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Parental Knowledge of Adolescent Activities: Links with Parental Attachment Style and Adolescent Substance Use

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Abstract

Parents' knowledge of their adolescents' whereabouts and activities is a robust predictor of adolescent risk behavior, including the use of drugs and alcohol. Surprisingly few studies have attempted to identify parental characteristics that are associated with the degree of parental knowledge. The present study is the first to examine how parental attachment style relates to mother, father, and adolescent reports of parental knowledge. Further, we used structural equation modeling to test the associations among parents' attachment styles, reports of parental knowledge, and adolescents' alcohol and marijuana use. Participants included 203 adolescents (mean age = 14.02, *SD* = .91) living in two-parent households and their parent(s). As predicted, mothers' and fathers' insecure attachment styles were negatively associated with self-reported and adolescent-reported parental knowledge, and all three reports of parental knowledge were negatively related to adolescent substance use. Mothers' and fathers' attachment styles were unrelated to adolescent substance use. However, evidence emerged for indirect effects of parental attachment style on adolescent substance use through reports of parental knowledge. Implications for prevention efforts and the importance of multiple reporters within the family are discussed.

Keywords

adolescent risk behavior; alcohol; marijuana; parental knowledge; attachment style

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Adolescence is a developmental period characterized by increasing rates of risky and health-compromising behaviors. Of note, adolescent substance use continues to be a major public health concern (Kann et al., 2014). In a nationwide study of adolescent health behaviors, 35% of US high school students reported consuming alcohol in the past month, 21% reported an episode of binge drinking during the same time period (i.e., five or more drinks in a row), and 23% reported using marijuana in the past month (Kann et al., 2014). Research aiming to advance understanding of variables that predict substance use in adolescence has

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the potential to inform prevention efforts and, therefore, has important implications for public health.

One variable that has consistently been found to be associated with adolescent substance use is *parental knowledge* (PK; e.g., Cottrell et al., 2003; DiClemente et al., 2001; Fletcher, Steinberg, & Williams-Wheeler, 2004; see Racz & McMahon, 2011, for a review). PK refers to the degree to which parents are aware of where their child is, with whom their child is associating, and what their child is doing (Stattin & Kerr, 2000; note that Stattin & Kerr distinguished PK from "parental monitoring," the latter referring to more active parental supervision and surveillance). Lower levels of PK have been linked to higher rates of alcohol and marijuana use (DiClemente et al., 2001) and earlier initiation of drug use (Chilcoat & Anthony, 1996). In addition, adolescents of parents with less knowledge are more likely to associate with drug using peers (Soenens, Vansteenkiste, Luyckx, & Goossens, 2006).

Parental Characteristics Related to Parental Knowledge

Despite the important and well established link between PK and adolescent substance use, a growing interest in the correlates and predictors of PK, and calls from prevention researchers to explore how PK relates to other domains of parenting (e.g., Dishion & McMahon, 1998), to date, relatively few studies have empirically examined parental characteristics that may be associated with PK (see Crouter & Head, 2002, for a review).

In the broader parenting literature, there is compelling evidence for a link between parents' personal characteristics (e.g., personality traits) and parenting behavior (e.g., Denissen, van Aken, & Dubas, 2009). Although some empirical evidence indicates that parental characteristics are related to variations in PK (see Crouter & Head, 2002, for a review), "parents' personal qualities have not received the attention they deserve" (Crouter & Head, 2002, p. 474). Parental qualities that have been found to relate to PK include parent gender (mothers typically posses more PK than fathers; Crouter, Helms-Erikson, Updegraff, & McHale, 1999) and parent education (more educated fathers tend to possess more PK; Crouter et al., 1999). Given substantial empirical evidence for the importance of PK in relation to adolescent risk behaviors, additional research aimed at identifying parental characteristics that are related to PK is warranted. We propose that one parental characteristic that is likely to be related to PK is a parent's attachment style.

Parental Attachment Style and Parental Knowledge

Adult attachment styles are conceptualized as "systematic patterns of expectations, needs, emotions, emotion-regulation strategies, and social behavior" in close relationships (e.g., with family members, romantic partners, and close friends; Shaver & Mikulincer, 2002, p. 134; see also Mikulincer & Shaver, 2007). Individual differences in adult attachment style, viewed as relatively stable across time and relationships, reflect differences on two dimensions: *avoidance* and *anxiety* (Brennan, Clark, & Shaver, 1998). High avoidance reflects discomfort with intimacy, dependency, and emotional disclosure in close relationships. By contrast, high anxiety reflects an intense fear of rejection and abandonment, a strong desire for relationship closeness, and preoccupation with relationship

needs (Shaver & Mikulincer, 2002). A high score on one or both of these two dimensions reflects greater attachment insecurity whereas low scores on both dimensions reflect greater attachment security.

To the extent that adult attachment styles reflect relatively stable orientations toward close relationships, it is reasonable to expect that parents' attachment styles would be linked to a variety of parental emotions, cognitions, and behaviors – that is, to the ways in which they parent. Indeed, considerable research indicates this to be the case. For example, parental attachment insecurity has been found to be related to more parenting stress, lower perceived closeness to children, less confidence in the ability to function well as a parent or cope with the stresses of parenthood, more negative views of actual and prospective children, and less sensitive and responsive parental behavior (see Jones, Cassidy, & Shaver, 2015, for a review). In addition, anxious and avoidant adults have demonstrated maladaptive strategies for coping with distress (see Mikulincer & Shaver, 2007, for a review) and difficulties appropriately responding to the needs of others (see Collins, Guichard, Ford, & Feeney, 2006, for a review), which may make handling the challenges of parenthood difficult for these individuals. This constellation of findings provides compelling evidence for a potential link between parents' attachment styles and PK.

