HHS Public Access

Author manuscript

J Youth Adolesc. Author manuscript; available in PMC 2016 September 01.

Published in final edited form as:

J Youth Adolesc. 2015 September ; 44(9): 1688–1701. doi:10.1007/s10964-014-0143-6.

Parent-child discrepancies in reports of parental monitoring and their relationship to adolescent alcohol-related behaviors

Caitlin C. Abar[1], **Kristina M. Jackson**[2], **Suzanne M. Colby**[2], and **Nancy P. Barnett**[2]

[1]SUNY Brockport, 350 New Campus Drive, Brockport, NY

[2]Center for Alcohol and Addiction Studies, Brown University, 121 S Main St, Providence, RI

Abstract

Discrepancies between parents and adolescents regarding parenting behaviors have been hypothesized to represent a deficit in the parent-child relationship and may represent unique risk factors for poor developmental outcomes. The current study examined the predictive utility of multiple methods for characterizing discrepancies in parents' and adolescents' reports of parental monitoring on youth alcohol use behaviors in order to inform future study design and predictive modeling. Data for the current study came from a prospective investigation of alcohol initiation and progression. The analyzed sample consisted of 606 adolescents (6^{th} – 8^{th} grade; 54% female) and their parents were surveyed at baseline, with youth followed up 12 months later. A series of hierarchical logistic regressions were performed for each monitoring-related construct examined (parental knowledge, parental control, parental solicitation, and child disclosure). The results showed that adolescents' reports were more closely related to outcomes than parents' reports, while greater discrepancies were frequently found to be uniquely associated with greater likelihood of alcohol use behaviors. Implications for future work incorporating parents' and adolescents' reports are discussed.

Keywords

Discrepancy; Parental Monitoring; Parent; Adolescent

Introduction

A wealth of research has shown that a high degree of parental monitoring, as defined by "a set of correlated parenting behaviors involving attention to and tracking of the child's whereabouts, activities, and adaptations" (Dishion & McMahon, 1998, pp. 61), is associated with lower levels of early adolescent alcohol and other substance use (e.g., Dodge et al., 2009; Kopak, Ayers, Lopez, & Stevenson, 2011). Monitoring entails parents actively

Corresponding Author: Caitlin C. Abar, PhD, Assistant Professor, Department of Psychology, SUNY Brockport, 350 New Campus Drive, Brockport, NY 14420, cabar@brockport.edu, 585.395.5774 (office), 585.395.2116 (fax).

Author Contributions

CA conceived of the study, participated in its design and coordination, performed the statistical analysis, and drafted the manuscript; KJ participated in the design and interpretation of the data, helped with the statistical analysis, and helped to draft the manuscript; SC participated in the design and coordination of the study and helped to draft the manuscript; NB participated in the design and coordination of the study and helped to draft the manuscript. All authors read and approved the final manuscript.

seeking knowledge about the behaviors of their child (Kerr & Statin, 2000; Stattin & Kerr, 2000) with the purpose of identifying negative influences on their teen. Parents can then attempt to prevent the occurrence of age inappropriate or risky behaviors by intervening based upon this knowledge. The beneficial effects of parental monitoring on youth outcomes have been shown using cross-sectional (e.g., DiClemente et al., 2001), longitudinal (e.g., Barnes, Hoffman, Welte, Farrell, & Dintcheff, 2006), and experimental designs (e.g., Dishion, Nelson, & Kavanagh, 2003). These monitoring effects have been observed across a variety of measurement approaches, including observational and self-report methods.

Studies have most often assessed parental monitoring from either the perspective of the parent (e.g., Pettit, Bates, Dodge, & Meece, 1999) or the child (e.g., Tobler & Komro, 2010). Importantly, studies that have measured parental monitoring simultaneously from both parent and child perspectives tend to find only small to moderate positive associations between parents' and children's reports (De Los Reyes, Goodman, Kliewer, & Reed-Quiñones, 2008; Lippold et al., 2011; Pettit et al., 2001; Reynolds, MacPherson, Matusiewicz, Schreiber, & Lejuez, 2011), indicating substantial discrepancies between reporters. Furthermore, when parents' and adolescents' reports of monitoring are used as simultaneous predictors of outcomes, adolescents' reports tend to be more strongly predictive than parents' reports (e.g., Kerr & Stattin, 2000). Cottrell and colleagues (2003), in particular, found that adolescents' reports of parent monitoring were negatively associated with tobacco, alcohol, and marijuana use and sexual risk, whereas parents' reports were only associated with tobacco use. Reynolds and colleagues (2011) found that greater children's reports of parental monitoring were more strongly predictive of lower later adolescent delinquency than parents' reports. They also observed an interaction between parents' and adolescents' reports, with high children's reports of parental knowledge more closely related to lower delinquency when parents also reported a high knowledge. Taken as a whole, this literature suggests that adolescents' reports of parental monitoring have greater predictive utility than those of parents with respect to youth outcomes.

Based on previous research, one could conclude that researchers should focus on incorporating students' reports into their models. However, students' reports do not necessarily represent parents' behaviors, but rather represent those parenting behaviors as perceived by students. The observed differential associations with youth outcomes across parents' and children's reports, coupled with the mild-to-moderate associations between reports, suggest that parents' and children's reports may capture subtly different aspects of monitoring. Parents' reports represent the behaviors they feel that they have engaged in, whereas students' reports represent those parental behaviors that students are aware of or perceive. As such, a growing body of research has focused on relationships between parents' and youths' reports. The current study seeks to expand this literature by exploring these relationships in the context of parental monitoring as applied to youth alcohol use.

Discrepancies as an Important Predictor of Youth Outcomes

Discrepancies between parents' and child's reporting have been examined across a number of parenting characteristics, including discipline (Guion, Mrug, & Windle, 2009), support (Gaylord, Kitzmann, & Coleman, 2003; Tien et al., 1994), control (Gonzales et al., 1996),

parent-child relationship quality (Reidler & Swenson, 2012), and, most germane to the current study, parental monitoring behaviors (e.g., De Los Reyes et al., 2010; Lippold et al., 2011). These discrepancies have been investigated as risk factors, following the premise that if parents and adolescents disagree, the risk of adverse outcomes may be elevated (for a review, see De Los Reyes, 2011). For example, Maurizi, Gershoff, and Aber (2012) found that parent-child discrepancies in reports of parental affection, punitiveness, and control were cross-sectionally associated with adolescents' symptoms of anxiety and conduct disorder. Other researchers have focused on discrepancies between parents' and adolescents' perceptions of relationship quality and their associations with children's outcomes, including adolescents' externalizing and internalizing problems (Pelton, Steele, Chance, Forehand, & The Family Health Project Research Group, 2001; Reidler & Swenson, 2012), with larger discrepancies tending to be associated with greater problems.

The few studies that have examined discrepancies between parents' and children's reports on parental monitoring also have found greater discrepancies to be predictive of greater child delinquency (De Los Reyes et al., 2010; Lippold et al., 2011). Lippold and colleagues (2011) classified the correspondence between parents' and children's reports of parental monitoring into four distinct groups: (1) both parent and child report low monitoring ("low parent, low child"), (2) parent reports low monitoring and child reports high monitoring ("low parent, high child"), (3) parent reports high monitoring and child reports low monitoring ("high parent, low child)", and (4) both parent and child report high monitoring ("high parent, high child"), with "low" and "high" determined based on median splits. Adolescents in the low parent, low child group displayed greater substance use initiation and expected more positive outcomes from substances than adolescents in the high parent, high child group (illustrating a main effect of monitoring that is protective). Adolescents in the high parent, low child group displayed more favorable substance use expectancies and greater delinquency than those in the high parent, high child group (Lippold et al., 2011). In a sample of primarily African American children and adolescents (9–16 years), De Los Reyes et al. (2010) employed a different categorical approach to discrepancies by performing latent profile analysis on standardized discrepancy scores (standardized parent report minus standardized child report) for parental monitoring (operationalized as parental knowledge) and two sources of parental knowledge: child disclosure about their behaviors and parental solicitation of information from their child. As the authors anticipated, three classes emerged (parent consistently reporting more monitoring than the child; child consistently reporting more monitoring than the parent, and no consistent disagreements – either high or low consistent reports). Both discrepant groups reported greater delinquency than the non-discrepant group at a two-year follow-up. De Los Reyes and colleagues (2010) also found discrepancies to be relatively consistent across constructs, indicating systematic reporting biases as opposed to random measurement errors on the part of one or both reporters.

