

BEST FRIEND INFLUENCE OVER ADOLESCENT PROBLEM BEHAVIORS:
THE ROLE OF PERCIEVED FRIENDSHIP QUALITY

by

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Thesis Submitted to the Faculty of
The Charles E. Schmidt College of Science
In Partial Fulfillment of the Requirements for the Degree of
Master of Arts

Florida Atlantic University

Boca Raton, Florida

December 2013

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This thesis was prepared under the direction of the candidate's thesis advisor, Dr. Brett Laursen, Department of Psychology, and has been approved by the members of his supervisory committee. It was submitted to the faculty of the Charles E. Schmidt College of Science and was accepted in partial fulfillment of the requirements for the degree of Master of Arts.

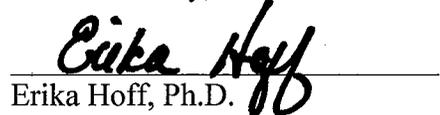
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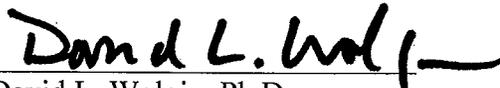
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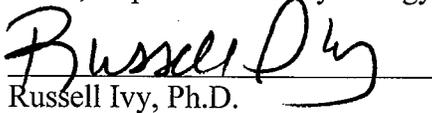
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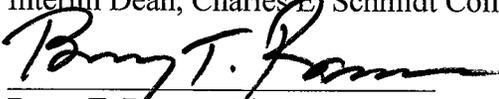
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ACKNOWLEDGEMENTS

The author wishes to express thanks to Håkan Stattin and Margaret Kerr of Örebro University for access to the 10-18 project archival data that were used in the current study.

The author is also grateful for the insight provided by Brett Laursen, Erika Hoff and Dave Perry who each provided a different perspective on the best way to tackle problems and provide solutions. The author is also especially grateful for the hands-on guidance provided by Brett Laursen every step of the way.

ABSTACT

Author: Cody Hiatt
Title: Best Friend Influence over Adolescent Problem Behaviors: The Role of Perceived Friendship Quality
Institution: Florida Atlantic University
Thesis Advisor: Dr. Brett Laursen
Degree: Master of Arts
Year: 2013

Close friends have been shown to influence adolescent problem behaviors, especially alcohol abuse (Urberg, Degirmencioglu, and Pilgrim, 1997). The degree of influence, however varies as a function of individual characteristics such as peer acceptance (Laursen, Hafen, Kerr, and Stattin, 2012) and age (Popp et al., 2008). The present study examines whether differences in influence extend to perceptions of friendship quality. Using a sample of 764 Swedish adolescents involved in stable same-sex reciprocal best friend relationships that lasted at least one year, analyses used distinguishable dyad actor-partner interdependence model (APIM) analyses (Kenny, Kashy, & Cook, 2006) to track influence over two years of the friendship. More satisfied friends were more influential than less satisfied friends on intoxication frequency and truancy. The findings of this study indicate that influence accompanies

perceptions of quality. Those with higher perceptions of quality exhibit more influence on friends who perceive relatively lower quality.

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INTRODUCTION

Homophily describes the tendency of affiliates to be similar (Larzarsfeld and Merton, 1954). Homophily on deviant behaviors is a concern because of fears that adolescents engage in health risk behaviors because of peer pressure. Evidence of peer pressure is clear, but the mechanisms are not, especially in terms of understanding who influences whom. For instance, delinquency increases over time for adolescents with deviant friends (Poulin, Dishion, and Haas, 1999). This effect is exacerbated in low quality friendships, which suggests that perceptions of relationship quality may play a role in friend influence. The current research will test the hypothesis that influence within a friendship varies as a function of differences in the perceived quality of the friendship.

Theoretical Mechanisms of Friend Influence

Several conceptual models have been advanced to explain friend influence over problem behaviors. Some of the most important are the reputational salience model (Hartup, 1996), Vygotsky's (1978) theory of cognitive development, social learning theory (Bandura, 1986), Brown's (2008) model of peer influence, and Piaget's (1970) theory of disequilibrium. I will review each in turn.

Reputational salience theory describes the friend selection processes (Hartup, 1996). According to the theory, friend similarity varies according to the importance and visibility of an attribute. Observable behaviors that help to define an individual's reputation are important characteristics in the selection of friends. During adolescence,

delinquent behavior has high reputational salience. For this reason, friends are often selected on the basis of similarity on delinquent behavior and substance use. Once selected on the basis of these salient traits, friends seek to promote even greater similarity based upon these unique traits. Thus, friends may choose one another because of a prominent behavior, then socialize each other in ways that increase the valued behavior.

Vygotsky's (1978) social theory of cognitive bootstrapping also addresses mechanisms of peer influence. Central to the framework is a discussion of how high ability children help to promote the cognitive development of their less advanced peers wherein the former teach the latter effective learning strategies and skills. According to the theory, those who do not have the cognitive resources necessary to complete a given task can obtain the necessary resources via social interaction with more advanced peers. The process works best when the less advanced peer receives instruction that is within his or her zone of proximal development, which describes instruction targeted just above current capabilities. The zone of proximal development is the area between the learner's actual development level (ability to independently perform a task or skill) and the level of potential development (ability to solve or perform a task or skill under guidance or with collaboration with more advanced peers). The theory is typically applied to cognitive development, but it may be extended to the acquisition of problem behaviors. For example, a less advanced peer may not have the knowledge of how to best skip class, but in collaboration with a peer who has this knowledge, he or she may learn effective strategies for truancy.

In social learning theory, youth learn deviant behavior from observing models (Bandura, 1986). While observing models, youth develop expectancies, which describe expectations about the likelihood that a behavior will be rewarded or punished. Expectancies mediate the link between immediate observable behavior and future performance of a behavior. A behavior is learned if it is observed, retained, can be reproduced, and a motive exists to perform it. Thus an individual who observes a friend drinking, must also have sufficient motivation to drink, and have opportunity to drink in order for the behavior to be reproduced. Central to this theory is the notion that one peer can be more influential than another by virtue of modeling and rewards. Of course, conventional learning mechanisms also play a role. Youth who are rewarded for deviant behavior, perhaps through praise and encouragement, are likely to reproduce the behavior. Dishion (2009) describes this type of reinforcement as deviant talk, noting that troubled youth tend to reward one another for descriptions of delinquent exploits.

Brown and colleagues (2008) offer a framework for understanding when and how peer influence occurs. At the heart of the model is a feedback loop between the activation of peer influence and the response to the influence attempt. The model includes various characteristics of both the influencer and the influencee that may alter one's susceptibility to influence. These characteristics include the context or setting, the degree to which participants are open to influence, the salience of the influencers, and the quality of the relationship between the influencer and the influencee. Taken together, these factors help to describe discrepancies in who influences whom. For example, one individual may be more open to influence over drinking alcohol, but if the individual does not have an opportunity to drink, behavior will not change. An individual may be open to drinking

influence, but if he or she does not get along with the influencer, then drinking influence may not occur.

Disequilibrium is another potential source of peer influence (Piaget, 1970). A state of disequilibrium occurs when an individual's current state is discrepant from his or her desired state. The resulting discrepancy motivates behavioral change. In peer interactions, disequilibrium can be a motivating force for peer influence. Disequilibrium arises when two friends have different characteristics. If similarity is desired, disequilibrium can be relieved when one friend takes on characteristics of the other friend (Bukowski, Velasquez, & Brendgen, 2008). Alternatively, disequilibrium can be an internal motivation. Adolescents with low self-esteem may experience a state of disequilibrium because they are dissatisfied with themselves. Accordingly, those with low self-esteem are motivated to change and may be more susceptible to peer influence.

Relationship Quality as a Source of Relative Friend Influence

Many theories address the mechanisms of friend influence. Far fewer describe the relative influence of each partner within a dyad. The current research will focus on relative perceptions of friendship quality as a unique factor that determines who influences whom within a dyad.

Friendships are important resources that provide participants with companionship, information, and emotional support (Furman, 1998). Differences in perceptions of friendship quality imply differences in perceptions of one or more of these resources. Two competing hypotheses have been advanced to explain how perceived differences in qualities of friendship may translate into differences in the influence that one friend has over another.

Some have argued that the friend who describes the friendship as relatively lower in quality may be the most influential partner. Investment theories argue that friends who see the relationship as low in quality have less incentive to conform to the wishes of a partner (Rusbult & Buunk, 1993). The member who views the relationships as higher in value and higher in quality probably has more to lose from dissolving it. The more one has to lose from dissolving a friendship, the more one is invested in the friendship, which means one is more apt to accommodate to the wishes of the partner (Urberg et al., 1997). Thus, when there are differential perceptions of relationship quality, there are differential perceptions about what is to be gained by continuing the relationship. When one friend perceives the relationship as relatively higher in quality than the other friend, the partner who sees the relationship as relatively high quality has more incentive to change than the partner who sees the relationship as relatively lower in quality.

Consistent with this view is Brown and colleagues' (2008) argument that the partner who perceives the relationship to be relatively higher in quality may be open to influence from the partner who sees the relationship as relatively lower in quality, but not the reverse. According to the model, a friend's relationship with the influencer can change one's susceptibility to influence. If one perceives a good relationship with a highly salient friend, one will be more likely to accommodate to the wishes of one's friend. Similarly, according to social learning theory, the partner who sees the relationship as higher in quality is probably the partner who sees the relationship as more rewarding. This suggests that he or she is the partner who is more likely to change, to maintain the rewarding relationship.