Attachment-related avoidance and parental knowledge—Avoidant adults prefer to maintain physical and psychological distance from close relationship partners and are uncomfortable with others depending on them (see Collins et al., 2006, and Mikulincer & Shaver, 2007, for reviews). As a result, parents high on avoidance may be reluctant to solicit information about adolescents' activities because this information may require them to probe further or to take action in a way that increases closeness between adolescent and parent. For example, if a parent were to learn that his/her adolescent is using alcohol or drugs, the parent might feel compelled to probe for further information and become involved. In order to preclude the possibility of such involvement, avoidant parents may simply not solicit information that could set this process in motion. In other words, avoidant parents may take an "ignorance is bliss" approach when it comes to adolescent problem behaviors. Also, given that avoidant adults perceive their relationships with their children as less close and hold more negative views of parenthood and of their children (Rholes, Simpson, & Blakely, 1995; Rholes, Simpson, Blakely, Lanigan, & Allen, 1997), it is possible that they simply have fewer interactions with their children in which meaningful information is exchanged. Similarly, as a result of a history of daily interactions with an avoidant parent, adolescents may develop negative perceptions of their parents – for example, as low on warmth and high on hostility – and, as a result, may be less likely to disclose information to that parent (see Kerr & Stattin, 2000, and Stattin & Kerr, 2000, for reviews of the importance of child disclosure to PK).

Attachment-related anxiety and parental knowledge—Data about the characteristics of individuals high on attachment anxiety support the possibility that anxious parents may also possess less PK than secure parents, but for different reasons than avoidant parents. Given their strong fear of abandonment and worries about relationships (Shaver & Mikulincer, 2002), it is possible that anxious parents are too preoccupied with their other

relationships (e.g., romantic relationship) to focus adequate attention on the activities of their children. Alternatively, anxious parents may be reluctant to ask about their adolescents' affairs for fear of pushing the adolescent away. For example, in an attempt to gain their adolescents' approval, parents high on anxiety may try to portray themselves as "cool parents" who are permissive and do not pry into their adolescents' lives. Another possibility stems from evidence that anxious attachment is linked to an intrusive and over-involved caregiving style in adult romantic relationships (see Collins et al., 2006, for a review). Because adolescence is a time when autonomy from parents is particularly salient, it is likely that adolescents would react negatively to this type of caregiving and therefore be reluctant to disclose to anxious parents any information that could promote even more intrusive behavior.

The Present Study

The first goal of the present study was to advance research on parental characteristics associated with PK by investigating, for the first time, the relation between parents' attachment styles and parent and adolescent reports of PK. We hypothesized that greater parental attachment insecurity (i.e., higher scores on the anxious or avoidant dimensions) would relate to less parent-and adolescent-reported PK. The second goal of this study was to test the associations among parental attachment style, PK, and adolescent substance use using structural equation modeling (SEM). We tested direct as well as indirect effects (through PK) of parental attachment style on adolescent substance use. We hypothesized that greater parental attachment insecurity would relate to less parent- and adolescent-reported PK, which in turn would relate to greater adolescent substance use; we made no specific hypotheses about the direct effects of parental attachment style on adolescent substance use. Because previous research has documented a modest correlation between the two attachment dimensions (e.g., Del Giudice, 2011), we included both attachment dimensions in all our models and allowed them to covary in order to tease apart the unique effects of attachment-related avoidance and anxiety on reports of PK.

Although not a central aim of the present study, we compared mother and father reports of PK and attachment style. Prior research suggests that mothers tend to possess more PK than fathers (e.g., Cottrell et al., 2003; Crouter et al., 1999); therefore, we expected the same pattern of results to emerge in this sample. In addition, a recent meta-analysis suggested potential gender differences in adult attachment style: Overall, men tend to report more avoidance and less anxiety than women (Del Giudice, 2011). However, there was substantial variation across samples included in the meta-analysis. Therefore, we framed our comparison of mothers' and fathers' attachment styles as exploratory.

Method

Participants

Participants included adolescents and their parent(s) who participated in the Wave 4 laboratory visit of an ongoing study of adolescent risk-taking. The original sample at Wave 1 included 277 target adolescents and their parent(s). Families were recruited from the Washington, DC metropolitan area using media and print advertisements sent to youth

organizations, schools, and libraries. Families with a child in the 5th or 6th grade and who were proficient in English were eligible to participate in the initial (Wave 1) laboratory assessment. Following the initial visit, families were invited back to the laboratory at annual intervals to complete a yearly assessment. Of the original sample of 277 adolescents, 232 adolescents and their parent(s) participated in the Wave 4 laboratory assessment.

Given our interest in the relations between PK and *both* mothers' and fathers' attachment styles, and calls from researchers to examine mother- and father-reported PK separately (Crouter & Head, 2002), the present study only included adolescents living in two-parent households. Based on this inclusion criterion, 170 adolescents and one or both parents from the larger study were included in the present study. Although all adolescents included in our subsample lived in two-parent households, both parents did not always participate in the Wave 4 visit.

In addition, we included 33 additional two-parent families who, although not part of the original sample for the larger study, participated in the Wave 4 data collection as part of a supplemental project. These additional families were recruited using flyers sent to area schools and community centers. To be eligible to participate in the supplemental project at Wave 4, families had to be proficient in English, have an adolescent between the ages of 13 and 16, and live in a two-parent household. The final sample for the present study included 203 adolescents (mean age = 14.02, *SD* = .91; 46% female) and one or both parents (196 mothers; 157 fathers). Importantly, the additional 33 families that participated in the supplemental project at Wave 4 did not differ from the two-parent families in the original longitudinal sample that participated at Wave 4 with respect to parents' attachment styles, reports of PK, adolescent substance use, income, adolescent gender, or ethnicity (all *p*s > .05). However, the adolescents from the additional 33 families were slightly older than the adolescents in the original sample at Wave 4, $t(200) = 2.21$, $p < .05$: a mean age of 14.34 years (*SD* = 1.04) compared to a mean age of 13.96 years (*SD* = .88).