In general, these studies indicate a unique predictive utility of discrepancies in parents' and youths' reports of parenting characteristics on internalizing and externalizing behaviors such that poorer outcomes were consistently related to greater discrepancies. The vast majority of these studies, however, focused on a single parenting construct and did not discuss potential effects on adolescent alcohol use. Furthermore, these studies tended to utilize a single

method for handling discrepancies. The current investigation seeks to address each of these issues in order to provide recommendations regarding study design and analytical strategy.

Conceptualization of Discrepancies

As mentioned above, parent-child discrepancies in reporting have been defined in several ways. The simplest approach is to use a simple measure of discordance, that is, establishing a threshold at which parents' and children's reports are considered discordant (e.g., +/− 0.25 Standard Deviations), and then contrasting discrepant and non-discrepant reports on outcomes of interest (e.g., Maurizi, Gershoff, & Aber, 2012). An extension of this approach is to categorize parents and adolescents as high or low on parental monitoring. Then three groups could be identified where (1) parents report high levels of parental monitoring and adolescents report low levels (for example), (2) parents report low levels and adolescents report high levels, and (3) both reporters report high levels or both report low levels. Alternatively, this approach could be used to investigate an interaction between the (low/high) levels of the two reporters. An interaction term permits greater differentiation regarding where on the scale consistent parents' and adolescents' ratings fall, such that concordance when the parent and adolescent is high is not assumed to be identical to concordance when the parent and adolescent is low (Reynolds et al., 2011).

Perhaps the most common technique used to define discrepant parents' and children's reports is to calculate the *absolute* difference between (standardized) parents' and children's reports, where the absolute observed discrepancy (e.g., |parent score minus adolescent score|) is then evaluated against adverse outcomes (e.g., De Los Reyes et al., 2010; Feinberg et al. 2000). The limitation to this approach is that it does not consider the directionality of the discrepancies in reports. For example, in both De Los Reyes et al. (2010) and Gaylord et al. (2003), mother–child discrepancies predicted child outcomes *only when the mother's report was higher than child report*.

Reidler and Swenson (2012) evaluated some of these ways to characterize parent-child discrepancies in reports of parent-child relationship quality. Their results indicated that multiplicative interaction terms between parents' and adolescents' reports (e.g., parent report X adolescent report for each case) of relationship quality were not predictive of greater internalizing or externalizing problems. In contrast, raw discrepancy scores (parent's score minus adolescent's score) for negative relationship quality were related to poorer adolescent adjustment (Reidler & Swenson, 2012). The absolute value of discrepancies (i.e., |parent's score minus adolescent's score|) and squared discrepancy scores (to account for potential curvilinear relationships) also were examined as predictors. The results indicated that raw discrepancy scores provided better prediction than absolute values, and little was added by the squared values.

One final approach to characterizing discrepancy allows for the evaluation of both discordance and direction (cf., Lippold et al., 2011). In this approach, described previously, a categorical grouping variable is computed to reflect: (1) parent is low and child is low, (2) parent is low and child is high, (3) parent is high and child is low, or (4) parent and child are both high. This approach incorporates elements of the direction of discrepancy and the magnitude of the difference.

Overview and Hypotheses

The current study uses data from a longitudinal investigation of parents and adolescents to contrast multiple methods for evaluating parent-child discrepancies in reports of parental monitoring for the prediction of youth outcomes: two-way interactions, standardized difference scores, and grouping variables based on both discordance and direction. An understanding of the differential utility of these methods can inform future research seeking to incorporate parent-child discrepancies into their predictive models. The current study extends the existing literature by exploring discrepancies in three other sources of parental knowledge described by Stattin and Kerr (2000): parental control, parental solicitation from their child, and child disclosure of activities to parents. Whereas previous research has focused on the outcomes of child and adolescent delinquency, this investigation explored the predictive utility of parent-child discrepancies in the context of adolescent alcohol use. Alcohol use during adolescence accounts for approximately 5,000 deaths and many more injuries in the U.S. annually (CDC, 2004). Furthermore, early onset of alcohol use is associated with negative outcomes including alcohol dependence in adulthood (Hingson, Heeren, & Winter, 2006). Given the severity of outcomes, numerous researchers have focused on ways in which parenting factors, like parental monitoring, can influence youth alcohol use (e.g., Windle, 2000). Multiple indicators of alcohol use behaviors were examined in order to illustrate the potential impact of discrepancies on initial alcohol involvement (e.g., sipping) and on more advanced alcohol involvement (e.g., ever drunk from alcohol).

We hypothesized that parents would report greater parental monitoring, parental control, parental solicitation, and child disclosure than adolescents. We also anticipated that greater discrepancies in monitoring, control, solicitation, and disclosure would be associated with greater engagement in alcohol use behaviors. Regarding effects across methods, based on work by Reidler and Swenson (2012), we expected that interactions between parents' and youths' reports would add little over and above their main effects. We also expected that the categorical approach to quantifying discrepancies would provide better prediction than the main effects model due to this model accounting for discordance in reports, as well as the direction of this discordance.

Method

Participants

The current sample consisted of parents and adolescents in an ongoing prospective study of alcohol initiation and progression (Jackson et al., 2014). Early adolescents and their parents or guardians (herein referred to as parents) were recruited in five cohorts from 6 schools in urban and suburban Rhode Island; the present study uses data from the first four cohorts, as data collection is ongoing for Cohort 5. Across participating schools, between 16% and 28% of students provided informed parental consent to participate. With regard to participant demographics, our sample was largely representative of the schools from which participants were recruited. The distribution in the sample across grades was representative of each school's distribution with the exception of an overrepresentation of eighth graders in one school and an underrepresentation of seventh graders in another school. The proportion of

girls in the sample aptly represents the school population in four of the five schools. In all but two schools, there are fewer Caucasians in our sample than the school population from which it was drawn, and there isa greater proportion of Hispanic students in the sample in two of the schools. Finally, students receiving subsidized lunch are well represented in three of the five schools but underrepresented in the remaining two, suggesting that our sample is more racially diverse than the school populations but also less disadvantaged.

A total of 796 adolescents were surveyed at baseline, with 681 adolescents surveyed 12 months later (86% retention). Female and White youth were more likely to be retained than male and non-White youth (p's < 0.05), but were of equivalent age and baseline alcohol use in the past month and past year (p's > 0.05). Retained youth also had higher scores on children's reports of parental knowledge, parental control, and child disclosure, as well as parents' reports of parental knowledge and child disclosure (*p*'s < 0.05). Retained youth also reported slightly better parent-child relationship quality than non-retained youth (*p*'s < 0.05). At baseline, 698 of the 796 parents (88%) completed paper-and-pencil surveys. White parents were more likely than non-White parents to participate (p < 0.05), but there were no differences between participating and non-participating parents on youth age, sex, and baseline alcohol use in past month and past year (p's > 0.05). There were also no differences on children's reports of parenting behaviors and indicators of parent-child relationship quality (p's > 0.05). The final sample size of youth surveyed at Time 2 who had parent surveys was 606 (76% of the original sample). Adolescents were in 6^{th} (n = 200), 7^{th} (n = 192), or 8^{th} grade (n = 214) at baseline. There was a relatively even split between female (n = 328; 54%) and male adolescents (n = 278; 46%). In terms of adolescent race/ethnicity, 435 participants were non-Hispanic, White (72%), 25 were non-Hispanic, Black (4%), 76 were Hispanic (13%), and 63 were non-Hispanic, other races (e.g., Asian, American Indian/ Alaskan; 10%). Regarding parents, the vast majority were women (n = 541; 89%) with a mean age of 41.32 years (SD = 7.15).