Others have argued that the friend who perceives the friendship as relatively higher in quality may be the most influential partner. According to the Piagetian concept of disequilibrium, motivation for change occurs due to a disparity between an actual state and a desired state (Bukowski, Velasquez, & Brendgen, 2008). Perceiving one's friendship to be high in quality friendship is a desired state. If one perceives a friendship to be low in quality, disequilibrium arises. Disequilibrium is unsettling. Disequilibrium motivates an individual to change the source of the disequilibrium, in this case, perceptions about the state of the relationship. Motivation to change could prompt the friend who perceives the relationship as lower in quality to conform to the wishes of the partner in order to improve harmony and cooperation, which may alter perceptions of relationship quality. There are other reasons why partners who perceive relationships to be of poor quality would seek to improve the quality of the affiliation. Social support has stress protective effects (Cohen, Sherrod & Clark, 1986). The perceived availability of social support is clearly a desirable asset. In an effort to improve well being and coping status, individuals who perceive relationships to be in disequilibrium may take steps to improve the friendship, which may motivate greater accommodation.

Leonard and Mudar (2004) reached a similar conclusion when investigating the influence of intoxication frequency in new marriages. Authors argue that perceptions of quality change the motivation to influence and be influenced. Specifically, wives have greater motivation to accommodate their husband's wishes in order to facilitate high quality in the relationship. To translate this to the friendship domain, perceiving relatively low quality in a friendship gives one greater motivation to improve friendship quality. In contrast, a friend who perceives a friendship as high quality is not motivated to change

and improve the quality of an already high quality friendship. Motivation to improve quality results in a motivation to accommodate to the wishes of the friend

Empirical Studies of Friend Influence over Adolescent Alcohol Abuse

Binge drinking is the most ubiquitous problem behavior during adolescence and young adulthood (Schulenberg et al., 1996). More than 25% of US high school seniors engaged in binge drinking at least once every two weeks (Johnston, O'Malley, Bachman, 1998). Binge drinking during adolescence predicts later alcohol dependence (Hilton, 1991), a host of other problem behaviors, from unwanted sexual intercourse to cognitive impairments (Schulenberg et al., 1996).

Friends play an important role in the development of adolescent drinking behavior. Close friends are a primary agent in the transition into alcohol use (Urberg, Degirmencioglu, and Pilgrim, 1997). Adolescent friends are similar on rates of alcohol consumption, with the association strongest during early adolescence (Engels et al., 2006). Friends are selected on the basis of drinking behavior and influence one another to increase drinking behavior over time (Burk, Vorst, Kerr, and Stattin, 2012).

Factors that Determine Relative Friend Influence over Alcohol Abuse

Research has shown that friends influence one another in terms of drinking behavior, but this only tells part of the story. Within a friendship, influence is not uniform. Some friends are more influential than others. Emerging evidence indicates that peer influence differs as a function of characteristics of the individual who is the source of influence and the characteristics of the individual being influenced. Two factors known to alter the influence of drinking behavior within adolescent friendships are acceptance and age.

Acceptance. Different theories reach the same conclusion about relative peer influence, namely that influence accompanies social status. According to reasoned action theory, high status individuals influence their lower status counterparts because they establish, model and enforce social norms. All behavior is filtered through normative beliefs and perceived norms (Fishbein & Azjen, 2010). Asher and McDonald (2009) note that acceptance is tied to leadership and perceived popularity, which, in turn, may translate into influence in the dyadic setting. Better accepted friends may pressure lower accepted friends to conform using the relational aggression tactics frequently found among popular youth. Better accepted friends may also model behaviors that are emulated by lower accepted partners who are accustomed to following the level of high status peers. Exchange theories also hypothesize greater influence for high accepted partners than for low accepted partners (Rusbult & Buunk, 1993). Exchange theories assume that individual investment in a relationship moderates behavior. An individual will react to preserve a relationship if resources have been invested in it. Higher accepted individuals have more alternatives for friends than lesser accepted individuals. Because the lower accepted member of the dyad has fewer friends, he or she has a greater incentive to comply with the higher accepted partner's wishes in order to preserve the relationship. Accordingly, the higher accepted partner is the more influential partner of the dyad.

There is evidence to support this proposition. Laursen, Hafen, Kerr, and Stattin (2012) tracked the influence of friends on the drinking behavior of students attending secondary and high schools. Stable friends were differentiated on the basis of relative acceptance. Results indicated that the higher accepted dyad member influenced the lower

accepted dyad member but not the reverse. For this reason, it is important that peer acceptance be included as a control variable in analyses that examine differences in influence as a function of perceived friendship quality.

Age. Theoretical models agree that older adolescents tend to influence their younger counterparts. Children prefer a relationship with younger peers so they can direct interactions (French, 1984). By the same token, younger partners report that they prefer to receive direction from older partners. Susceptibility to peer influence decreases linearly from across the adolescent years (Steinberg & Monahan, 2007). It is sensible that younger partners should be more susceptible to influence from older partners than the reverse. Much the same is predicted from models of autonomy development. Emotional autonomy from parents typically involves a transfer of emotional dependence to peers (Steinberg & Silverberg, 1986). As youth grow older they become more secure in their identities, less reliant on peers and, less susceptible to influence. All things being equal, older adolescents should be further along in the process of autonomy development than younger adolescents and, as such, relatively more influential.

Using the same data set I will use in this thesis, Popp et al. (2008) tracked the influence of friends on the drinking behavior of students attending secondary and high schools. Results indicated that older individuals significantly influenced younger friends on intoxication frequency, but that younger friends have little influence over older friends. For this reason, it is important that relative age be included as a control variable in analyses that examine differences in influence as a function of perceived friendship quality.

Relative Friend Influence over Truancy

Truancy is defined as skipping school without a valid excuse (Henry and Thornberry, 2010). Truancy is considered to be in a larger category of non-aggressive delinquent behaviors that correlate with alcohol consumption (Bimler & Kirkland, 2001). Indeed, Henry and Thornberry (2010) found that increases in truancy behavior predicted later increases substance abuse including alcohol use. Furthermore, the link between truancy and substance use was mediated by unsupervised time spent with peers. It follows that truancy and drinking should have common sources of influence. Conceptual models of influence over deviant behavior are not specific to alcohol consumption. Therefore, similar influence mechanisms are assumed to operate on the decision to cut class as on the decision to abuse alcohol.

As is the case for alcohol intoxication, research has shown peers to be especially influential over truancy during adolescence (Studsørød & Bru, 2011). Truancy tends to include unstructured, unmonitored time with friends in risky settings (Henry & Thornberry, 2010). Adolescents cut class with friends, which results in increases in problem behaviors and disengagement from school. Increases in problem behaviors and disengagement from school, in turn, increases truancy as adolescents cut class to drink, smoke, and use other substances.

To date, research has not examined the process of friend influence over truancy. Research has demonstrated that friends have a role in the development of truancy, but research has not investigated who influences whom. Theoretical perspectives that explain differential influence within a friendship do not uniquely apply to drinking behavior. They may also be used to describe friend influence over truancy.

Techniques for Studying Friend Influence

Statistical obstacles have hindered past efforts to identify the magnitude and the direction of peer influence (Laursen, 2005). Friends are interdependent, with interconnected social exchanges, that are frequent, strong, and diverse (Kelly, 1983). Friends influence each other's thoughts, feelings, and behaviors. Accordingly, data collected from friends cannot be considered independent, because relational interdependence fosters statistical non-independence (Kenny, 1996).

Previous studies of friend influence suffer from problems arising from statistical nonindependence. Dyadic data analyses overcome these limitations (Card, Selig, & Little, 2009; Kenny, Kashy, & Cook, 2006). The Actor-Partner Interdependence Model (APIM: Kenny, Kashy, & Cook, 2006) partitions variance shared by dyad members from variance that uniquely describes associations between partners. Modifications to the APIM allow for the analysis of dyadic data over time (Popp, Laursen, Burk, Kerr, & Stattin, 2008). Distinguishable dyad longitudinal APIM, which treats each member of the dyad as belonging to a unique class of participants, makes it possible to determine relative levels of influence within the dyad. Cross-lagged paths identify the degree to which one category of friend influences the other.

Hypotheses

The goal of this study is to determine whether perceived relationship quality is a unique predictor of relative friend influence over and above influence associated with age (Popp, Laursen, Kerr, Stattin, Burk, 2008) and peer acceptance (Laursen, Hafen, Kerr, and Stattin, 2012). To this end, distinguishable dyad APIM analyses will be conducted to

determine which partner has more influence over changes in drinking behavior, the one who sees the relationship as relatively higher in quality or the one who sees the relationship as relatively lower in quality. The same analyses will be repeated using intoxication frequency and truancy as the dependent variables. In each case, age and peer acceptance will be included as control variables to ensure that influence attributed to perceived relationship quality is not an artifact of other variables known to drive socialization effects.

The proposed study will ask three research questions. First, does friend influence over adolescent deviant behavior vary as a function of perceptions of the relative quality of the friendship? Relationship quality will be used as a distinguishing variable to determine whether influence differs for those who perceive the relationship to be relatively higher in quality (more satisfied) and those who perceive the relationship to be relatively lower in quality (less satisfied). Analyses will test two competing hypotheses.

Consistent with the notion of disequilibrium it is hypothesized that those who perceive the relationship as low quality will be motivated to change their behavior. The friend with relatively lower perceptions of relationship quality should be more susceptible to influence over deviant behavior (Bukowski, Velasquez, & Brendgen, 2008). Also, the friend who perceives the relationship to be relatively higher in quality may behave in a more enthusiastic manner toward his or her partner. A more enthusiastic partner will make more influence attempts to incorporate a friend into activities. A similar finding emerged for the literature on married couples. Barry and Wentzel (2006) found that in relationships, married women are likely to be motivated to accommodate to the wishes of their spouse to increase the quality of the relationship. Similarly, a friend

who rates a relationship as relatively low quality is motivated to accommodate to the wishes of a friend to increase the quality of the friendship.