The sample of 203 adolescents was racially diverse: 63% Caucasian, 24% African American, 9% Hispanic/Latino, 2% Asian/Southeast Asian, and 2% self-described as "Other." Participants' level of SES in these two-parent families had considerable variation (mean household income = $123,110, *SD* = $57,424). The majority of mothers (69%) and fathers (70%) had at least a college degree.

Procedure

At the Wave 4 assessment, families took part in a laboratory visit that lasted approximately 2 hours. At the beginning of the visit, parents provided written consent for themselves and their adolescents and all adolescents completed a written assent form. Adolescents were paid between $25 and $35 (compensation varied based on performance on a task that was unrelated to the present study) for their participation in the larger study. Parents were each paid $35 per child for their participation in the larger study. Families who participated in the supplemental project (which lasted an additional 1 hour) were paid $75 ($25 per parent, and $25 for adolescent). We focused on the Wave 4 assessment because it is only this time point that contained both (a) the increased sample size resulting from the inclusion of the

additional two-parent families and (b) the parental attachment style data. This research was approved by the University of Maryland Institutional Review Board.

Measures

Parents' attachment styles—Parents' attachment styles were measured using the Experiences in Close Relationships Scale (ECR; Brennan et al., 1998), a 36-item scale that assesses an individual's typical degree of attachment-related avoidance and anxiety in close relationships (e.g., with family members, romantic partners, or close friends). The *avoidance* subscale (18 items; α = .92 for mothers; α = .92 for fathers) measures the extent to which a person is uncomfortable with closeness, intimacy, and emotional disclosure in close relationships (e.g., "I prefer not to show others how I feel deep down" and "I try to avoid getting too close to others"). The *anxiety* subscale (18 items; α= .91 for mothers; α= .91 for fathers) measures the extent to which a person strongly desires closeness in relationships and worries about being rejected, abandoned, or unloved (e.g., "I worry a fair amount about losing my close relationship partners" and "I want to get very close to others, and this sometimes scares them away"). Although the original ECR items asked specifically about experiences with romantic partners, current measurement convention is to use items that ask about experiences in close relationships more generally (Mikulincer & Shaver, 2007). For each item, parents rated the extent to which they agree with the statement using a 7-point Likert-type scale, with responses ranging from 1 (*disagree strongly*) to 7 (*agree strongly*). Higher scores reflect greater attachment anxiety and avoidance in close relationships. The ECR has been used in hundreds of studies and has demonstrated excellent psychometric properties including internal consistency, test-retest reliability, and construct validity (Brennan et al., 1998; Mikulincer & Shaver, 2007).

Parental knowledge—We used an abbreviated version of the PK measure developed by Stattin and Kerr (2000), which assesses parents' knowledge of their adolescents' activities and whereabouts. Due to time constraints, we presented adolescents with five items from the larger measure that were most relevant for the age of adolescents in the present study (see also Reynolds et al., 2011). Mothers, fathers, and adolescents independently completed the measure (α = .66 for mothers; α = .78 for fathers; α = .73 for adolescents). Participants rated each item using a 5-point Likert-type scale, ranging from 0 (*never*) to 4 (*always*) based on the extent to which the item reflected PK in the family (e.g., "Do your parents know what you do during your free time?"). Minor word changes were made for the parent version of the scale (e.g., "Do you know what your child does during his or her free time?"). Higher scores on this measure reflect greater parental knowledge of adolescents' whereabouts and activities.

Adolescent substance use—We used two items from the CDC Youth Risk Behavior Survey (YRBS; Centers for Disease Control and Prevention, 2001) to assess adolescents' alcohol and marijuana use in the past year ("In the past year, how many times have you had a drink of alcohol (even a sip)?" and "In the past year, how many times have you used marijuana?). Adolescents rated the frequency with which they have used each of these substances in the past year on a 6-point scale ranging from 0 (*zero*) to 5 (*almost every day or*

more). The YRBS has been found to be reliable for high school samples (Brener, Collins, Kann, Warren, & Williams, 1995).

Demographic questionnaire—Parents provided basic demographic information about themselves and their adolescents (e.g., age, ethnicity, income, education).

Results

Missing Data

Other than one adolescent missing data on past year alcohol use, complete data were available for all adolescent-reported variables (i.e., PK and marijuana use). As noted in the Method section, although all 203 adolescents included in the present study lived in two-parent households, both parents did not always participate in the Wave 4 laboratory visit. Data were missing on less than 5% of the mother-reported variables and on 23% of the father-reported variables. We computed Little's missing completely at random (MCAR) test to further evaluate missingness. The results of this test suggested that the data were MCAR, $\chi^2(115) = 115.35$, $p = .47$. Therefore, we used maximum likelihood estimation to handle missing data.

Preliminary Analyses

Covariates—Preliminary analyses revealed no significant ethnic differences in any of the reports of PK or adolescent substance use; therefore, ethnicity was excluded from subsequent analyses. Adolescent age was significantly correlated with all three reports of PK (*rs* ranged from -.16 to -.27, all *ps* < .05) and with adolescent marijuana use ($r = .15$, $p < .05$). In addition, annual family income was significantly correlated with father-reported PK ($r = -.19$, $p < .05$), but was not significantly related to mother- or adolescent-reported PK or the adolescent substance use variables. Adolescent gender was significantly related only to father-reported PK, $t(155) = 2.03$, $p < .05$: on average, fathers possessed more knowledge about their daughters than their sons. Finally, paternal education was significantly related to father-reported PK, $t(153) = 2.48$, $p < .05$: on average, fathers who had at least a college degree reported less PK than fathers without a college degree. Based on these results, adolescent age and gender, paternal education, and annual family income were included in the appropriate models.