Procedure

Students were given information about the study in the school setting, and, if they expressed interest in participating and had written informed parental consent, they were invited to attend a two-hour in-person group orientation session. At this time, project staff described the study and participants completed a computer-based 45-minute baseline survey. At baseline parents were mailed a paper-and-pencil survey that took approximately 30 minutes to complete. The youth follow-up assessment was conducted using a web-based survey and took approximately 45 minutes to complete. For the follow-up assessment, participants were alerted that the survey was open, and they used a unique user ID and password to access the survey. Multiple reminders were given during the two-week survey window. Surveys could be completed from any location with internet access.

Measures

Parental Knowledge of Child Behavior (Time 1)—The Parental Monitoring Questionnaire (PMQ; Kerr & Stattin, 2000) was administered to both parents and adolescents. The PMQ operationalizes parental monitoring as parent knowledge of child activities. The PMQ contains 9 items measured on a five-point Likert scale (1 = No,

never/0%, 2 = Some of the time/25%, 3 = About half the time/50%, 4 = More than half, but not always/75%, 5 = Yes, always/100%). Example items from the adolescent version include: “Do your parents know what you do during your free time?”, “Do your parents know who you have as friends during your free time?”, and “Do your parents normally know where you go and what you do after school?” (Parent $\alpha = 0.81$; Adolescent $\alpha = 0.86$). Parent items were identical in content but reworded to be from the parent perspective.

Sources of Parental Knowledge - Parental Solicitation, Parental Control, and Child Disclosure (Time 1)—The Sources of Parental Knowledge Scales (Kerr & Stattin, 2000) was also administered to parents and adolescents; items were on the same five-point scale as the PMQ. Five items represented *parental solicitation*. Example items from the adolescent perspective are: “How often do your parents talk with your friends when they come to your home (ask what they do or what they think and feel about different things)?” and “How often do your parents start a conversation about things that happened during a normal day at school?” (Parent $\alpha = 0.77$; Adolescent $\alpha = 0.81$). For the other two subscales, the full 5-item scales were completed by adolescents but items were trimmed from the parent-report because they were not applicable for this young adolescent sample (e.g., “If you have been out very late one night, do your parents make you explain what you did and whom you were with?”). Three items represented *parental control* including: “Do you need to have your parents’ permission to stay out late on a weekday evening?” and “Do your parents always make you tell them where you are at night, who you are with, and what you do together?” (Parent $\alpha = 0.61$; Adolescent $\alpha = 0.71$). Four items represented *child disclosure* including: “Do you talk at home about how you are doing in the different subjects in school?” and “Do you keep a lot of secrets from your parents about what you do during your free time?” (reverse coded) (Parent $\alpha = 0.64$; Adolescent $\alpha = 0.73$). Parent items were identical in content but reworded to be from the parent perspective.

Parent-Child Relationship Quality (Time 1)—Adolescents completed the Network of Relationships Inventory (NRI; Furman & Buhrmester, 1985; 2009) which consists of two primary subscales representing social support (6 items; including support and companionship) and negative interactions (9 items; including criticism, conflict, and antagonism) related to the adolescent’s mother and father. Sample support items include: “How much free time do you spend with this person (mother/father)?”, “How often do you turn to this person for support with personal problems?”, and “How much do you play around and have fun with this person?” (Mother $\alpha = 0.85$; Father $\alpha = 0.85$). Examples of negative interaction items include: “How much do you and this person disagree and quarrel?”, “How often does this person point out your faults or put you down?”, and “How much do you and this person get upset with or mad at each other?” (Mother $\alpha = 0.91$; Father $\alpha = 0.91$). Scales for mothers and fathers were positively associated ($r_{\text{support}} = 0.54$, $p < 0.001$; $r_{\text{negative interactions}} = 0.37$, $p < 0.001$), so scores were averaged to represent overall indices of *parental support* and parent-child *negative interactions*.

Parental After School Supervision (Time 1)—A single variable indexed the number of days per week that parents report responsibility for supervising their children after school (range 0 – 5); this serves as a behavioral measure of parental monitoring that should have

relatively low bias by reporter. More days providing supervision per week is indicative of greater monitoring.

Adolescent Alcohol Use Behaviors (Time 2)—Adolescents were surveyed on their lifetime alcohol involvement. Three specific behaviors were assessed: (a) “Have you ever had a sip of alcohol?”, (b) “Have you ever had a full drink of alcohol?”, and (c) “Have you ever felt drunk (e.g., speech was slurred or unsteady on your feet) from alcohol?”

Plan of Analysis

Parents’ and children’s reports of parental knowledge, parental control, parental solicitation, and child disclosure (henceforth, together these are referred to as “monitoring”) were first examined using bivariate correlations then compared using dependent samples *t*-tests. Next, the three adolescent alcohol use behaviors were used as dependent variables in a series of hierarchical logistic regression analyses using parents’ and adolescents’ reports of monitoring, parent-child relationship quality, parental after school supervision, adolescent grade in school, and adolescent sex as predictors. Models were run separately for each parenting construct and alcohol use outcome. Relationship quality indicators (social support, negative interaction), parental after school supervision, grade, and sex were included in Step 1 for each model run as a way to better isolate the associations between discrepancies and alcohol-use outcomes. Grade and sex account for well-established differences in use between boys and girls across development, relationship quality indicators test the potential explanation that discrepancies represent deficits in the parent-child relationship, and parent after school supervision accounts for the general impact of parental monitoring using a more objective index.

Four models reflecting different ways to consider parent/child discrepancies were run. In Model 1, main effects of parents’ and adolescents’ reports of parental monitoring were included in Step 2. In Models 2a and 2b, adolescents’ reports was subtracted from parents’ reports to create a discrepancy score (thus higher scores indicated higher standardized parents’ reports than adolescents’ reports), and models were run separately with parents’ reports and the discrepancy score (for Model 2a) and adolescents’ reports and the discrepancy score (for Model 2b) included as predictors in Step 2. One model could not be run with both parent and adolescent main effects and the discrepancy score due to perfect multicolinearity. In Model 3, parents’ reports and adolescents’ reports were standardized, multiplied to create a two-way interaction term, and all three terms were included in Step 2. In Model 4, four groups were created based on levels of parents’ reports and adolescents’ reports: (1) low/low: below the mean on parents’ reports and adolescents’ reports, (2) high parent/low child: above the mean on parents’ reports and below the mean on adolescents’ reports, (3) low parent/high child: below the mean on parents’ reports and above the mean on adolescents’ reports, and (4) high parent/high child: above the mean on parents’ reports and adolescents’ reports. Three dummy codes were created to reflect these groups and entered in Step 2 for Model 4, with the low/low group functioning as the reference category. The three models within each parenting construct were compared on Nagelkerke pseudo-R^2 values, as the outcomes were categorical and variance measures would be inappropriate.

Results

Frequencies of Alcohol Use Behaviors and Bivariate Associations

At Time 2, 235 (39%) adolescent participants reported having ever had a sip of alcohol, 47 reported having ever had a full drink of alcohol (8%), and 17 reported having been drunk from alcohol (3%).

Spearman's rho correlations were used to describe the bivariate associations between predictors and alcohol use outcomes (see Table 1). More advanced grade in school was associated with a greater likelihood of having engaged in each alcohol use outcome. Greater parental support as perceived by the child was associated with less alcohol use and greater negative interactions as perceived by the child were associated with greater alcohol use.