In contrast, investment theories hold that, the friend who describes the relationship as relatively lower in quality should exhibit greater influence (Rusbult & Buunk, 1993). These models hold that the friend who has the most invested in the relationship should be the most accommodating because he or she has the most to lose. Thus, the friend who perceives the relationship to be higher in quality has more invested in the relationship and has more reasons to be influenced.

Second, is influence associated with friendship quality an artifact of relative age or relative peer acceptance? It is hypothesized that perceptions of relationship quality are independent of peer acceptance and age. Although previous studies suggest that influence is accorded to the older, better accepted partner, there is no reason to think that either of these variables are responsible for differences in perceptions of relationship quality.

Third, do influence patterns differ in new and ongoing friendships? Multiple groups APIM analyses will be conducted to determine if perceptions of relationship quality are more important for those in new relationships than for those in existing relationships. Previous research has indicated that differences in the relative influence of friends are more pronounced during the initial phases of the relationship than during the later phases. Specifically, older friends and better accepted friends held greater sway during the first year of the friendship than during the second year. I expect a similar pattern to emerge here, such that friends who exhibit greater influence as a function of relative perceptions of relationship quality will have more influence in the first year of friendship.

METHOD

Participants

Participants were drawn from the *10 to 18 Project*, a longitudinal study that began in 2002 and ended in 2007. The sample included 4,917 adolescents (2,517 boys and 2,400 girls) from four secondary schools (7th to 9th grade) and 1 high school (10th to 12th grade) in central Sweden. Of the 4,274 participants who described their nationality, 3,920 (91.7%) identified themselves as Swedish and 354 (8.3%) identified themselves as non-Swedish. According to parent reports, 56.4% ($n = 839$) of mothers who reported their working status were employed full-time, 35.2% ($n = 524$) were employed part-time, and 8.4% ($n = 125$) were not employed. In addition, 93.1% ($n = 1300$) of fathers who reported their working status were employed full-time, 2.5% ($n = 35$) were employed part-time, and 4.4% ($n = 61$) were not employed.

Participants in this study included adolescents who nominated the same same-sex reciprocal best friend for two consecutive years. Participants were in the 7th through 11th grade at the outset. Participants in friendship dyads that were stable across 9th and 10th grade were excluded to avoid potential confounds with school transition. The final sample included 764 subjects (338 boys, 426 girls) in stable same sex reciprocal best friend dyads. Thus, the sample differed in important ways from previous studies of peer influence using the same data, because the present study focused only on reciprocated first choice friendships. At the first wave of data collection, seventh graders ranged in age

from 12 to 13 ($M = 13.04$, $SD = .08$). Eighth graders ranged in age from 13 to 15 ($M = 14.07$, $SD = .21$). Tenth graders ranged in age from 15 to 17 ($M = 16.09$, $SD = .31$). Eleventh graders ranged in age from 16 to 19 ($M = 17.22$, $SD = .42$). Of the 382 participants who described their nationality, 358 (93.70%) identified themselves as Swedish and 24 (6.30%) identified themselves as non-Swedish. According to parent reports, 61.3% ($n = 133$) of mothers who reported their working status were employed full-time, 31.3% ($n = 68$) were employed part-time, and 7.4% ($n = 16$) were not employed. In addition, 94.7% ($n = 196$) of fathers who reported their working status were employed full-time, 2.4% ($n = 5$) were employed part-time, and 2.9% ($n = 6$) were not employed.

Instruments

Five waves of data were collected. Participants completed the same battery of questionnaires at annual intervals. The current study focuses on the peer nomination, friendship quality, intoxication frequency, and adolescent truancy measures.

Peer nominations. Participants identified up to three important peers (except in wave one, where participants nominated up to 4 important peers). An important peer is “someone you talk with, hang out with, and do things with.” Participants labeled important peers as friends, siblings, or romantic partners. Important peers did not have to be enrolled in the same grade or attend the same school as the participant. Participants also nominated peer affiliates: up to 10 individuals with whom they spent time in school and up to 10 individuals with whom they spent time out of school. Important peers and peer affiliates could be older or younger, boys and girls, from the same school or different school, but not parents or other adults. *Peer acceptance* was calculated by

summing the total number of incoming friend and peer affiliate nominations a participant received.

Important peer nominations were used to identify reciprocated friends. Reciprocated friends nominated each other as important peers and labeled one another as friends. Reciprocated best friends nominated one another as the highest ranked important peer. Of the 413 reciprocated best friend dyads identified ($n = 178$ male dyads, $n = 235$ female dyads), 268 dyads ($n = 116$ male dyads, $n = 152$ female dyads) remained reciprocated best friends at two consecutive time points.

Perceived Friendship Quality. Participants completed an 18-item measure of friendship quality describing the highest ranked important peer (Tillfors et al., 2012; See Appendix A). The response format ranged from 1 (*don't agree at all*) to 5 (*agree perfectly*). Item scores were averaged. Internal reliability was good ($\alpha = .86$ to $.87$).

Intoxication Frequency. Participants completed a problem behavior inventory with documented validity among Swedish youth (Magnusson, Duner, & Zetterbloom, 1975). Intoxication frequency includes three items referring to alcohol consumption during the past month or year (Laursen et al., 2012; See Appendix B). Items were rated on a scale ranging from 1 (*no, it has not happened*) to 3 (*several times*). Scores were standardized and then averaged. Internal reliability was good ($\alpha = .87$ to $.90$).

Truancy. The problem behavior inventory included three items that described truancy, rated on a scale ranging from 1 (*no, it has not happened*) to 3 (*yes, several times*). Parents also completed a child behavior problem inventory that included one item on the topic of truancy, rated on a scale ranging from 1 (*no, it hasn't happened*) to 3 (*yes,*

several times) (see appendix C). Item scores were standardized within adolescent and parent reports, then averaged. Internal reliability was acceptable ($\alpha = .71$ to $.72$).

Procedure

Students were recruited in school and letters were sent to parents to inform them of the study. The letters included postage-paid cards for parents to return if they wanted to decline their child's participation in the study. Trained research assistants administered questionnaires to the participating students during regular school hours. Sessions lasted approximately one hour. Teachers were not present.

The final sample included 7th through 12th graders who nominated the same same-sex reciprocal best friend for two consecutive years. Friends who were only stable across 9th and 10th grade were removed from the sample, to avoid a confound with the school transition. The final sample did not significantly differ from the total sample on mother and father employment status ($t(1472-1522) = 1.2 - 1.9, p = .45 - .54$) ($d = .03 - .03$), parental education ($t(1519) = 1.05, p = 0.35$) ($d = .231$), truancy ($t(4971) = 0.85, p = .34$) ($d = .01$), and intoxication frequency ($t(959) = 1.13, p = 0.37$) ($d = .06$). Friendship quality was significantly higher in the final sample ($t(2758) = 3.35, p = 0.03$) ($d = .132$).

Plan of Analysis

Preliminary analyses determined the suitability of the distinguishable friend dyad analyses. Analyses examined influence as a function of perceived friendship quality. Within each dyad, participants were categorized as relatively higher on perceived friendship quality or relatively lower on perceived friendship quality. Dyads where

partners differed in perceptions of friendship quality by less than one standard deviation were omitted ($n = 32$). A χ^2 test of distinguishability (Kenny et al. 2006) constrained the variances means, and correlations of all study variables to be equal. Significant χ^2 values that reveal poor fit indicate that friends should be distinguished on the basis of friendship quality. Little's MCAR test (Little, 1988) indicated friendship quality, truancy and intoxication frequency data were missing completely at random, $\chi^2(985, N=382) = 959.97, p = .71$. An average of 35.3% (range= 9.7% to 58.4%) of the data were missing on friendship quality. Missing friendship quality data were handled using multiple imputation, so that participants could be categorized as high or low quality partners.

Does friend influence over deviant behavior vary as a function of relative perceptions of the quality of the relationships? Two sets of distinguishable dyad APIM analyses were conducted. APIM analyses were conducted using path analyses in a Structural Equation Modeling (SEM) framework with Mplus 7.0 (Muthén & Muthén, 2012). Figure 1 depicts a fully saturated distinguishable dyad APIM for the sample distinguished by friendship quality with intoxication frequency as the dependent variable. Figure 2 depicts a fully saturated distinguishable dyad APIM for the sample distinguished by friendship quality with truancy as the dependent variable. Model fit is not assessed in any of these analyses because the models were fully saturated.

Friend influence on intoxication frequency is indicated by a statistically significant beta weight on between-individual partner paths ($b1$, and $b2$). A significant ($b1$) partner path indicates that the intoxication frequency of the friend who perceives relatively higher levels of friendship quality predicted changes in the intoxication frequency of the friend who perceives relatively lower levels of friendship quality. A

significant (*b2*) partner path indicates that the intoxication frequency of the friend who perceives relatively lower levels of friendship quality predicted changes in the intoxication frequency of the friend who perceives relatively higher levels of friendship quality.

Friend influence on truancy is indicated by a statistically significant beta weight on between-individual partner paths (*b1*, and *b2*). A significant (*b1*) partner path indicates that the truancy of the friend who perceives relatively higher levels of friendship quality predicted changes in the truancy of the friend who perceives relatively lower levels of friendship quality. A significant (*b2*) partner path indicates that the truancy of the friend who perceives relatively lower levels of friendship quality predicted changes in the truancy of the friend who perceives relatively higher levels of friendship quality. To compare the influence paths of partners who perceive the friendship to be relatively higher in quality and partners who perceive the relationship to be relatively lower in quality, influence paths are constrained to be equal and model fit will be examined.