Comparison of mother and father reports of PK and attachment style—We performed paired samples *t*-tests to examine mother and father differences in PK and attachment style. These analyses were restricted to families in which complete data from both mother and father were available ($n = 148$ for PK; $n = 150$ for attachment style). Fathers, on average, reported less PK ($t[147] = 4.10$, $p < .001$) than mothers. In addition, on average, fathers reported greater avoidance ($t[149] = 2.01$, $p < .05$) and anxiety ($t[149] = 2.35$, $p < .01$) than mothers.

Principal Analyses: Structural Equation Models

We used the measured variables to serve as indicators of latent variables representing parental attachment style, parental knowledge, and adolescent substance use. We tested four

latent variable models (labeled Models 1–4 below): two models for each parent. One model tested the links between parental attachment style and the parent's own report of PK; the second model tested the links between parental attachment style and adolescent-reported PK (see Figure 1). For each model, we first tested a measurement model in which all the latent factors were allowed to covary. Adequate data-model fit emerged for each measurement model, so no modifications were made. Next, we tested the structural models in which the hypothesized paths among the latent variables were added. Fit indices suggested good fit for all structural models (see Table 2 for fit indices). To test the indirect effects of parental attachment style on adolescent substance use, we used bootstrapping to generate bias-corrected confidence intervals and then examined those confidence intervals to determine the significance of the indirect paths (MacKinnon, Lockwood, & Williams, 2004; Shrout & Bolger, 2002). In accord with current recommendations, we report unstandardized indirect effects and bootstrapped confidence intervals (e.g., Rucker, Preacher, Tormala, & Petty, 2011). All SEM analyses were performed with M*plus* statistical software Version 7 (Muthén & Muthén, 1998–2012). The standardized covariances among the latent variables in each model are presented in Table 1. Standardized path coefficients for each model are presented in Figure 1.

Latent variable creation

Parent attachment dimensions—Following prior research with the ECR (e.g., Scott, Levy, & Pincus, 2009), we created item parcels to serve as measured indicators of latent avoidance and anxiety variables. We performed a separate factor analysis for the 18 items of the avoidance subscale and the 18 items of the anxiety subscale and then rank-ordered the items within each subscale based on the magnitude of the factor loadings. For each attachment dimension, we then successively assigned each item to one of three parcels (6 items per parcel) and summed the items within each parcel, resulting in three measured indicators of the latent avoidance factor and three measured indicators of the latent anxiety factor. Across all models, all factor loadings were significant (standardized loadings ranged from .82 to .96).

Parental knowledge—We used the five items of the PK scale as measured indicators of a latent PK variable for each reporter. Across all models, all factor loadings were significant. However, for mother- and father-reported PK, one item ("Do you usually know what type of homework your child has?") yielded loadings lower than the acceptable cutoff of .40 (Whitley & Kite, 2013). Therefore, this item was removed and not included in the analyses. After removing the above item from parent reports of PK, standardized loadings ranged from .63 to .84 for father-reported PK, from .50 to .74 for mother-reported PK, and from .41 to .72 for adolescent-reported PK).

Adolescent substance use—We used self-reported past year alcohol and marijuana use as measured indicators of a latent adolescent substance use variable. Across all models, factor loadings were significant. Standardized factor loadings ranged from .53 to .61 for alcohol use and from .54 to .63 for marijuana use.

Mother models: Model 1 examined the associations among mother attachment style dimensions, mother-reported PK, and adolescent substance use. The results revealed that maternal attachment anxiety was related to less mother-reported PK, and mother-reported PK was negatively associated with adolescent substance use. Although maternal avoidance was negatively associated with mother-reported PK at the bivariate level (see Table 1), there was not a significant unique effect of avoidance on PK when avoidance was allowed to covary with anxiety (i.e., when the portion of avoidance that is correlated with anxiety was partialed out). The direct effects of maternal attachment style on adolescent substance use were not significant. However, the indirect effect of maternal anxiety on adolescent substance use, through mother-reported PK, was significant (indirect effect of anxiety = .16: 99% CI [.01, .60]).

Model 2 examined the associations among mother attachment style dimensions, adolescent-reported PK, and adolescent substance use. The results revealed that maternal attachment avoidance, but not anxiety, was associated with less adolescent-reported PK, and adolescent-reported PK was negatively associated with adolescent substance use. The direct effects of maternal attachment style on adolescent substance use were not significant. However, the results revealed that maternal avoidance was indirectly related to adolescent substance use through adolescent-reported PK (indirect effect of avoidance = .10: 95% CI [.01, .29]).

Father models: Model 3 examined the associations among father attachment style dimensions, father-reported PK, and adolescent substance use. The results revealed that paternal attachment anxiety was related to less father-reported PK, and father-reported PK was negatively associated with adolescent substance use. Although paternal avoidance was negatively associated with father-reported PK at the bivariate level (see Table 1), there was not a significant unique effect of avoidance on PK when avoidance was allowed to covary with anxiety (i.e., when the portion of avoidance that is correlated with anxiety was partialed out). The direct effects of paternal attachment style on adolescent substance use were not significant. However, the results revealed that paternal anxiety was indirectly related to adolescent substance use through father-reported PK (indirect effect of anxiety = .10: 99% CI [.001, .36]).

Model 4 examined the associations among father attachment style dimensions, adolescent-reported PK, and adolescent substance use. The results revealed that paternal attachment anxiety, but not avoidance, was associated with less adolescent-reported PK, and adolescent-reported PK was negatively associated with adolescent substance use. The direct effects of paternal attachment style on adolescent substance use were not significant. However, paternal anxiety was indirectly related to adolescent substance use through adolescent-reported PK (indirect effect of anxiety = .25: 99% CI [.01, .87]).