Parents' reports and adolescents' reports of greater parent knowledge were consistently associated with lower use, with stronger associations between adolescents' reports and outcomes. Standardized knowledge discrepancy scores were associated with a greater likelihood of ever having a full drink. Adolescents' reports of parental control were consistently associated with lower likelihood of each alcohol use behaviors, and parents' reports of control were associated with reduced rates of ever sipped and ever drunk. Greater discrepancies in reports of parental control were also associated with ever had a full drink. Parental solicitation was only associated with ever having a full drink, and only for adolescents' reports. Solicitation discrepancies were, however, positively associated with ever having a full drink. Greater child disclosure was consistently associated with lower alcohol outcomes for both parents' reports and adolescents' reports. Child disclosure discrepancies were positively associated with ever sipped and ever had a full drink.

Table 2 presents means, standard deviations, and correlations between parents' reports and adolescents' reports of parental monitoring indices. There were stronger associations among adolescents' report indices (lower right corner of table) than among parents' reports (upper left corner). There were small to moderate positive associations between parents' reports and adolescents' reports of knowledge, solicitation, and disclosure but not reports of parental control (bold values). The magnitudes of these associations suggest there are substantial discrepancies between children's and parents' reports.

Comparing Parents' and Adolescents' Reports

There was a significant difference in mean level of parental knowledge across reporter, t (696) = 12.97, $p < 0.001$. Similar effects were observed for parental control (t (687) = 11.90, $p < 0.001$), parental solicitation (t (693) = 16.96, $p < 0.001$), and child disclosure (t (681) = 12.77, $p < 0.001$). Across all four constructs, parents' reports were higher than adolescents' reports (see Table 2).

Predicting Alcohol Use Behaviors

In Step 1, adolescent sex, grade, two parent-child relationship quality indices, and parent after-school supervision were used as predictors of alcohol use outcomes. As these variables were covariates, for parsimony, Step 1 results are described here (and presented in the first

row for all four parenting variables) but not described again. Grade in school was a consistent predictor of increased likelihood of alcohol use, with magnitudes of effect increasing with greater outcome severity (e.g., $OR_{sip} = 1.42$; $OR_{ever\ drunk} = 4.82$). Negative parent-child interactions was also a significant predictor of increased likelihood of each alcohol use behavior (ORs = 1.63 – 2.60). Prediction of ever full drink and ever drunk were stronger (Pseudo $R^2 = 0.22 – 0.25$) than the prediction of ever sip (Pseudo $R^2 = 0.07$; see Table 3).

Parental Knowledge

Model 1 – Main Effects of Parents' and Adolescents' Reports. In Step 2, parents' reports and adolescents' reports of parental knowledge were not related to ever sip (Δ Pseudo $R^2 = 0.01$). For ever full drink and ever drunk, the inclusion of parents' reports and adolescents' reports improved prediction (Δ Pseudo $R^2 = 0.04 – 0.11$), with greater adolescents' reports of knowledge associated with decreased likelihood of these alcohol use behaviors. *Model 2a – Main Effects of Parents' Reports and Discrepancy Score*. In Step 2, parents' reports of knowledge and discrepancy scores accounted for the same amount of "variance" as when both main effects were entered simultaneously in Model 1 (see bold values for Model 1 and Model 2a). However, in this model, greater parents' reports of knowledge predicted a decreased likelihood of ever having a full drink and ever being drunk, with stronger effects observed for the more serious alcohol use behaviors (e.g., $OR_{ever\ drunk} = 0.25$) than for the more preliminary alcohol use behaviors (e.g., $OR_{ever\ drink} = 0.54$). Greater discrepancy scores, when accounting for parents' reports of knowledge main effect, were predictive of greater likelihoods of ever full drink and ever drunk. *Model 2b – Main Effects of Adolescents' Reports and Discrepancy Score*. Consistent with Model 2a, greater adolescents' reports of knowledge was associated with decreased likelihood of ever having a full drink and ever drunk. However, in contrast to the prior model, discrepancy scores were not predictive of any alcohol use behavior. Note the opposite direction of effect compared to Model 2a where the main effects of parents' reports were modeled, as the discrepancy scores were directional (parents' reports – adolescents' reports). *Model 3 – Main Effects of and Interaction between Parents' Reports and Adolescents' Reports*. The interaction term between parents' reports and adolescents' reports of knowledge added little or nothing to the prediction of alcohol use behaviors beyond the main effects (Δ Pseudo $R^2 = 0.00 – 0.00$). Adolescents' reports of knowledge was maintained as a significant predictor of decreased likelihood of ever had a full drink and ever drunk, but parent's reports of knowledge were not associated with any outcome with adolescent reports in the model. *Model 4 – Effects of Parents' and Adolescents' Reports Categorical Groups*. Using discrete knowledge groups improved prediction of alcohol use behaviors over Step 1 more than in Models 1–3, particularly for ever full drink and ever drunk (Δ Pseudo $R^2 = 0.09$ and 0.13). Membership in the high parent – high adolescent group was associated with a decreased likelihood of all use behaviors over the low parent – low adolescent group, although less so for ever sipped. Relative to the low parent – low adolescent group, individuals in the high parent – low adolescent group had a decreased likelihood of ever being drunk, and those in the low parent – high adolescent group had a decreased likelihood of ever having a drink.

Parental Control

Model 1 – Main Effects of Parents' and Adolescents' Reports. Inclusion of parents' reports and adolescents' reports of control resulted in small improvements in predictions of each of the alcohol use behaviors over Step 1 (Δ Pseudo R^2 = 0.02 – 0.03; see Table 3). Greater adolescents' reports of control was associated with decreased likelihood of ever sipped and ever had a full drink, whereas greater parents' reports of control was associated with decreased likelihood of ever drunk. *Model 2a – Main Effects of Parents' Reports and Discrepancy Score*. Greater parents' reports of control were a significant predictor of decreased likelihood of ever sipped and ever having a full drink. Greater discrepancy scores were predictive of greater likelihoods of ever sipped and ever having a full drink. *Model 2b – Main Effects of Adolescents' Reports and Discrepancy Score*. As in the prior model, greater adolescents' reports of control was associated with decreased likelihood of ever sipping and ever having a full drink. In contrast to the prior model, discrepancy scores were associated with reduced likelihood of ever having been drunk only. *Model 3 – Main Effects of and Interaction between Parents' and Adolescents' Reports*. The interaction term added nothing to the prediction of alcohol use behaviors over and above the main effects. Adolescents' reports of control were maintained as a significant predictor of decreased likelihood of ever sipped and ever having a full drink. *Model 4 – Effects of Parents' Reports and Adolescents' Reports Categorical Groups*. Inclusion of control groups provided nearly identical prediction as the main effects model (Model 1; Δ Pseudo R^2 = 0.02 – 0.04). Membership in the high parent – high adolescent group was associated only with a decreased likelihood of ever having a sip relative to the low parent – low adolescent group.

Parental Solicitation

Model 1 – Main Effects of Parents' and Adolescents' Reports. Inclusion of main effects resulted in very little improvement in each of the alcohol use behaviors over Step 1 (Δ Pseudo R^2 = 0.00 – 0.01; see Table 3). Neither parents' reports nor adolescents' reports of solicitation was associated with any alcohol use outcome. *Model 2a – Main Effects of Parents' Reports and Discrepancy Score*. No associations between parents' reports of solicitation and discrepancy scores and alcohol use outcomes were observed. *Model 2b – Main Effects of Adolescent' Reports and Discrepancy Score*. There were no associations between adolescents' reports of solicitation and discrepancy scores and alcohol use outcomes. *Model 3 – Main Effects of and Interaction between Parents' Reports and Adolescents' Reports*. The interaction term was significantly predictive of ever having a sip, with individuals with high parents' reports and high adolescents' reports of solicitation being less likely to have ever sipped alcohol. *Model 4 – Effects of Parents' and Adolescents' Reports Categorical Groups*. Prediction of outcomes was nearly identical to the main effects model (Model 1; Δ Pseudo R^2 = 0.01 – 0.01). None of the contrasts between the low parent, low adolescent group and the other groups were significantly associated with outcomes.

