sign the consent form and complete all other requested information. Should you decline please mark "no" on the consent form and return it. For any questions, please do not hesitate to contact me at (562) 861-9342, or my dissertation advisor, Dr. Carl E. Paternite, at (513) 529-2416.

Sincerely,

Cy V. Estonactoc

Parent Consent Form

Adolescent's Name: (please print) _____

Please specify the primary caregivers currently living in your household who are willing to participate in the present study. It is not necessary for both primary caregivers in the household to participate in order for your family to be included. However, we would like to have the input of both primary caregivers if possible, in order to gain more complete understanding of adolescent behavior. Please **SIGN** either or both forms below and indicate your willingness to participate by circling the appropriate response. After completion please return the Consent Form using the self-addressed stamped envelope. Please be sure to **SIGN** the consent form and complete all other requested information.

Mother/Stepmother/ Guardian

Please indicate your relationship to this adolescent by circling one of the following:

- | | |
|-------------|---------------------------|
| a. Mother | b. Stepmother |
| c. Guardian | d. Other (specify): _____ |

Name (please print): _____

Signature _____

Date: _____

Yes I agree to participate, and give permission for my son and his/her teacher to provide information about my son.

No I do not agree to participate.

Street name and number (+Apartment #): _____

City, State, and Zip Code: _____

Contact Phone Number: () _____