Discussion

In light of the substantial evidence that PK is linked to adolescent substance use (see Racz & McMahon, 2011, for a review), the present investigation sought to advance this literature by studying a previously unexamined parental characteristic – parental attachment style – that might contribute to the extent to which both adolescents and parents perceive parents to be

knowledgeable about their adolescents' whereabouts and behaviors. As predicted, we found evidence that parents' attachment styles were associated with parent and adolescent perceptions of PK and all three reports of PK were associated with adolescent substance use. In addition, although parental attachment styles were uncorrelated with adolescent substance use, we found significant indirect effects of parental attachment style on adolescent substance use through PK. The observed links between parental attachment style and perceptions of PK are consistent with a growing body of literature demonstrating that parents' attachment styles are related to thoughts and behaviors in parent–child relationships (see Jones et al., 2015, for a review).

We begin our discussion by noting that, as is commonly the case when adolescents provide reports about PK (e.g., Cottrell et al., 2003; Kerr & Stattin, 2000; Stattin & Kerr, 2000), adolescents in the present study reported on PK collectively rather than on mother and father PK individually. As such, our findings speak to the ways in which mothers' and fathers' individual attachment styles predict adolescent reports of *parental* knowledge (e.g., adolescents whose mothers reported greater attachment-related avoidance reported that their parents have lower PK). We limited our analyses to adolescents living with both parents to increase the likelihood that adolescents took both parents' knowledge into account when making their collective ratings. In addition to adolescent reports of joint PK, mothers and fathers reported individually about their own PK.

We also note that research has identified several sources of PK, including child disclosure and parent solicitation of information (Stattin & Kerr, 2000). Our measure of PK was not designed to tease apart the specific sources of PK. As such, in our discussion of the findings, the inferences we draw about how parental attachment style may influence both parent solicitation and adolescent disclosure of information are particularly speculative.

Maternal Attachment Style and Parental Knowledge

In the present study, we found that mothers' attachment anxiety was negatively related to their own perceptions of PK, a pattern that reflects anxious individuals' worries that relationship partners do not want to be as close with them as they would like to be (e.g., Brennan et al., 1998; evident in endorsing ECR items such as "I find that others don't want to get as close as I would like"). Mothers high in attachment anxiety may wish that they were more involved in their adolescents' lives and knew more about their activities. In other words, anxious mothers' perceptions that they lack knowledge about their adolescents' whereabouts and activities may reflect more general feelings they have about their close relationships – feelings of not being close enough to their relationship partners and fears that partners will want distance – rather than a reflection of actual communication in the parent-adolescent relationship (see Finzi-Dottan, Cohen, Iwaniec, Sapir, & Wiezman, 2006 and Kor, Mikulincer, & Pirutinsky, 2012, for evidence that anxious parents perceive their family relationships as low in cohesion and high in emotional distance). The lack of a connection between mothers' anxiety and adolescent-reported PK suggests that adolescents may not be systematically withholding information from their parents as a result of their mothers' concerns about closeness, however.

In contrast, we found that mothers' attachment avoidance was negatively associated with adolescent reports, but not their own reports, of PK. There are several possible explanations for this link. It may be that avoidant mothers, who prefer distance in their relationships (Mikulincer & Shaver, 2007), act in subtle ways that unintentionally signal to their adolescents that they prefer not to know about the details of their daily lives. Adolescents, in turn, may pick up on these preferences and consequently withhold personal details from their parents. Another possibility stems from research showing a strong negative correlation between mothers' avoidance and perceived closeness to their children (Rholes et al., 1995). As a result of this reduced closeness and avoidant individuals' preference for distance, adolescents of avoidant mothers may simply have fewer interactions with their mothers in which information about their lives is exchanged.

Paternal Attachment Style and Parental Knowledge

A somewhat different pattern emerged for fathers. As was the case for mothers, fathers' attachment anxiety was linked to less self-reported PK; like anxious mothers, these fathers may be worried that their adolescents do not want to have a close relationship and may perceive adolescents as withholding information regardless of adolescents' actual communication with parents. Unlike the findings for mothers, fathers' anxiety rather than avoidance was related to less adolescent-reported PK. It is reasonable to speculate that when fathers are high in anxiety, they may take active steps to solicit information from their adolescents, but adolescents may view this paternal behavior as intrusive and unwarranted, leading them to withhold personal information from their parents. Anxious fathers, in turn, may perceive adolescents' aversion to divulging information and feel left out of adolescents' lives. The fact that fathers' anxiety was linked to both father- and adolescent-reported PK suggests that there may be something in particular about fathers' worries about closeness in their relationships that interferes with their ability to acquire knowledge about their children's behaviors (see Jones & Cassidy, 2014, for evidence that paternal anxiety, rather than avoidance, is related to negative parenting outcomes). In future studies, it will be useful for researchers to take a closer look at fathers' monitoring efforts as well as adolescents' disclosure of their behavior to fathers to gain insight into the mechanisms that link fathers' attachment anxiety and PK.

Differences in Adolescent-Reported PK as a Function of Parent Gender

The observed differences in the relations between mothers' and fathers' attachment styles and adolescent perceptions of PK might be best understood in the context of gender norms for parenting (see Lamb, 2010, for a review). Specifically, the findings are consistent with the possibility that adolescent perceptions of PK vary as a function of the extent to which the parent's attachment style violates gender norms. Fathers, across development, devote less time than mothers to hands-on caregiving tasks, focusing instead on fostering children's exploration and autonomy (Craig, 2006; Grossmann et al., 2002). In addition, fathers typically possess less PK than mothers (e.g., Crouter et al., 1999) – a finding that also emerged in parents' reports of PK in the present study. Mothers, on the other hand, are typically perceived by their adolescents as warmer and more involved than fathers, and adolescents are more likely to confide in and depend on their mothers than their fathers (Rosenthal & Kobak, 2010; Youniss & Smollar, 1985). Given these differences in gender

norms for parenting, paternal attachment anxiety may be particularly problematic for father-adolescent relationships, and maternal avoidance may be particularly problematic for mother-adolescent relationships (see Jones & Cassidy, 2014, for further evidence). For example, an avoidant father's lack of awareness and limited attempts to solicit information about his adolescent's activities may be viewed by the adolescent as normative paternal behavior, rather than as a sign that the father prefers not to know what is going on in his/her life; this may explain why we did not find an association between paternal avoidance and adolescent-reported PK in the present study. However, an anxious father who may be intrusive and over-involved in his adolescent's life violates gender norms for parenting roles. This atypical paternal behavior may have the opposite effect of pushing adolescents away and in turn reducing paternal knowledge – thereby explaining the significant association between paternal anxiety and adolescent-reported PK in the present study.