Child Disclosure

Model 1 – Main Effects of Parents' and Adolescents' Reports. Inclusion of main effects provided small to moderate improvements in prediction over Step 1 (Δ Pseudo R^2 = 0.01 – 0.06). However, neither parents' nor adolescents' reports of disclosure were significantly

associated with any alcohol use outcome. *Model 2a – Main Effects of Parents' Reports and Discrepancy Score*. Greater parents' reports of disclosure were associated with decreased likelihood of ever having a full drink and ever being drunk. Discrepancy scores were not predictive of any outcome. *Model 2b – Main Effects of Adolescents' Reports and Discrepancy Score*. As in the model with parents' reports and discrepancy scores, greater adolescents' reports of disclosure were associated with decreased likelihood of ever having a full drink and ever being drunk. Discrepancy scores were again not predictive of outcomes. *Model 3 – Main Effects of and Interaction between Parents' and Adolescents' Reports*. The interaction term added little to the prediction of alcohol use behaviors over and above the main effects. Adolescents' reports of child disclosure continued to be a significant predictor of ever having a full drink. *Model 4 – Effects of Parents' and Adolescents' Reports Categorical Groups*. Inclusion of disclosure groups substantially improved prediction of ever being drunk over Step 1 (Δ Pseudo $R^2 = 0.11$). Membership in the high parent – high adolescent group and low parent – high adolescent group were associated with a decreased likelihood of ever having been drunk over the low parent – low adolescent group.

Discussion

A growing body of literature has examined the potential predictive utility of discrepancies in parents' and adolescents' reports on adolescent outcomes (e.g., De Los Reyes et al., 2010; Guion et al., 2009). In general, studies have shown that the greater the difference between parents' and adolescents' reports, the worse the developmental outcome for the adolescent. The current study presents a systematic review of the ways that discrepancies have been conceptualized in the literature and sought to expand upon this research by thoroughly examining each of these conceptualizations across multiple parenting constructs and by examining the predictive utility of discrepancies for early adolescent alcohol use behaviors.

Results indicated that adolescents' reports of monitoring and sources of knowledge were more strongly related to (adolescent reported) alcohol use behaviors than parents' reports. These findings are in line with a wealth of research supporting the primacy of adolescents' reports of parenting characteristics over parents' reports (e.g., Jaccard, Dittus, & Gordon, 1998; Latendresse et al., 2009). There was also a consistent trend across the parenting constructs for weaker associations with sipping than with the other two alcohol use behaviors. Child sipping/tasting often occurs in the family context with parental approval (Jackson et al., 2012; Warner & White, 2003), making indices of parental monitoring perhaps less relevant. The only apparent exception to this pattern was for parental control, but an examination of the adolescents' reports odds ratios shows that, while statistically significant, the magnitude of the effect for ever sipped is smaller than the effects for the other alcohol use behaviors.

An interesting pattern of main effects was observed with regard to child disclosure. While previous studies have shown greater child disclosure to be associated with lower levels of youth risk behaviors (e.g., Kerr & Stattin, 2000; Soenens, Vansteenkiste, Luyckx, & Goossens, 2006), these associations were primarily only observed in the current study at the univariate level. These results may be the result of including grade in school (proxy for age) and indices of relationship quality as covariates, as child disclosure from either perspective

were closely related to relationship quality and adolescents' reports were negatively associated with grade in school.

Discrepancies in Reports

The present study found that, as hypothesized, parents consistently reported that they monitored their children more than adolescents reported this behavior. Previous research has also shown higher parental reports of parental monitoring (Reynolds et al., 2011), parental control (Maurizi, Gershoff, & Aber, 2012), and child disclosure (Reidler & Swenson, 2012), though Lippold and colleagues (2011) showed greater adolescents' reports of parental monitoring. The current study is the first to examine discrepancies in parental monitoring and each of the sources of knowledge in the same sample. The systematic parental over-reporting and/or adolescent under-reporting suggest the presence of an unobserved, or latent, trait that accounts for these consistent differences (Guion, Mrug, & Windle, 2009). These results seem to indicate the need for greater attention to issues of social desirability in our existing theories of discrepancies in reports (De los Santos & Kazdin, 2005). Specifically, parents may be consistently over reporting behaviors that are typically associated with "good" parenting, although it is also possible that adolescents are intentionally under-reporting parental involvement in order to appear more autonomous. Together, findings suggest the importance of incorporating observational ratings or collateral reports of parental monitoring and sources of parental knowledge in addition to parents' and adolescents' reports.

Discrepancies as Predictors of Adolescent Alcohol Use

In general, discrepancy scores, operationalized as the difference between standardized parents' reports and standardized adolescents' reports, displayed a degree of predictive utility when used in consort with parents' reports. In particular, the discrepancy between parents' and adolescents' reports was meaningful for the constructs of parental knowledge and parental control in that these discrepancies were associated with increased likelihoods of youth alcohol use. However, discrepancy scores were very infrequently predictive over and above the impact of adolescents' reports, demonstrating the importance of utilizing adolescents' reports of parenting in predicting adolescent-reported alcohol involvement.

The two methods that explicitly included agreement in parents' and adolescents' reports, parent-adolescent interaction terms (Model 3) and categorical groups based on high/low parents' and adolescents' reports (Model 4), revealed very different results from the approach that used discrepancy scores (Model 2). Whereas the interaction terms across parenting constructs contributed very little in terms of prediction of outcomes, the categorical approach to parents' and adolescents' reports frequently provided the best prediction of alcohol use outcomes, particularly for parental monitoring and child disclosure. These results were in support of our hypothesis and were particularly striking given the known reduction in predictive power associated with dichotomizing continuous predictors (Cohen, 1983). The current null findings for the interaction terms in Model 3 were in line with previous research examining parents' and adolescents' reports of child disclosure and relationship quality (Reidler & Swenson, 2012), and the strongest prediction using the four-group approach in Model 4 was in line with previous work on parents' and adolescents'

reports of monitoring (Lippold et al., 2011). Specifically, in these categorical models, those adolescents in the high parent report, high adolescent report group tended to be the least likely to engage in alcohol use behaviors.

Strengths and Limitations

The present study is one of the first to examine discrepancies in parental monitoring and different sources of parental behaviors in the same study. The sample of parents and adolescents was relatively large, from multiple sites, and representative to the local population in regard to ethno-racial composition. Moreover, our examination on alcohol initiation behaviors among early adolescents has relevance for the emergence of risky alcohol-related trajectories during later adolescence and the transition to adulthood. Multiple methods were used in the current study to account for discrepancies, and the current study was the first to place a focus on predicting alcohol use behaviors, rather than the more frequently studied delinquency. Furthermore, we examined multiple alcohol use behaviors and found unique associations across behaviors of varying severity. As a group, these methodological and analytic strengths highlight the potential relevance of the current findings in the study of adolescent risk behaviors.

Several limitations of the current investigation should also be acknowledged. First, indices of relationship quality and alcohol use outcomes were only collected from the adolescent perspective, such that future research might benefit from collection of parents' and collaterals' (e.g., best friend) reports. Second, as with the majority of work on parenting influences, most parent reporters (nearly 9 out of 10) were mothers, and it is unknown the extent to which father-reported monitoring behaviors would show a similar phenomenon. There is, however, research showing similar protective effects of paternal and maternal monitoring (e.g., Kalina et al., 2013). Third, the consent rate was relatively low, and the reasons for lack of parental consent might be closely related to the variables being investigated (e.g., parental knowledge and sources of knowledge), making it important for future research to replicate the findings in other samples. Fourth, the examination of an early adolescent sample necessarily limits the prevalence and variability in alcohol use, and calls for replication in an older sample with a greater base rate of alcohol use. Fifth, the alcohol use outcomes examined were indices of lifetime use, making it impossible to determine if parenting behaviors preceded use or were in response to use. Additional research providing a more precise and temporally defined depiction of parenting predictors of alcohol use onset is required. Sixth, the method of data collection differed for adolescents (online survey) and parents (paper-and-pencil survey), which might have partially induced the observed discrepancies. The context for collecting data also changed from baseline (individual online survey in a group setting) to follow-up (individual online survey Future work should seek to examine discrepancies in parents' and adolescents' reports using identical survey methods. Finally, participants represent a single state in the Northeast United States, though they were drawn from five different school districts representing urban, suburban, and rural communities. Future replication work should be performed on a more geographically representative sample of adolescents and their parents.