A follow-up repeated measures analyses of variance (ANOVA) will determine if the rate of change in the dependent variable is greater for friends with specific distinguishing features. Significant partner paths in APIM models indicate positive or negative associations, but do not indicate increases and decreases in means. Follow-up analyses will determine if intoxication frequency or truancy increase or decrease given friend's relative amount of intoxication frequency or truancy.

Are differences in friend influence as a function of perceived relationship quality an artifact of relative age or relative peer acceptance? The next analyses

measured relative influence as a function of perceived relationship quality after controlling for age and peer acceptance. The same two distinguishable dyad APIM analyses were conducted, except that time 1 age and time 1 peer acceptance scores are added as time 1 correlates in separate analyses. Thus, two sets of distinguishable dyad APIM analyses were conducted. Separate analyses included time 1 age of each partner or time 1 peer acceptance of each partner as control variables. Intoxication frequency and class cutting are the dependent variables. To compare the influence paths of partners who perceive the friendship to be relatively higher in quality and partners who perceive the relationship to be relatively lower in quality, influence paths are constrained to be equal and model fit was examined.

Do sex, length of friendship, or age moderate patterns of influence? Multiple group analyses compared dyads who differ on key characteristics to determine if patterns of influence differ for boys and girls, for those with new friendships and those with established friendships, and for middle school youth and high school youth. APIM analyses distinguished by relationship quality were conducted on dyads that differ on sex, friendship duration, and school level. Multiple group analyses tested for significant differences on influence paths in friends. To compare the influence paths of partners who perceive the friendship to be relatively higher in quality and partners who perceive the relationship to be relatively lower in quality, influence paths were constrained to be equal and model fit was examined. Paths were constrained to be equal across models and χ^2 values was examined. A significant χ^2 value indicates poor fit, meaning the paths are significantly different; a nonsignificant χ^2 indicates that the paths are not significantly

different. Two sets of distinguishable dyad APIM analyses were conducted with intoxication frequency and truancy as the dependent variables.

RESULTS

Preliminary Analyses

A series of 2 (relative perceptions of friendship quality: high or low) by 2 (sex) by 2 (time: year 1 or year 2) repeated measures ANOVAs were conducted using intoxication frequency and truancy as the dependent variables. The main effect of time on intoxication frequency was significant, $F(1, 750) = 8.258, p = .004 (d=.072)$, with intoxication frequency increasing over time (Time 1 $M=1.72, SD=0.88$; Time 2 $M=1.79, SD=0.95$). The effect of time was not statistically significant for truancy. There were no statistically significant two-way interactions.

Intercorrelations among study variables.

Bivariate correlations are presented in Table 1. Intoxication frequency was significantly positively associated with concurrent acceptance, age and truancy. Truancy was significantly positively associated with concurrent age. Truancy and intoxication frequency were positively correlated with one another over time.

Distinguishable Dyad APIM Analyses

A χ^2 test of distinguishability indicated which partners can be distinguished on the basis of relative perceptions of friendship quality, $\chi^2(49, N=382) = 3193.51, p < .01$.

Intoxication Frequency. Figure 3 depicts results of the APIM analysis on intoxication frequency with friends distinguished on the basis of relative friendship quality. Partner paths indicated that the friend who perceived more satisfaction in the

friendship influenced the friend who perceived less satisfaction in the friendship, but not the reverse. Higher levels of initial intoxication frequency on the part of the friend who perceived more satisfaction in the friendship predicted greater increases from time 1 to time 2 in intoxication frequency for the friend who perceived less satisfaction in the friendship ($\beta=.45$). The initial intoxication frequency of the friend who perceived less satisfaction in the friendship did not predict changes in levels of intoxication frequency in the friend who perceived more satisfaction in the friendship ($\beta= .09$). There was a statistically significant difference between partners on the influence of intoxication frequency, $\chi^2(1, N=382) = 12.979, p = .001$.

APIM analyses revealed significant influence for intoxication frequency. The more satisfied friend's initial intoxication frequency predicted change in the less satisfied friend's intoxication frequency. To better understand influence friendship dyads were divided into one of two groups: the more satisfied friend had higher initial intoxication frequency than the less satisfied friend ($n = 132$), or the more satisfied friend had lower initial intoxication frequency than the less satisfied friend ($n = 129$). Dyads who differed by less than .25 standard deviations in initial intoxication frequency were removed from analyses ($n = 121$).

A 2 (Time) X 2(relative intoxication frequency of more satisfied friend) repeated measures ANOVA was conducted. The intoxication frequency of the less satisfied friend was the dependent variable. There was a statistically significant time by relative intoxication frequency of the more satisfied friend interaction, $F(1, 259) = 51.75, p < .001$. The less satisfied friend showed greater increases in intoxication frequency when their friend drank relatively more at the outset (Figure 4). The less satisfied friend

showed decreases in intoxication frequency when their friend drank relatively less at the outset.

Figure 5 depicts results of distinguishable dyad APIM analyses on intoxication frequency with peer acceptance included as a control variable. The same pattern of statistically significant results emerged. After controlling for peer acceptance, partner paths indicated that the friend who perceived more satisfaction in the friendship influenced the friend who perceived less satisfaction in the friendship, but not the reverse. Higher levels of initial intoxication frequency on the part of the friend who perceived more satisfaction in the friendship predicted greater increases from time 1 to time 2 in intoxication frequency for the friend who perceived less satisfaction in the friendship ($\beta=.44$). The initial intoxication frequency of the friend who perceived less satisfaction in the friendship did not predict changes in levels of intoxication frequency in the friend who perceived more satisfaction in the friendship ($\beta= .10$). There was a statistically significant difference between partners on the influence of intoxication frequency, $\chi^2(1, N=382) = 12.978, p = .001$.

Figure 6 depicts results of distinguishable dyad APIM analyses on intoxication frequency with age included as a control variable. The same pattern of statistically significant results emerged. After controlling for age, partner paths indicated that the friend who perceived more satisfaction in the friendship influenced the friend who perceived less satisfaction in the friendship, but not the reverse. Higher levels of initial intoxication frequency on the part of the friend who perceived more satisfaction in the friendship predicted greater increases from time 1 to time 2 in intoxication frequency for the friend who perceived less satisfaction in the friendship ($\beta=.45$). The initial

intoxication frequency of the friend who perceived less satisfaction in the friendship did not predict changes in levels of intoxication frequency in the friend who perceived more satisfaction in the friendship ($\beta = .09$). There was a statistically significant difference between partners on the influence of intoxication frequency, $\chi^2(1, N=382) = 12.979, p = .001$.

Multiple Group Analyses. Three sets of multiple group analyses contrasted patterns of influence for (a) males and females, (b) middle school and high school students, and (c) those in the first year of friendship and ongoing friendships. There were no statistically significant differences between males more ($\beta = .35$) and less ($\beta = .13$) satisfied friends and female more ($\beta = .51$) and less ($\beta = .08$) satisfied friends on the influence of intoxication frequency, $\chi^2(6, N=382) = 4.18, p = .65$. There were no statistically significant differences between middle school more ($\beta = .34$) and less ($\beta = .06$) satisfied friends and high school more ($\beta = .48$) and less ($\beta = .09$) satisfied friends on the influence of intoxication frequency $\chi^2(6, N=382) = 10.01, p = .12$. There were no statistically significant differences between new friendship dyad more ($\beta = .29$) and less ($\beta = .12$) satisfied friends and ongoing friendship dyad more ($\beta = .58$) and less ($\beta = .05$) satisfied friends on the influence of intoxication frequency $\chi^2(2, N=382) = 4.76, p = .09$.

Truancy

Figure 7 depicts results of the APIM analysis on truancy with friends distinguished on the basis of relative friendship quality. Partner paths indicated that the friend who perceived more satisfaction in the friendship influenced the friend who perceived less satisfaction in the friendship, but not the reverse. Higher levels of initial truancy on the part of the friend who perceived more satisfaction in the friendship

predicted greater increases from time 1 to time 2 in truancy for the friend who perceived less satisfaction in the friendship ($\beta=.17$). The initial truancy of the friend who perceived less satisfaction in the friendship did not predict changes in levels of truancy in the friend who perceived more satisfaction in the friendship ($\beta= .07$). There was not a statistically significant difference between partners on the influence of intoxication frequency, $\chi^2(1, N=382) = .895, p = .35$.

APIM analyses revealed significant influence for truancy. The more satisfied friend's initial truancy predicted change in the less satisfied friend's truancy. To better understand influence friendship dyads were divided into one of two groups: the more satisfied friend had higher initial truancy than the less satisfied friend ($n = 29$), or the more satisfied friend had lower initial truancy than the less satisfied friend ($n = 119$). Dyads who differed by less than .25 standard deviations in initial truancy were removed from analyses ($n = 42$).

A 2 (Time) X 2(relative truancy of more satisfied friend) repeated measures ANOVA was conducted. The truancy of the less satisfied friend was the dependent variable. There was a statistically significant time by relative truancy of the more satisfied friend interaction, $F(1, 69) = 109.77, p < .001$. The less satisfied friend showed greater increases in truancy when their friends were relatively more truant at the outset (Figure 8). The less satisfied friend showed decreases in truancy when their friends were relatively less truant at the outset.