On the other hand, the intrusive behavior characteristically associated with high attachment anxiety (e.g., Kunce & Shaver, 1994) may, when evident in mothers, be viewed by adolescents as more normative because adolescents generally perceive mothers as more intrusive and involved than fathers (Cubis, Lewin, & Dawes, 1989; Finley, Mira, & Schwartz, 2008). In contrast, it may be that it is the relatively distant behavior characteristic of avoidant mothers that is viewed as gender atypical. Adolescents with avoidant mothers may interpret their mothers' avoidance as an implicit lack of interest about adolescents' activities and daily plans; this atypical maternal behavior may be particularly salient for adolescents, who may choose not to disclose information to their parents. As such, adolescents' schemas about parental gender roles may explain the finding that maternal avoidance, but not anxiety, was negatively related to adolescent-reported PK in the present study (see Jones & Cassidy, 2014, for evidence that maternal avoidance, rather than anxiety, is related to negative parenting outcomes and to adolescents' negative perceptions of their mothers).

Indirect Effects of Parental Attachment Style on Adolescent Substance Use Through PK

Consistent with prior research demonstrating that the influence of some parenting domains (e.g., warmth) on adolescent substance use may be better conceptualized as indirect through PK rather than direct (Fletcher et al., 2004; Soenens et al., 2006), we found four indirect effects of parental attachment style on adolescent substance use via PK. Specifically, greater maternal and paternal anxiety were indirectly related to greater adolescent substance use through their own reports of PK. In addition, we found that greater maternal avoidance and greater paternal anxiety were indirectly related to greater adolescent substance use through adolescent-reported PK.

An important caveat to consider when interpreting these indirect effects is that there were no direct effects of parental attachment style on adolescent substance use in the SEMs and parental attachment style was uncorrelated with adolescent substance use at the bivariate level. Although it is possible to have a significant indirect effect when the predictor and outcome variables are not significantly related (e.g., Hayes, 2009; Shrout & Bolger, 2002), the inferences we can make about the indirect effects are tempered by the lack of a significant direct association between parents' attachment styles and adolescent substance

use. For example, on the one hand, given that parental attachment style was uncorrelated with adolescent substance use, it is unclear whether targeting parental attachment security as part of intervention or prevention programs would have a significant effect on adolescent substance use. On the other hand, PK is a central target of intervention and prevention efforts (e.g., Dishion & McMahon, 1998; Perrino, González-Soldevilla, Pantin, & Szapocznik, 2000), and our results showed that parental attachment style explains a significant amount of the variance in mother, father, and adolescent reports PK (R^2 ranged from .10 to .21; see Table 2). Thus, addressing the ways in which parental insecurity may preclude parents from acquiring knowledge about their adolescents' whereabouts and activities may increase PK, which in turn may decrease substance use. Given that this is the first study to examine the associations among parental attachment style, PK, and adolescent substance use, additional research is needed to better understand these links and to determine the benefits (or lack thereof) to prevention efforts of considering the role of parental attachment insecurity.

Multiple Informants of Parental Knowledge

Our findings highlight the benefit of obtaining multiple informants when assessing PK in the family system. Numerous studies have identified relatively modest correlations among reports of PK (Cottrell et al., 2003; Reynolds et al., 2011), suggesting that mothers, fathers, and adolescents have different perceptions about the extent to which parents are knowledgeable about adolescents' behavior, and that PK might be best viewed as a dyadic, transactional characteristic of parent–child relationships. Indeed, the conclusions we drew from the data differed as a function of informant. We propose that this variation can be meaningfully interpreted within the context of existing research related to adult attachment, adolescent development, and adolescent–parent relationships. Moreover, this approach provides greater insight into the ways in which parents' attachment styles may relate in different ways to their own and their adolescents' perceptions of the parent and of the parent–child relationship.

Limitations and Future Directions

Although the present findings provide novel insight into the parental characteristics associated with PK and adolescent substance use, these results must be interpreted in light of several study limitations. First, the data used in the present study were cross-sectional and based on self-reports. Replications of this work in different samples and using different study designs and methodologies will be important to bolster support for the patterns observed in this sample. Second, we were unable to tease apart the specific mechanisms by which parental attachment styles are related to reports of PK. In other words, we found a link between parental attachment insecurity and less PK, but it is unclear whether this link is due to less active parental monitoring or less adolescent disclosure. Future studies using additional measures of parent and adolescent behavior and sources of PK could address this question.

Third, we restricted our focus to two-parent families because of our interest in how mother *and* father attachment relate to reports of PK and how mother *and* father PK relate to adolescent substance use. Given evidence that single parenthood is associated with less

mother-reported PK (Pettit, Laird, Dodge, Bates, & Criss, 2001), future studies may want to examine whether and how the links between attachment style and PK differ in single-parent families versus two-parent families. It is possible that attachment-related associations with PK may be particularly pronounced in single-parent families. This might be the case because single parents often experience heightened parenting stress (Williford, Calkins, & Keane, 2007), and it is precisely during times of stress that individuals' attachment styles are particularly likely to influence their behavior (Shaver & Mikulincer, 2002). In addition, our sample consisted of mostly middle-income families and relatively well-educated parents. Whether or not the present results would generalize to lower SES and more at-risk samples is an important question that future research should address.