Conclusion

The current study represents an important step in the understanding of parents' and adolescents' reports of parenting behaviors and their differential associations with adolescent alcohol outcomes. The general pattern of results observed imply that studies examining parental influences on youth outcomes should, in most cases, seek to incorporate reports from adolescents on their parents' practices, as adolescents' reports of parental knowledge and sources of parental knowledge were more strongly associated with alcohol use than parents' reports. However, our results suggest that collecting reports from parents, as well, may lend added utility to studies exploring adolescent alcohol-related behaviors, particularly when discrepancies between parents' and adolescents' reports are incorporated into predictive models. These discrepancies may indicate an unobserved deficit in parent-adolescent communication or relationship quality, in general, that should be considered when examining youth risk. Findings across multiple methods for examining discrepancies suggest that using categorical groupings based on relative rankings (i.e., high/low) from each reporter used may improve prediction of problem adolescent behavior over models incorporating only main effects or other discrepancy methods.

Acknowledgments

This paper was written with funding support through the National Institute on Alcohol Abuse and Alcoholism to K. Jackson (R01 AA016838).

Biographies

Caitlin C. Abar is an Assistant Professor at SUNY Brockport. She received her doctorate in Human Development and Family Studies from the Pennsylvania State University. Her major research interests include parental influences on adolescent and emerging adult risk behaviors, with a particular focus on alcohol use and negative consequences.

Kristina M. Jackson is an Associate Professor at the Center for Alcohol and Addition Studies at Brown University. She received her doctorate in Social Psychology from Arizona State University. Her major research interests include a focus on the initiation of and progression of alcohol use in adolescents

Suzanne M. Colby is an Associate Professor at the Center for Alcohol and Addition Studies at Brown University. She received her doctorate in Experimental Psychology from the University of Rhode Island. Her major research interests include laboratory and clinical studies, treatment development, and instrumentation research related to adolescent and young adult substance use disorders.

Nancy P. Barnett is an Associate Professor at the Center for Alcohol and Addition Studies at Brown University. She received her doctorate in Clinical Psychology from the University of Washington. Her major research interests are in testing brief interventions for substance use among adolescents and young adults.

References

Barnes GM, Hoffman JH, Welte JW, Farrell MP, Dintcheff BA. Effects of parental monitoring and peer deviance on substance use and delinquency. Journal of Marriage and Family. 2006; 68:1084–1104.

Centers for Disease Control and Prevention (CDC) National Center for Injury Prevention and Control (NCIPC). Web-Based Injury Statistics Query and Reporting System (WISQARS). 2004. Available online at: http://www.cdc.gov/ncipc/wisqars/default.htm

Cohen J. The cost of dichotomization. Applied Psychological Measurement. 1983; 7:249–253.

Cottrell L, Li X, Harris C, D'Alessandri D, Stanton B. Parent and adolescent perceptions of parental monitoring and adolescent risk involvement. Parenting: Science and Practice. 2003; 3:179–195.

De Los Reyes A. Introduction to special section: More than measurement error: Discovering meaning behind informant discrepancies in clinical assessments of children and adolescents. Journal of Clinical Child and Adolescent Psychology. 2011; 40:1–9. [PubMed: 21229439]

De Los Reyes A, Goodman KL, Kliewer W, Reid-Quiñones K. The longitudinal consistency of mother–child reporting discrepancies of parental monitoring and their ability to predict child delinquent behaviors two years later. Journal of Youth and Adolescence. 2010; 39:1417–1430. [PubMed: 20020188]

DiClemente RJ, Wingood GM, Crosby R, Sionean C, Oh MK. Parental monitoring: Association with adolescents' risk behaviors. Pediatrics. 2001; 107:1363–1368. [PubMed: 11389258]

Dishion TJ, McMahon RJ. Parental monitoring and the prevention of child and adolescent problem behavior: A conceptual and empirical formulation. Clinical Child and Family Psychology Review. 1998; 1:61–75. [PubMed: 11324078]

Dishion TJ, Nelson SE, Kavanagh K. The Family Check-Up with high risk young adolescents: Preventing early-onset substance use by parent monitoring. Behavior Therapy. 2003; 34:553–571.

Dodge, KA.; Malone, PS.; Lansford, JE.; Miller, S.; Pettit, GS.; Bates, JE. Monographs of the Society for Research in Child Development. 2009. A dynamic cascade model of the development of substance-use onset. Serial No. 294

Feinberg M, Howe G, Reiss D, Hetherington EM. Relationship between perceptual differences of parenting and adolescent antisocial behavior and depressive symptoms. Family Psychology. 2000; 14:531–555.

Furman W, Buhrmester D. Children's perceptions of the personal relationships in their social networks. Developmental Psychology. 1985; 21:1016–1024.

Furman W, Buhrmester D. The network of relationships inventory: Behavioral systems version. Journal of Behavioral Development. 2009; 33:470–478.

Gaylord NK, Kitzmann KM, Coleman JK. Parents' and children's perceptions of parental behavior: Associations with children's psychosocial adjustment in the classroom. Parenting. 2003; 3:23–47.

Gonzales N, Cauce AM, Mason C. Interobserver agreement in the assessment of parental behavior and parent-child conflict: African American mothers, daughters, and independent observes. Child Development. 1997; 67:1483–1498. [PubMed: 8890496]

Guion K, Mrug S, Windle M. Predictive value of informant discrepancies in reports of parenting: Relations to early adolescents' adjustment. Journal of Abnormal Child Psychology. 2009; 37:17–30. [PubMed: 18584134]

Hingson RW, Heeren T, Winter MR. Age at drinking onset and alcohol dependence: Age of onset, duration, and severity. Archives of Pediatrics & Adolescent Medicine. 2006; 160:739–746. [PubMed: 16818840]

Jaccard J, Dittus PJ, Gordon VV. Parent-adolescent congruency in reports of adolescent sexual behavior and in communications about sexual behavior. Child Development. 1998; 69:247–261. [PubMed: 9499570]

Jackson C, Ennett ST, Dickinson DM, Bowling JM. Letting children sip: Understanding why parents allow alcohol use by elementary school-aged children. Archives of Pediatric and Adolescent Medicine. 2012; 17:1–5.

Jackson KM, Roberts M, Colby SM, Barnett NP, Abar CC, Merrill J. Willingness to drink as a function of peer offers and peer norms in early adolescence. Journal of Studies on Alcohol and Drugs. 2014; 75:404–414. [PubMed: 24766752]

Kalina O, Geckova AM, Klein D, Jarcuska P, Reijneveld SA. Mother's and father's monitoring is more important that parental social support regarding sexual risk behavior among 15-year-old adolescents. The European Journal of Contraception and Reproductive Health Care. 2013 epublication ahead of print.

Kerr M, Stattin H. What parents know, how they know it, and several forms of adolescent adjustment: Further support for a reinterpretation of monitoring. Developmental Psychology. 2000; 36:366–380. [PubMed: 10830980]

Kopak AM, Ayers S, Lopez V, Stevenson P. Parental monitoring, alcohol, and marijuana use among Hispanic and non-Hispanic White adolescents: Findings from the Arizona Youth Survey. Journal of Drug Issues. 2011; 41:461–486.