Figure 9 depicts results of distinguishable dyad APIM analyses on truancy with peer acceptance scores included as control variables. The same pattern of statistically significant results emerged. After controlling for peer acceptance, partner paths indicated

that the friend who perceived more satisfaction in the friendship influenced the friend who perceived less satisfaction in the friendship, but not the reverse. Higher levels of initial truancy on the part of the friend who perceived more satisfaction in the friendship predicted greater increases from time 1 to time 2 in truancy for the friend who perceived less satisfaction in the friendship ($\beta=.18$). The initial truancy of the friend who perceived less satisfaction in the friendship did not predict changes in levels of truancy in the friend who perceived more satisfaction in the friendship ($\beta= .08$). There was a statistically significant difference between partners on the influence of intoxication frequency, $\chi^2(1, N=382) = .818, p = .29$.

Figure 10 depicts results of distinguishable dyad APIM analyses on truancy with relative age included as control variables. The same pattern of statistically significant results emerged. After controlling for relative age, partner paths indicated that the friend who perceived more satisfaction in the friendship influenced the friend who perceived less satisfaction in the friendship, but not the reverse. Higher levels of initial truancy on the part of the friend who perceived more satisfaction in the friendship predicted greater increases from time 1 to time 2 in truancy for the friend who perceived less satisfaction in the friendship ($\beta=.17$). The initial truancy of the friend who perceived less satisfaction in the friendship did not predict changes in levels of truancy in the friend who perceived more satisfaction in the friendship ($\beta= .10$). There was a statistically significant difference between partners on the influence of intoxication frequency, $\chi^2(1, N=382) = 9.38, p = .40$.

Multiple Group Analyses. Three sets of multiple group analyses contrasted patterns of influence for (a) males and females, (b) middle school and high school

students, and (c) those in the first year of friendship and ongoing friendships. There were no statistically significant differences between male and female dyads on the influence of truancy, $\chi^2(6, N=382) = 15.67, p = .015$. There were no statistically significant differences between middle school and high school dyads on the influence of truancy $\chi^2(6, N=382) = 6.71, p = .34$. There were no statistically significant differences between new friendship and ongoing friendship dyads on the influence of truancy $\chi^2(6, N=382) = 6.69, p = .35$.

DISCUSSION

The findings of this study indicate that perceptions of friendship quality shape patterns of influence. Within a friend dyad, the partner who perceives the relationship to be higher in quality has more influence on the problem behaviors of the friend who perceives the relationship to be relatively lower in quality. This pattern of results held for intoxication frequency, even after partitioning out the variance associated with age and peer acceptance. More satisfied friends also exhibited significant influence over less satisfied friends on truancy but not the opposite.

Empirical Contributions

Several recent studies have extended the study of peer influence in new directions, seeking to answer the question: who influences whom? The present study replicates and extends previous research on the characteristics of friends that shape relative influence over intoxication frequency (Laursen, Hafen, Kerr, & Stattin, 2012; Popp, Laursen, Burk, Kerr, & Stattin, 2008). Previous research with the same sample indicates that better accepted friends and older friends tend to influence their less accepted and younger counterparts. The current study extended these findings by distinguishing friends on the basis of perceived friendship quality. The friend who reported greater friendship quality influenced his or her partner, but not the reverse. These findings were independent of the influence associated with age or acceptance, suggesting that perceived quality is a unique dimension along which influence is

distributed. Two opposing hypotheses were tested. One hypothesis suggests that friends who perceive relatively greater friendship quality exhibit more influence. The Piagetian concept of disequilibrium suggests that the friend who describes the friendship as relatively higher quality should exhibit more influence because the perception of a low quality friendship is undesirable (Bukowski, Velasquez, & Brendgen, 2008).

Accordingly, an individual who perceives a friendship to be of low quality will be motivated to change behavior to accommodate the wishes of the friend in order to increase the quality of the friendship. The other hypothesis suggests that friends who perceive relatively lower friendship quality should exhibit more influence. Investment theories argue that the partner who is more invested in the relationship should be more accommodating of a partner's wishes in order to maintain the relationship (Rusbult & Buunk, 1993). Thus, the friend who perceives the friendship to be low of quality should have more influence than the friend who perceives the friendship to be of high quality because the latter has more incentive to behave in ways that will maintain the relationship (Rusbult & Buunk, 1993).

The current research supports the hypothesis that more satisfied friends influence friends who perceive less quality. Results indicated that the partner who rated the friendship as higher in quality exhibited more influence over the partner. The current findings indicate that those in high quality friendships are more influential than low quality friendships. Previous researchers have hypothesized that high quality friendships are influential simply because partners spend more time together than those in low quality friendship (Bukowski, Velasquez, & Brendgen, 2008). The current study suggests that much of this influence may come from the partner who sees the relationship in better

terms. Believing the friendship to be high quality may cause one to behave in an influential manner. This type of behavior could be general enthusiasm towards the relationship or some other infectious behavior. Perceptions of high quality may also lead one to make more influence attempts. Previous research indicates that an imbalance of power in a relationship alters perceptions of relationship quality (Oyamot, Fuglestad, and Snyder, 2010). Accordingly, it may be that differences in influence may be the cause of differences in perceptions of quality. That is, the friend who has more influence may be more satisfied with the relationship and, as a consequence, rate the relationship as higher in quality.

Alternate Explanations

Alternative explanations were considered and rejected. Previous research has shown that age (Popp, Laursen, Burk, Kerr, & Stattin, 2008) and peer acceptance (Laursen, Hafen, Kerr, and Stattin, 2012) alter patterns of relative influence within friendships. These characteristics were not responsible for influence attributed to differences in perceptions of quality. More satisfied friends are not simply more influential because they are high status, sociable individuals. By the same token, more satisfied friends are not more influential simply because they are older. It is possible, of course, that quality may be correlated with some other variables that may account for the findings. But the analysis strategy ruled out two of the most likely confounds.

Group Differences in Patterns of Influence

Previous research has shown that influence increases the most during the first year of a friendship, with subsequent increases being smaller in magnitude (Laursen, Hafen, Kerr and Stattin, 2012). Results from the present study were consistent with this trend,

although differences failed to reach conventional levels of statistical significance. It is worth noting that the partner who perceives the friendship as low quality still did not exhibit statistically significant influence in ongoing or in new friendships, it is clear that influence lies with the partner who perceives the friendship to be of high quality. Too much stock should not be put in null findings, but the results seem to suggest that the importance of quality does not vary for boys and girls nor for middle school or high schoolers. This finding is in line with theories that describe the influence of problem behaviors as a function of friendship quality, none of which theorize that influence would vary for male and female or middle and high school dyads. If differences were to be found, they would likely be due to mean level differences in the amount of problem behaviors exhibited by boys because high school children and boys are likely to have more problem behaviors.

Implications for Intervention, Prevention and Future Research

The findings have implications for future research, prevention, and intervention. First, the particular social interactions of friends within a dyad have important implications for the development of problem behaviors. Consider an interaction that may occur between an individual who rates a friendship as high quality and an individual who rates the same relationship as low quality. The more satisfied friend is enthusiastic and excited about the relationship, drawing the other friend into his or her problem behaviors. That is, an enthusiastic partner is likely to want to incorporate his or her best friend into these activities. This partner makes attempts to influence the behavior of that friend including inclusion in activities like drinking and cutting class. Thus, having a friend who

really likes you is good for your self-image, but potentially bad for the development of problem behaviors.

The current study offers implications for future research. Those who wish to further the current research should investigate whether the findings reflect characteristics of the friend who is being influenced or the friend doing the influencing. Throughout this thesis, I have assumed that the findings are a product of the high quality partner, exerting influence over the low quality partner. But the findings could instead be a product of the individual being influenced. It could be that the individual who rates the relationship as low quality is highly susceptible to influence. One possibility, as alluded to above, is that low quality partners are, for some reason or another, looking to please their friends or especially vulnerable to the persuasive efforts of friends. The design of the present study makes it impossible to tease apart these possibilities.

The current study demonstrates that perceptions of a friendship alter behavior. Other research has demonstrated this, but has failed to capture the differences in relative influence for participants who hold differential perceptions of the relationship. For example, Ladd, Kochenderfer & Coleman (2008) demonstrated that positive perceptions of friendship quality predict increases in satisfaction and stability and, negative perceptions of quality predicted maladjustment. The current research also argues that individual perceptions of quality are important for determining outcomes; differential perceptions of quality yielded differential outcomes. Future research should consider those with differential perceptions of a relationship as a distinct group when investigating dyadic relationships. For example, previous research has argued that when there is a imbalance of power within a relationship, relationships are perceived as lower in quality

(Veniegas & Peplau, 1997). That is, when one member has greater influence over the other, dyads are, on average, rated as lower quality. Extending this work, results for the present study indicated that when there is an imbalance in the influence friends have over one another, there can be an imbalance in perceptions of quality. Future research that investigates influence and power dynamics in dyads should consider quality rating of both members. It stands to reason that one who has more power in a relationship, might find the relationship more advantageous.

Additionally, the current study offers several methodological advantages over previous research. First, few studies have determined relative influence within friendship dyads. Treating members of a dyad as indistinguishable creates a plethora of problems when tracking influence over problem behaviors. Distinguishing friends on a basis of discrepant characteristics is more appropriate, because considering dyad members who are empirically distinct as such yields more accurate results. Second, the present study ruled out alternative explanations through the use of control variables and multi-group models. When conducting APIM analyses that track the influence of problem behaviors within friends, variance is separated based on a distinguishing characteristic. Partners distinguished on one characteristic, may be distinguishable based on other similar characteristics that also explain variance within the model. Also, including variables that are theoretically or empirically potential moderators of the influence process may make the difference between detecting significant effects within models.

The findings suggest that those who want to prevent or intervene in the development of problem behaviors should look toward the best friend. Intervention programs should recognize that friends are an influential agent in the development of

problem behaviors, and that different friends have a differential impact on the development of problem behaviors. When friends do not share perceptions of quality, intervention should be catered to each partner.