Fourth, because we followed the common practice of having adolescents report the knowledge of both parents jointly (e.g., Cottrell et al., 2003; Stattin & Kerr, 2000), the ways in which adolescents integrate perceptions of each parent's knowledge into a global perception of PK – which is likely to vary across adolescents, and perhaps also as a function of the combination of each parent's attachment style – remains unknown. Examination of the ways in which mothers' and fathers' attachment styles relate to adolescent perceptions of each parent's individual PK will be an important extension of the current work.

Fifth, although it is a strength that we used multiple informant reports of PK, evidence suggests that reporters can be biased in their self-reports. Future studies may benefit from incorporating observations of parent-adolescent discussions that allow for more naturalistic assessments of parental information-seeking and adolescent disclosure. It is possible that parental attachment insecurity fosters a home environment in which parents do not feel comfortable soliciting information and adolescents, in turn, feel uncomfortable sharing personal information. Relatedly, an inevitable by-product of collecting data from multiple reporters within the same family is that there is likely some degree of non-independence of the data (i.e., mother and father reports of attachment style or PK are not statistically independent). Future research involving larger samples could utilize multilevel modeling techniques to account for the nested structure of family data.

Sixth, adolescents in the current sample are relatively young, and as such, have only just begun to experiment with drugs and alcohol. It will be important to examine links among parents' attachment styles, PK, and substance use in samples of older adolescents characterized by higher rates of substance use.

Seventh, in our discussion of the present findings, we focused on how parents' attachment styles may influence aspects of the parent–adolescent relationship (e.g., parental solicitation and child disclosure to parent) that may in turn affect the degree of PK. Another important factor to consider in future research is how parents' attachment styles influence the parents' marital relationship and how aspects of the parents' relationship could in turn affect the degree of PK. An abundance of research has shown that attachment insecurity is associated with more negative romantic relationship outcomes (e.g., lower relationship satisfaction, less effective communication; Mikulincer & Shaver, 2007). These romantic relationship difficulties may interfere with one or both parents' level of PK. For example, parental insecurity and relationship difficulties may result in a poor parenting alliance, low

communication, and ineffective co-parenting (see Coyl, Newland, & Freeman, 2010, for some initial evidence), which could lead to lower PK. Greater attention to marital relationship quality in studies of PK is warranted.

Finally, although the link between PK and adolescent substance use has been replicated many times, and PK has been found to prospectively predict substance use in several large sample longitudinal studies (e.g., Fletcher et al., 2004; Van Ryzin, Fosco, & Dishion, 2012), the link between PK and adolescent substance use likely reflects bidirectional and transactional processes. In addition to PK influencing adolescent engagement in substance use, it is also possible that adolescent engagement in substance use affects the degree of PK. For example, an adolescent who is using drugs or alcohol may be more reluctant than an adolescent who is not using substances to spend time with parents and share details about his or her activities, resulting in less PK. Alternatively, parents of adolescents who use substances and repeatedly get into trouble may become so frustrated that they disengage and give up trying to acquire knowledge about their adolescents' activities (see Racz & McMahon, 2011, for further discussion). In future studies, researchers should devote greater considerations to these bidirectional influences.

Despite these limitations, the findings of the present study offer useful information that advances knowledge about the predictors of PK and adolescent substance use. Our study responds to calls to examine parental factors that might shed light on individual differences in PK. Further, our inclusion of both mothers and fathers is a significant extension to the large number of PK studies focused only on mothers; our findings suggest that adolescent and parent perceptions of PK are influenced by mothers' *and* fathers' attachment styles. This information may be useful to consider when designing interventions to increase PK, and could shed light on why some parents are more effective than others at obtaining information about their adolescents' behaviors and activities.

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References

Brener ND, Collins JL, Kann L, Warren CW, Williams BI. Reliability of the Youth Risk Behavior Survey Questionnaire. American Journal Epidemiology. 1995; 141:575–580.

Brennan, KA.; Clark, CL.; Shaver, PR. Self-report measurement of adult attachment: An integrative overview. In: Simpson, JA.; Rholes, W., editors. Attachment theory and close relationships. New York, NY: Guilford; 1998. p. 46-76.

Centers for Disease Control and Prevention. National school-based Youth Risk Behavior Survey. Atlanta, GA: Author; 2001. Public-use data documentation

Chilcoat HD, Anthony JC. Impact of parent monitoring on initiation of drug use through late childhood. Journal of the American Academy of Child & Adolescent Psychiatry. 1996; 35:91–100. [PubMed: 8567618]

Collins, NL.; Guichard, AC.; Ford, MB.; Feeney, BC. Responding to need in intimate relationships: Normative processes and individual differences. In: Mikulincer, M.; Goodman, GS., editors. Dynamics of romantic love: Attachment, caregiving, and sex. New York, NY: Guilford; 2006. p. 149-189.

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

Coyl DD, Newland LA, Freeman H. Predicting preschoolers' attachment security from parenting behaviours, parents' attachment relationships, and their use of social support. Early Child Development and Care. 2010; 180:499–512.

Craig L. Does father care mean fathers share?: A comparison of how mothers and fathers in intact families spend time with children. Gender & Society. 2006; 20:259–281.

Crouter, AC.; Head, MR. Parental monitoring and knowledge of children. In: Bornstein, MH., editor. Handbook of parenting: Vol. 3: Being and becoming a parent. 2nd ed.. Mahwah, NJ: Erlbaum; 2002. p. 461-483.