Latendresse SJ, Rose RJ, Viken RJ, Pulkkinen L, Kaprio J, Dick DM. Parental socialization and adolescents' alcohol use behaviors: Predictive disparities in parents' versus adolescents' perceptions of the parenting environment. Journal of Clinical Child and Adolescent Psychology. 2009; 38:232–244. [PubMed: 19283601]

Lippold MA, Greenberg MT, Feinberg ME. A dyadic approach to understanding the relationship of maternal knowledge of youths' activities to youths' problem behavior among rural adolescents. Journal of Youth and Adolescence. 2011; 40:1178–1191. [PubMed: 20936499]

Maurizi L, Gershoff ET, Aber JL. Item-level discordance in parent and adolescent reports of parenting behavior and its implications for adolescents' mental health and relationships with parents. Journal of Youth and Adolescence. 2012; 41:1035–1052. [PubMed: 22258760]

Pelton J, Steele RG, Chance MW, Forehand R. Discrepancy between mother and child perceptions of their relationship: II. Consequences for children considered within the context of maternal physical illness. Journal of Family Violence. 2001; 16:17–35.

Pettit GS, Bates JE, Dodge KA, Meece DW. The impact of after-school peer contact on early adolescent externalizing problems is moderated by parental monitoring, perceived neighborhood safety, and prior adjustment. Child Development. 1999; 70:768–778. [PubMed: 10368921]

Pettit GS, Laird RD, Dodge KA, Bates JE, Criss MM. Antecedents and behavior-problem outcomes of parental monitoring and psychological control in early adolescence. Child Development. 2001; 72:583–598. [PubMed: 11333086]

Reidler EB, Swenson LP. Discrepancies between youth and mother's perceptions of their mother-child relationship quality and self-disclosure: Implications for youth- and mother-reported youth adjustment. Journal of Youth and Adolescence. 2012; 41:1151–1167. [PubMed: 22573279]

Reynolds EK, MacPherson L, Matusiewicz AK, Schreiber WM, Lejuez CW. Discrepancy between mother and child reports of parental knowledge and the relation to risk behavior engagement. Journal of Clinical Child & Adolescent Psychology. 2011; 40:67–79. [PubMed: 21229444]

Soenens B, Vansteenkiste M, Luyckx K, Goossens L. Parenting and adolescent problem behavior: An integrated model with adolescent self-disclosure and perceived parental knowledge as intervening variables. Developmental Psychology. 2006; 42:305–318. [PubMed: 16569169]

Stattin H, Kerr M. Parental monitoring: A reinterpretation. Child Development. 2000; 71:1072–1085. [PubMed: 11016567]

Tobler AL, Komro KA. Trajectories of parental monitoring and communication and effects on drug use among urban young adolescents. Journal of Adolescent Health. 2010; 46:560–568. [PubMed: 20472213]

Warner LA, White HR. Longitudinal effects of age at onset and first drinking situations on problem drinking. Substance Use & Misuse. 2003; 38(14):1983–2016. [PubMed: 14677779]

Windle M. Parental, sibling, and peer influences on adolescent alcohol use and alcohol problems. Applied Developmental Science. 2000; 4:98–110.

Table 1

Spearman's rho correlations between predictors and alcohol use behaviors

	Ever Sipped	Ever Full Drink	Ever Drunk
Grade in School	0.20***	0.21***	0.16***
Adolescent Sex	−0.05	−0.03	−0.03
Parental Support	−0.11**	−0.15***	−0.10*
Parent-Child Negative Interactions	0.17***	0.20***	0.12**
Parent After School Supervision	−0.04	−0.06	0.03
Parental Knowledge (Parent)	−0.12**	−0.15***	−0.15***
Parental Knowledge (Adolescent)	−0.19***	−0.24***	−0.14***
Knowledge Discrepancy Scores (Parent-Adolescent)	0.06	0.11**	0.05
Parental Control (Parent)	−0.09*	−0.07	−0.10*
Parental Control (Adolescent)	−0.14***	−0.16***	−0.09*
Control Discrepancy Scores (Parent-Adolescent)	0.08	0.11**	0.01
Parent Solicitation (Parent)	−0.01	0.00	0.02
Parent Solicitation (Adolescent)	−0.07	−0.10**	−0.07
Solicitation Discrepancy Scores (Parent-Adolescent)	0.05	0.10*	0.07
Child Disclosure (Parent)	0.05	−0.10*	−0.12**
Child Disclosure (Adolescent)	−0.18***	−0.20***	−0.13***
Disclosure Discrepancy Scores (Parent-Adolescent)	0.08*	0.10*	0.04

Note. When not designated, data were from adolescents' reports.

* p <0.05,

** p < 0.01,

*** p < 0.001

Table 2

Means, (Standard Deviations), and correlations among indices of parental monitoring

	1	2	3	4	5	6	7	8
1. Parental Knowledge (Parent)	4.49 (0.46)							
2. Parental Control (Parent)	0.11**	4.77 (0.63)						
3. Parent Solicitation (Parent)	0.38***	0.18***	3.87 (0.81)					
4. Child Disclosure (Parent)	0.58***	0.05	0.32***	4.28 (0.64)				
5. Parental Knowledge (Adolescent)	**0.21*****	0.07	0.14***	0.23***	4.05 (0.86)			
6. Parental Control (Adolescent)	0.18***	**0.04**	0.10*	0.20***	0.52***	4.26 (0.95)		
7. Parent Solicitation (Adolescent)	0.18***	0.04	**0.29*****	0.19***	0.53***	0.44***	3.13 (1.07)	
8. Child Disclosure (Adolescent)	0.25***	0.08*	0.18***	**0.30*****	0.66***	0.43***	0.53***	3.81 (0.94)

Note. Bolded cells depict the correlation between adolescents' reports and parents' reports on the same construct.

* $p < 0.05$,

** $p < 0.01$,

*** $p < 0$.

Table 3

Logistic regression results predicting alcohol use behaviors separately for parent knowledge, parent control, parent solicitation, and child disclosure

	Parental Knowledge			Parental Control	
	Ever Sip	**Ever Drink**	**Ever Drunk**	**Ever Sip**	**Ever Drink**
Step 1 – All Models					
Pseudo R^2	**0.07**	**0.22**	**0.25**	**0.07**	**0.22**
Sex (1=male, 0=female)	0.93 (0.65 – 1.35)	0.97 (0.47 – 2.01)	0.75 (0.23 – 2.49)	0.95 (0.66 – 1.38)	0.98 (0.47 – 2.02)
Grade in School	1.42** (1.14 – 1.79)	2.90*** (1.66 – 5.06)	4.82** (1.50 – 15.47)	1.43** (1.14 – 1.80)	2.89*** (1.66 – 5.05)
Parental Support	0.85 (0.68 – 1.07)	0.66 (0.41 – 1.05)	0.64 (0.29 – 1.42)	0.87 (0.69 – 1.09)	0.66 (0.41 – 1.06)
Negative Interactions	1.63** (1.20 – 2.22)	2.48*** (1.56 – 3.95)	2.60** (1.34 – 5.04)	1.62** (1.19 – 2.21)	2.46*** (1.55 – 3.92)
Parent After School Supervision	0.98 (0.91–1.06)	0.92 (0.80 – 1.07)	1.10 (0.86 – 1.40)	0.98 (0.91– 1.06)	0.93 (0.80– 1.07)
Step 2 – Model 1					
Pseudo R^2	**0.08**	**0.26**	**0.36**	**0.09**	**0.25**
Parents' Reports	0.93 (0.77 – 1.11)	0.91 (0.66 – 1.25)	0.64 (0.42 – 1.00)	0.92 (0.76 – 1.11)	0.84 (0.61 – 1.17)
Adolescents' Reports	0.89 (0.72 – 1.09)	0.59** (0.42 – 0.85)	0.38** (0.21 – 0.70)	0.80* (0.66 – 0.97)	0.69* (0.49 – 0.96)
Step 2 – Model 2a					
Pseudo R^2	**0.08**	**0.26**	**0.36**	**0.09**	**0.25**
Parents' Reports	0.82 (0.63 – 1.06)	0.54** (0.34 – 0.84)	0.25*** (0.11 – 0.53)	0.74* (0.57 – 0.96)	0.58* (0.37 – 0.91)
Discrepancy Score[a]	1.13 (0.92 – 1.39)	1.69** (1.18 – 2.40)	2.63** (1.44 – 4.82)	1.25* (1.03 – 1.52)	1.46* (1.05 – 2.04)
Step 2 – Model 2b					
Pseudo R^2	**0.08**	**0.26**	**0.36**	**0.09**	**0.25**
Adolescents' Reports	0.82 (0.63 – 1.06)	0.54** (0.34 – 0.84)	0.25*** (0.11 – 0.53)	0.74* (0.57 – 0.96)	0.58* (0.37 – 0.91)