Limitations

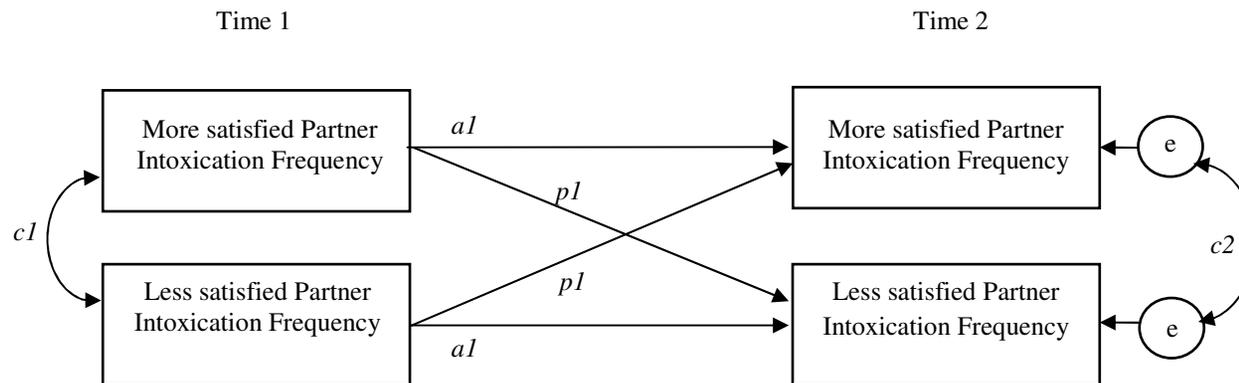
The current study is not without limitations. First, participants were drawn from a homogeneous population of youth in Sweden. Future studies should examine whether the findings extend to youth in urban, diverse, mobile populations. That being said, the current sample offers a distinct advantage over others in that students from an entire community participated. This allows us to investigate a broader range of friendships, not just friendships in school. Second the current study tracked the influence of friendships over a one year period. This large time frame allowed for the investigation of long-term friendships, but it does not capture how influence may occur in fluctuating or brief friendships. In brief or unstable friendships, perceptions of quality may have less of an impact (because other features are more salient) or more of an impact (because friends are still evaluating one another). Future research should investigate the influence of problem behaviors at more frequent intervals. Similarly, the current research only was able to look at first mentioned best friendships. Other types of friends may be less influential, or characteristics other than perceived relationship quality may be more salient. Additionally, when one perceives a low quality friend who is also less important than other friends, one might be less likely to be influenced. This person perceives a crummy relationship with an unimportant individual and has no incentive to conform to the wishes of the friend. Tracking influence in 3rd or 4th best friendships might yield different results.

Conclusion

In conclusion, friend influence is more than just a trait or a behavior, it is also an attitude. It is easy to imagine how characteristics such as age, beauty, or size might make one partner more influential than another. It is also easy to imagine how behaviors, such as relational aggression, or peer status, such as popularity, might accord one friend greater influence. But, it is less obvious how attitudes, particularly attitudes about the relationship, might translate into influence. It is likely that these attitudes are manifest in a host of behaviors that serve to alter relationship perceptions. It remains to be seen whether influence stems from the transmission of the attitudes or the behaviors the attitudes engender.

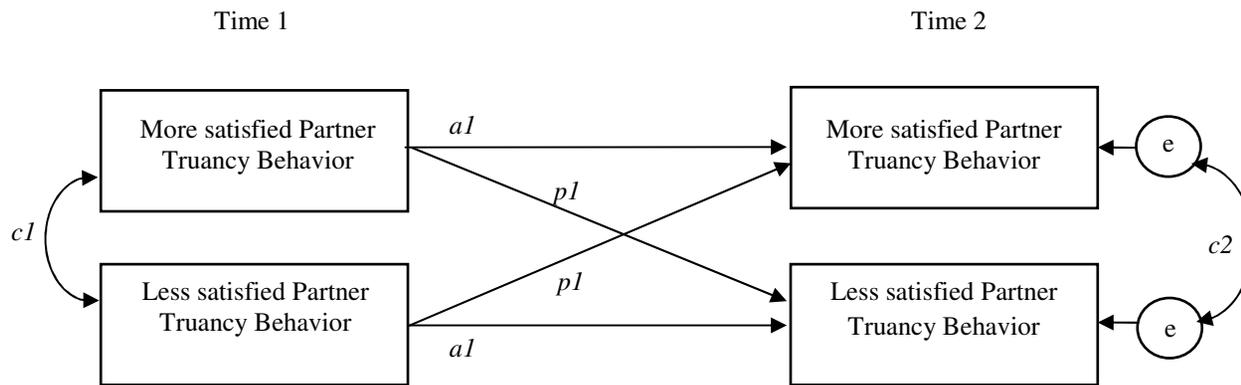
APPENDIX

Figure 1. A longitudinal Actor-Partner Interdependence Model (APIM) for distinguishable dyads predicting intoxication frequency.



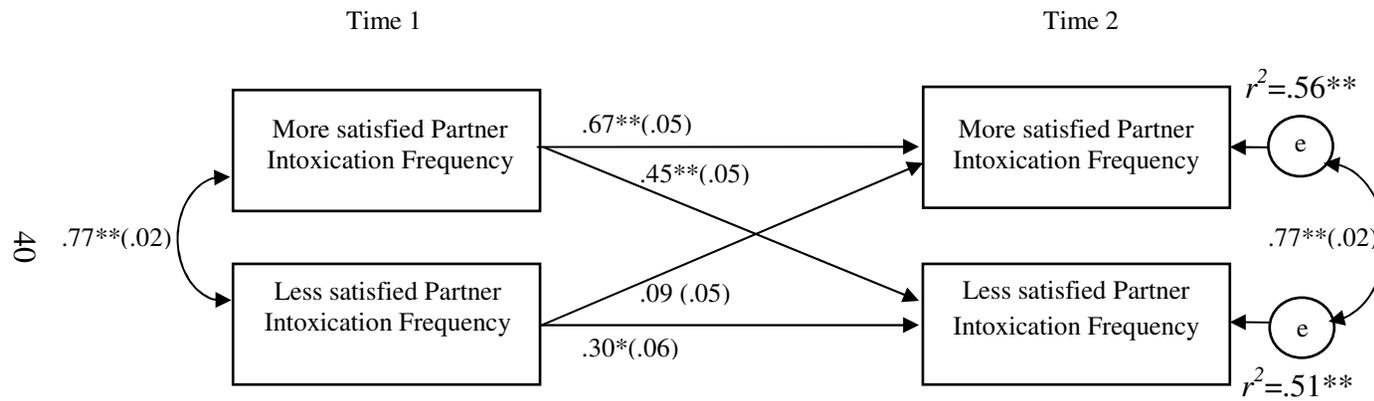
Note. Stability (actor) paths = $a1$ and $a2$. Influence (partner) paths = $p1$ and $p2$. Concurrent correlations = $c1$ and $c2$.

Figure 2. A longitudinal Actor-Partner Interdependence Model (APIM) for distinguishable dyads predicting truancy.



Note. Stability (actor) paths = $a1$ and $a2$. Influence (partner) paths = $p1$ and $p2$. Concurrent correlations = $c1$ and $c2$.

Figure 3. *Friend influence over intoxication frequency as a function of relative perceptions of friendship quality.*



Note. ($N = 382$ dyads). Standardized beta weights are reported with the standard error in parenthesis. $*p < .05$, $**p < .01$, two-tailed.

Figure 4. *Change in intoxication frequency among relatively less satisfied friends partnered with more satisfied friends who have higher or lower levels of intoxication frequency.*

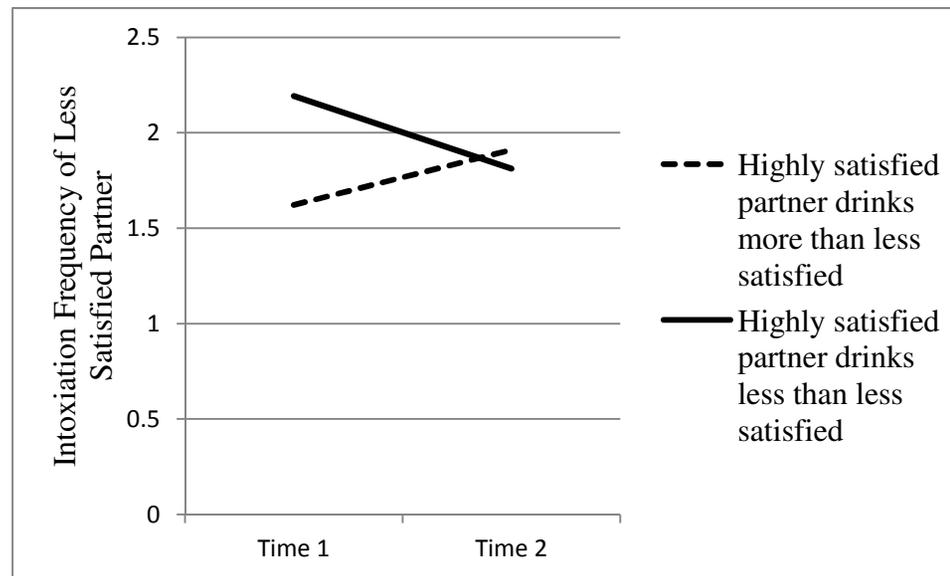
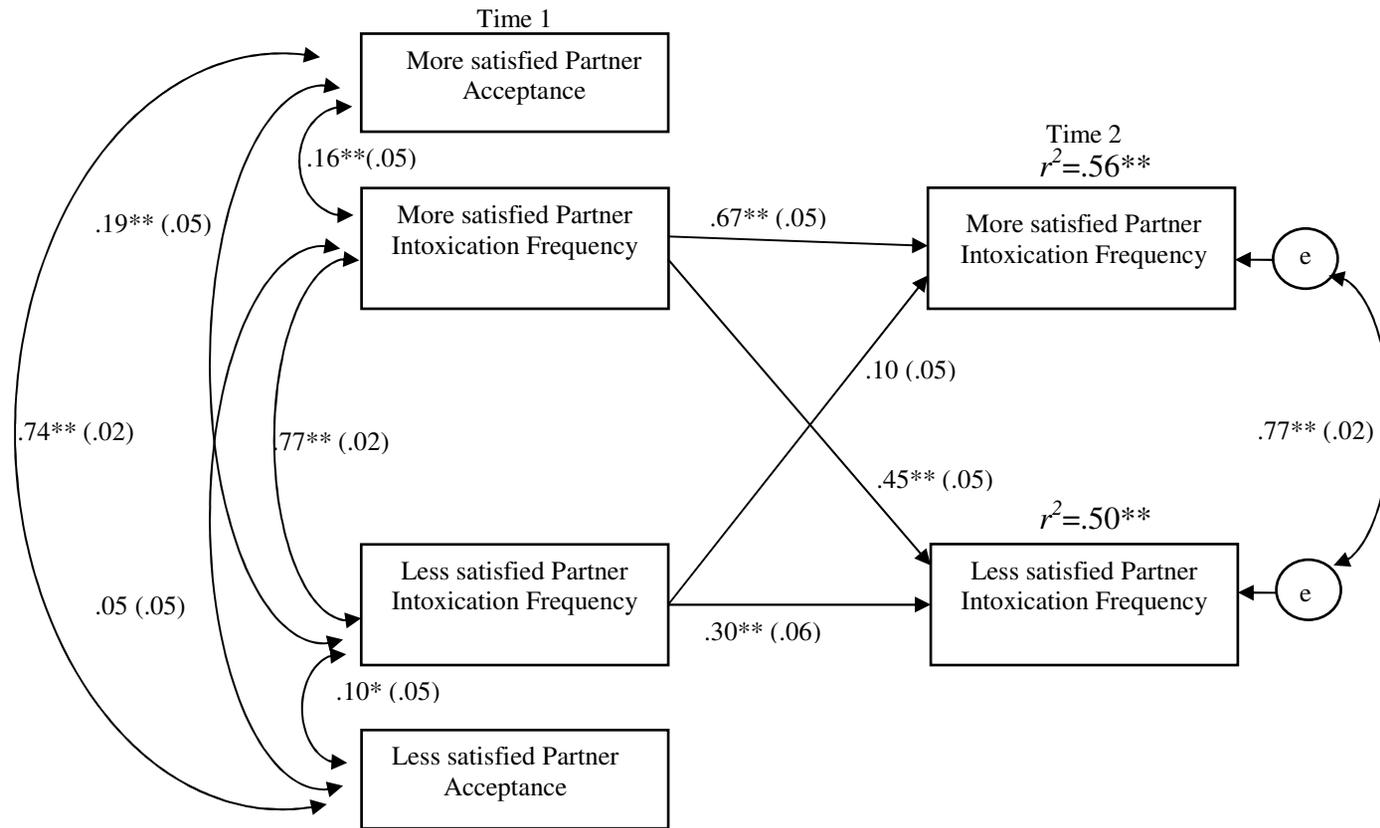
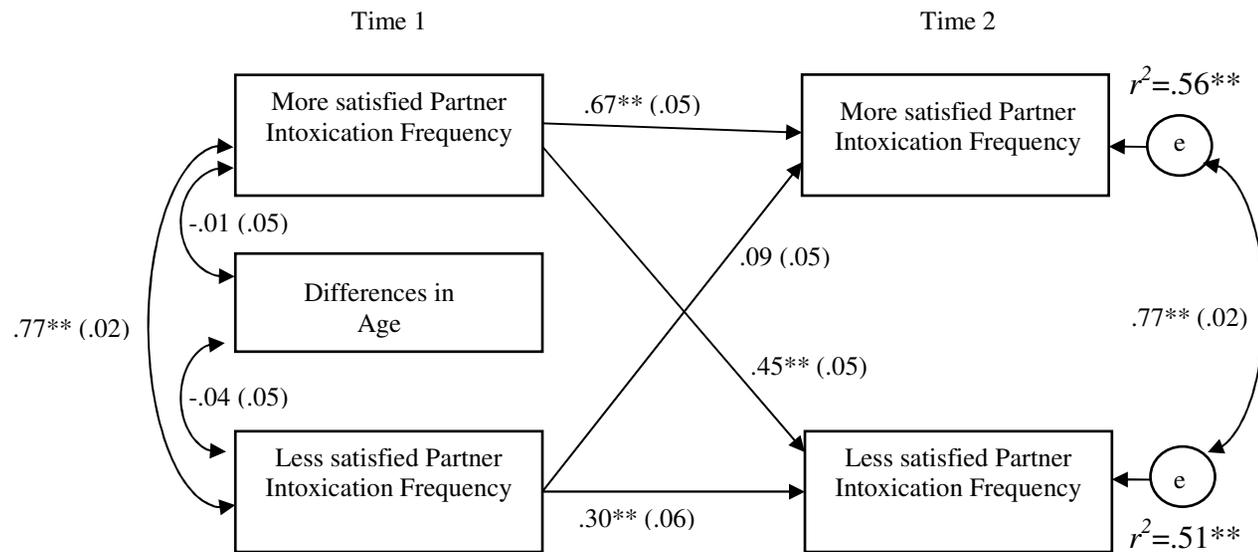


Figure 5. Friend influence over intoxication frequency as a function of relative perceived friendship quality, controlling for relative peer acceptance.



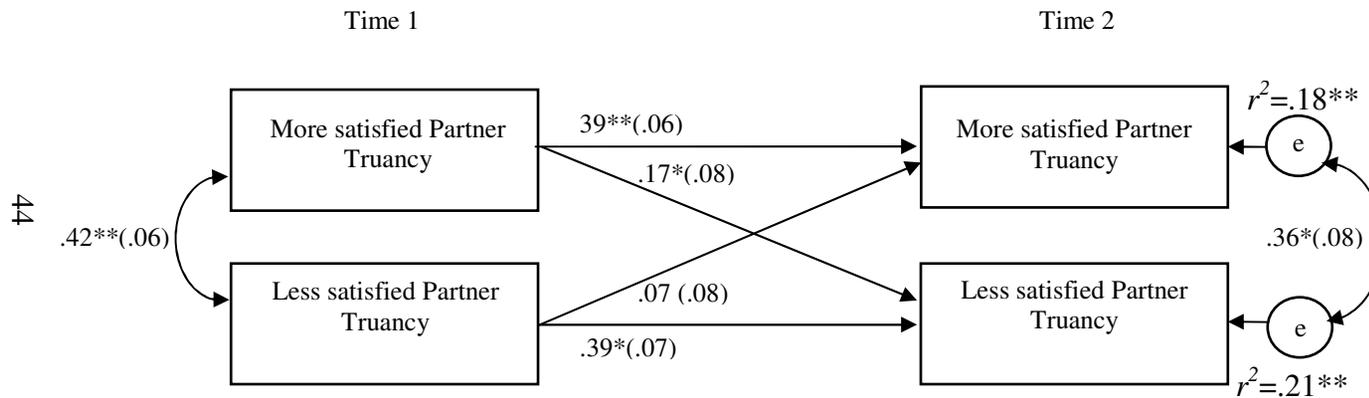
Note. ($N = 382$ dyads) Standardized beta weights are reported, with the standard errors in parenthesis. $*p < .05$, $**p < .01$, two-tailed

Figure 6. Friend influence over intoxication frequency as a function of relative perceived friendship quality, controlling for differences in age.



Note. ($N = 382$ dyads) Standardized beta weights are reported, with the standard errors in parenthesis. $*p < .05$, $**p < .01$, two tailed.

Figure 7. Friend influence over truancy as a function of relative perception friendship quality.



Note. ($N = 382$ dyads) Standardized beta weights are reported, with the standard errors in parenthesis. $*p < .05$, $**p < .01$, two-tailed.