	Parental Knowledge			Parental Control	
	Ever Sip	**Ever Drink**	**Ever Drunk**	**Ever Sip**	**Ever Drink**
Discrepancy Score[a]	0.92 (0.77– 1.12)	0.91 (0.66 – 1.25)	0.64 (0.42 – 1.00)	0.92 (0.76 – 1.12)	0.84 (0.61 – 1.17)
Step 2 – Model 3					
Pseudo R^2	**0.08**	**0.26**	**0.38**	**0.09**	**0.25**
Parents' Reports	0.92 (0.76 – 1.12)	0.93 (0.63 – 1.37)	0.90 (0.40 – 2.06)	0.92 (0.76 – 1.12)	0.79 (0.56 – 1.12)
Adolescents' Reports	0.89 (0.72 – 1.09)	0.60** (0.42 – 0.85)	0.40** (0.22 – 0.74)	0.80* (0.66 – 0.98)	0.69* (0.49 – 0.96)
Parents' X Adolescents' Interaction	0.99 (0.83 – 1.20)	1.03 (0.76 – 1.40)	1.41 (0.80 – 2.48)	0.98 (0.78 – 1.25)	0.84 (0.56 – 1.27)
Step 2 – Model 4[b]					
Pseudo R^2	**0.09**	**0.31**	**0.38**	**0.09**	**0.26**
High Parent – Low Adolescent	0.60 (0.34 – 1.06)	0.51 (0.22 – 1.19)	0.10* (0.01 – 0.84)	0.77 (0.37 – 1.61)	1.10 (0.37 – 3.29)
Low Parent – High Adolescent	0.66 (0.37 – 1.16)	0.20** (0.06 – 0.64)	0.26 (0.05 – 1.36)	0.49 (0.21 – 1.18)	0.89 (0.21 – 3.81)
High Parent – High Adolescent	0.49* (0.29 – 0.85)	0.06*** (0.01 – 0.30)	0.00*** N/A[c]	0.45* (0.22 – 0.91)	0.36 (0.11 – 1.11)

	Parent Solicitation			Child Disclosure	
	Ever Sip	**Ever Drink**	**Ever Drunk**	**Ever Sip**	**Ever Drink**
Step 1 – All Models					
Pseudo R^2	**0.07**	**0.22**	**0.25**	**0.07**	**0.23**
Sex	0.95 (0.66 – 1.38)	0.97 (0.47 – 2.00)	0.75 (0.23 – 2.49)	0.94 (0.65 – 1.36)	1.01 (0.48 – 2.10)
Grade in School	1.39** (1.11 – 1.75)	2.89*** (1.65 – 5.05)	4.81** (1.50 – 15.44)	1.41** (1.12 – 1.77)	3.02*** (1.70 – 5.36)
Parental Support	0.85 (0.68 – 1.07)	0.66 (0.41 – 1.05)	0.64 (0.29 – 1.41)	0.83 (0.66 – 1.05)	0.66 (0.41 – 1.07)
Negative Interactions	1.66** (1.21 – 2.26)	2.48*** (1.56 – 3.94)	2.60** (1.34 – 5.03)	1.58** (1.16 – 2.16)	2.40*** (1.50 – 3.84)

	Parent Solicitation			Child Disclosure	
	Ever Sip	**Ever Drink**	**Ever Drunk**	**Ever Sip**	**Ever Drink**
Parent After School Supervision	0.98 (0.91– 1.06)	0.92 (0.80– 1.07)	1.09 (0.86 – 1.39)	0.98 (0.91– 1.06)	0.92 (0.79 – 1.07)
Step 2 – Model 1					
Pseudo R^2	**0.08**	**0.23**	**0.25**	**0.08**	**0.25**
Parents' Reports	1.12 (0.92 – 1.37)	1.12 (0.76 – 1.65)	0.91 (0.50 – 1.67)	0.99 (0.82 – 1.20)	0.84 (0.58 – 1.21)
Adolescents' Reports	1.03 (0.84 – 1.27)	1.09 (0.71 – 1.66)	0.85 (0.41 – 1.74)	0.86 (0.68 – 1.08)	0.69 (0.46 – 1.03)
Step 2 – Model 2a					
Pseudo R^2	**0.08**	**0.23**	**0.25**	**0.08**	**0.25**
Parents' Reports	1.16 (0.91 – 1.48)	1.22 (0.74 – 2.00)	0.77 (0.34 – 1.74)	0.85 (0.65 – 1.10)	0.57* (0.35 – 0.93)
Discrepancy Score[a]	0.97 (0.79 – 1.20)	0.92 (0.60 – 1.41)	1.18 (0.58 – 2.43)	1.17 (0.93 – 1.47)	1.46 (0.97 – 2.20)
Step 2 – Model 2b					
Pseudo R^2	**0.08**	**0.23**	**0.25**	**0.08**	**0.25**
Adolescents' Reports	1.16 (0.91 – 1.48)	1.22 (0.74 – 2.00)	0.77 (0.34 – 1.74)	0.85 (0.65 – 1.11)	0.57* (0.35 – 0.93)
Discrepancy Score [a]	1.12 (0.92 – 1.37)	1.12 (0.76 – 1.65)	0.91 (0.50 – 1.67)	0.99 (0.82 – 1.20)	0.84 (0.58 – 1.21)
Step 2 – Model 3					
Pseudo R^2	**0.09**	**0.24**	**0.25**	**0.08**	**0.26**
Parents' Reports	1.08 (0.88 – 1.32)	1.01 (0.68 – 1.51)	0.97 (0.47 – 2.01)	1.00 (0.82 – 1.22)	0.74 (0.50 – 1.09)
Adolescents' Reports	1.04 (0.85 – 1.29)	1.11 (0.73 – 1.68)	0.84 (0.41 – 1.75)	0.86 (0.68 – 1.09)	0.64* (0.42 – 0.98)
Parents' X Adolescents' Interaction	0.80* (0.66 – 0.98)	0.72 (0.48 – 1.08)	1.10 (0.60 – 2.01)	1.10 (0.90 – 1.33)	0.79 (0.57 – 1.09)
Step 2 – Model 4[b]					
Pseudo R^2	**0.08**	**0.23**	**0.26**	**0.08**	**0.24**
High Parent – Low Adolescent	0.97 (0.56 – 1.66)	1.36 (0.52 – 3.57)	1.37 (0.36 – 5.27)	0.73 (0.43 – 1.27)	0.56 (0.21 – 1.50)

	Parent Solicitation			Child Disclosure	
	Ever Sip	**Ever Drink**	**Ever Drunk**	**Ever Sip**	**Ever Drink**
Low Parent – High Adolescent	1.32 (0.77 – 2.27)	1.45 (0.49 – 4.25)	0.45 (0.05 – 4.36)	0.57 (0.31 – 1.03)	0.52 (0.15 – 1.83)
High Parent – High Adolescent	1.12 (0.67 – 1.87)	1.37 (0.47 – 3.95)	0.58 (0.09 – 3.72)	0.82 (0.49 – 1.37)	0.37 (0.12 – 1.10)

Note. Bolded cells depict the pseudo-R^2 value for the corresponding model. Supplemental models were run with adolescents' schools included as a multinomial covariate. Results were nearly identical across outcomes, so the more parsimonious models were retained.

[a] Discrepancy Score = Standardized Parent Report – Standardized Adolescent Report

[b] Reference = Low Parent – Low Adolescent.

[c] Nearly perfect association between membership and outcome; confidence intervals could not be calculated.

* $p < 0.05$,

** $p < 0.01$,

*** $p < 0.001$