Figure 8. *Change in truancy among relatively less satisfied friends partnered with more satisfied friends who have higher or lower levels of truancy.*

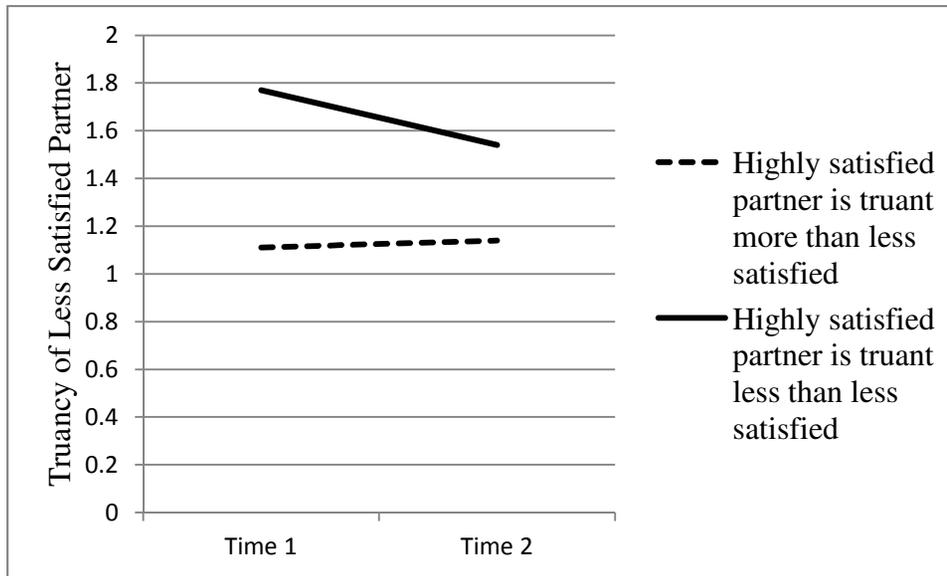
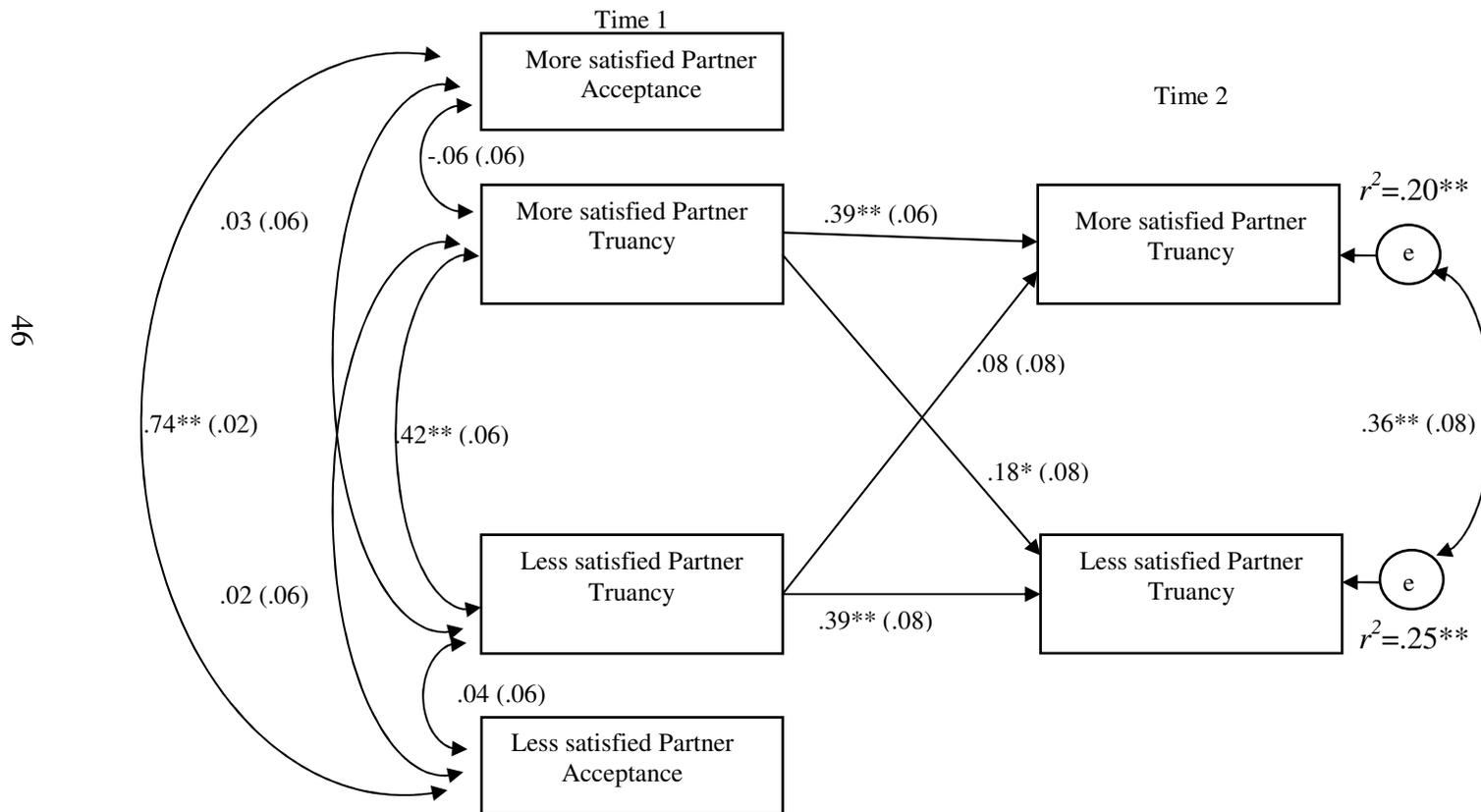
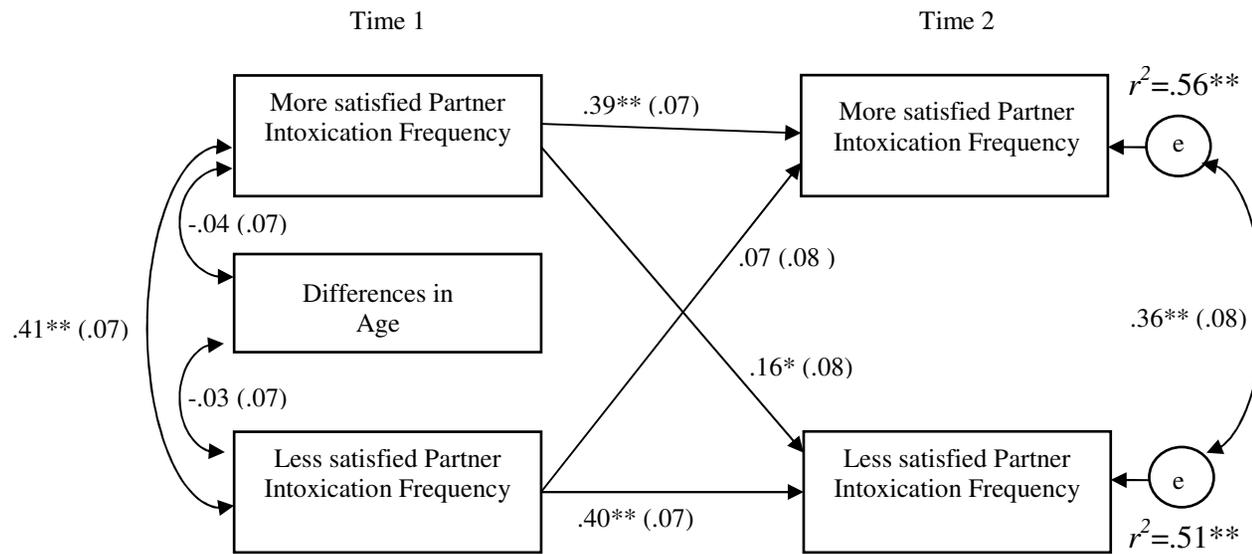


Figure 9. Friend influence over truancy as a function of relative perceived friendship quality, controlling for relative acceptance.



Note. ($N = 382$ dyads) Standardized beta weights are reported, with the standard errors in parenthesis. $*p < .05$, $**p < .01$, two-tailed.

Figure 10. *Friend influence over truancy as a function of relative perceived friendship quality, controlling for differences in age.*



Note. ($N = 382$ dyads) Standardized beta weights are reported, with the standard errors in parenthesis. * $p < .05$, ** $p < .01$, two-tailed.

Table 1.

Correlations Among Study Variables for the Total Sample (n=764).

	1	2	3	4	5	6	7	8
Time One								
1. Intoxication Frequency	-							
2. Truancy	.297	-						
3. Friendship Quality	.061	-.080	-					
4. Acceptance	.128	-.008	.100	-				
5. Age	.560	.225	.065	.036	-			
6. Sex	-.043	.045	.238	.005	.023	-		
Time Two								
7. Intoxication Frequency	.689	.267	.102	.234	.516	-.067	-	
8. Truancy	.399	.409	.027	.038	.307	-.094	.467	-

Note: p < .05 are in boldface. Correlation n = 470 – 764, depending on variables.

Appendix A

Friendship Quality Questionnaire

Conflicted relations

1. We often get angry with each other
2. We argue a lot
3. We often get annoyed with each other
4. We fight a lot

Support and trust

5. My VIP stands by me if others talk about me behind my back
6. We make each other feel important and special
7. My VIP says “I’m sorry” when he or she has hurt my feelings or been mean
8. My VIP sometimes says nasty things about me to others
9. My VIP would like me even if nobody else did
10. My VIP keeps his or her promises
11. My VIP doesn’t tell my secrets to others
12. My VIP doesn’t listen to me
13. My VIP pays attention to my feelings
14. I am very pleased with our relationships
15. My VIP supports me when I have an argument with my parents/teachers

Response format:

1. Don’t agree at all
2. Don’t quite agree
3. Agree somewhat
4. Agree pretty well
5. Agree perfectly

Appendix B

Adolescent truancy questionnaire

In the last month – with your most important peer

1. Have you drank alcohol until you got drunk

Response format:

1. No
2. Yes, once
3. Yes, several times

In the last month – with your peer group

2. Have you drank alcohol until you got drunk

Response format:

1. No
2. Yes, once
3. Yes, several times

In the last year

3. Have you drunk so much beer, liquor, or wine that you got drunk

Response format:

1. No, it has not happened
2. 1 time
3. 2-3 times
4. 4-10 times
5. More than 10 times

Appendix C

Adolescent truancy questionnaire

1. Have you played hookey this or last term? (being gone a whole day)

Response format:

1. No
2. Yes, once
3. Yes, several times

With your first-mentioned, or most important peer

2. Have you skipped class - during the last month

Response format:

1. No
2. Yes, once
3. Yes, several times

With your peer group

3. Have you played hookey – during the last month

Response format:

1. No
2. Yes, once
3. Yes, several times

Parent reported

4. Has the child ever cut class?

Response format:

1. No, hasn't happened
2. Yes, once
3. Yes, several times

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