Crouter AC, Helms-Erickson H, Updegraff K, McHale SM. Conditions underlying parents' knowledge about children's daily lives in middle childhood: Between-and within-family comparisons. Child Development. 1999; 70:246–259. [PubMed: 10191526]

Cubis J, Lewin T, Dawes F. Australian adolescents' perceptions of their parents. Australian and New Zealand Journal of Psychiatry. 1989; 23:35–47. [PubMed: 2930414]

Del Giudice M. Sex differences in romantic attachment: A meta-analysis. Personality and Social Psychology Bulletin. 2011; 37:193–214. [PubMed: 21239594]

Denissen JA, van Aken MG, Dubas JS. It takes two to tango: How parents' and adolescents' personalities link to the quality of their mutual relationship. Developmental Psychology. 2009; 45:928–941. [PubMed: 19586171]

DiClemente RJ, Wingood GM, Crosby R, Sionean C, Cobb BK, Harrington K, 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]

Finley GE, Mira SD, Schwartz SJ. Perceived paternal and maternal involvement: Factor structures, mean differences, and parental roles. Fathering. 2008; 6:62–82.

Finzi-Dottan R, Cohen O, Iwaniec D, Sapir Y, Weizman A. The child in the family of a drug-using father: Attachment styles and family characteristics. Journal of Social Work Practice in the Addictions. 2006; 6:89–111.

Fletcher AC, Steinberg L, Williams-Wheeler M. Parental influences on adolescent problem behavior: Revisiting Stattin and Kerr. Child Development. 2004; 75:781–796. [PubMed: 15144486]

Grossmann K, Grossmann KE, Fremmer-Bombik E, Kindler H, Scheuerer-Englisch H, Zimmermann P. The uniqueness of the child-father attachment relationship: Fathers' sensitive and challenging play as a pivotal variable in a 16-year longitudinal study. Social Development. 2002; 11:307–331.

Hayes AF. Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. Communication Monographs. 2009; 76:408–420.

Jones JD, Cassidy J. Parental attachment style: Examination of links with parent secure base provision and adolescent secure base use. Attachment & Human Development. 2014; 16:437–461. [PubMed: 24897927]

Jones JD, Cassidy J, Shaver PR. Parents' self-reported attachment styles: A review of links with parenting behaviors, emotions, and cognitions. Personality and Social Psychology Review. 2015; 19:44–76. [PubMed: 25024278]

Kann L, Kinchen S, Shanklin SL, Flint KH, Hawkins J, Harris WA, Zaza S. Youth Risk Behavior Surveillance – United States, 2013. Morbidity and Mortality Weekly Report Surveillance Summaries. 2014; 63(S4):1–138. [PubMed: 24918634]

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]

Kor A, Mikulincer M, Pirutinsky S. Family functioning among returnees to Orthodox Judaism in Israel. Journal of Family Psychology. 2012; 26:149–158. [PubMed: 22081910]

Kunce, LJ.; Shaver, PR. An attachment-theoretical approach to caregiving in romantic relationships. In: Bartholomew, K.; Perlman, D., editors. Attachment processes in adulthood. London, England: Jessica Kingsley Publishers; 1994. p. 205-237.

Lamb, ME., editor. The role of the father in child development. 5th ed.. Hoboken, NJ: Wiley; 2010.

MacKinnon DP, Lockwood CM, Williams J. Confidence limits for the indirect effect: Distribution of the product and resampling methods. Multivariate Behavioral Research. 2004; 39:99–128. [PubMed: 20157642]

Mikulincer, M.; Shaver, PR. Attachment in adulthood: Structure, dynamics, and change. New York, NY: Guilford; 2007.

Muthén, LK.; Muthén, BO. Mplus User's Guide. Seventh Edition. Los Angeles, CA: Muthén & Muthén; 1998-2012.

Perrino T, Gonzalez-Soldevilla A, Pantin H, Szapocznik J. The role of families in adolescent HIV prevention: A review. Clinical Child and Family Psychology Review. 2000; 3:81–96. [PubMed: 11227063]

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]

Racz S, McMahon RJ. The relationship between parental knowledge and monitoring and child and adolescent conduct problems: A 10-year update. Clinical Child and Family Psychology Review. 2011; 14:377–398. [PubMed: 22086648]

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]

Rholes WS, Simpson JA, Blakely BS. Adult attachment styles and mothers' relationships with their young children. Personal Relationships. 1995; 2:35–54.

Rholes WS, Simpson JA, Blakely BS, Lanigan L, Allen EA. Adult attachment styles, the desire to have children, and working models of parenthood. Journal of Personality. 1997; 65:356–385.

Rosenthal NL, Kobak R. Assessing adolescents' attachment hierarchies: Differences across developmental periods and associations with individual adaptation. Journal of Research on Adolescence. 2010; 20:678–706. [PubMed: 22545000]

Rucker DD, Preacher KJ, Tormala ZL, Petty RE. Mediation analysis in social psychology: Current practices and new recommendations. Social and Personality Psychology Compass. 2011; 5:359–371.

Scott LN, Levy KN, Pincus AL. Adult attachment, personality traits, and borderline personality disorder features in young adults. Journal of Personality Disorders. 2009; 23:258–280. [PubMed: 19538081]

Shaver PR, Mikulincer M. Attachment-related psychodynamics. Attachment & Human Development. 2002; 4:133–161. [PubMed: 12467506]

Shrout PE, Bolger N. Mediation in experimental and nonexperimental studies: New procedures and recommendations. Psychological Methods. 2002; 7:422–445. [PubMed: 12530702]

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]

Van Ryzin MJ, Fosco GM, Dishion TJ. Family and peer predictors of substance use from early adolescence to early adulthood: An 11-year prospective analysis. Addictive Behaviors. 2012; 37:1314–1324. [PubMed: 22958864]

Whitley, BE., Jr; Kite, ME. Principles of Research in Behavioral Science. 3rd ed.. New York, NY: Routledge; 2013.

Williford AP, Calkins SD, Keane SP. Predicting change in parenting stress across early childhood: Child and maternal factors. Journal of Abnormal Child Psychology. 2007; 35:251–263. [PubMed: 17186365]

Youniss, J.; Smollar, J. Adolescent relations with mothers, fathers, and friends. Chicago, IL: University of Chicago Press; 1985.

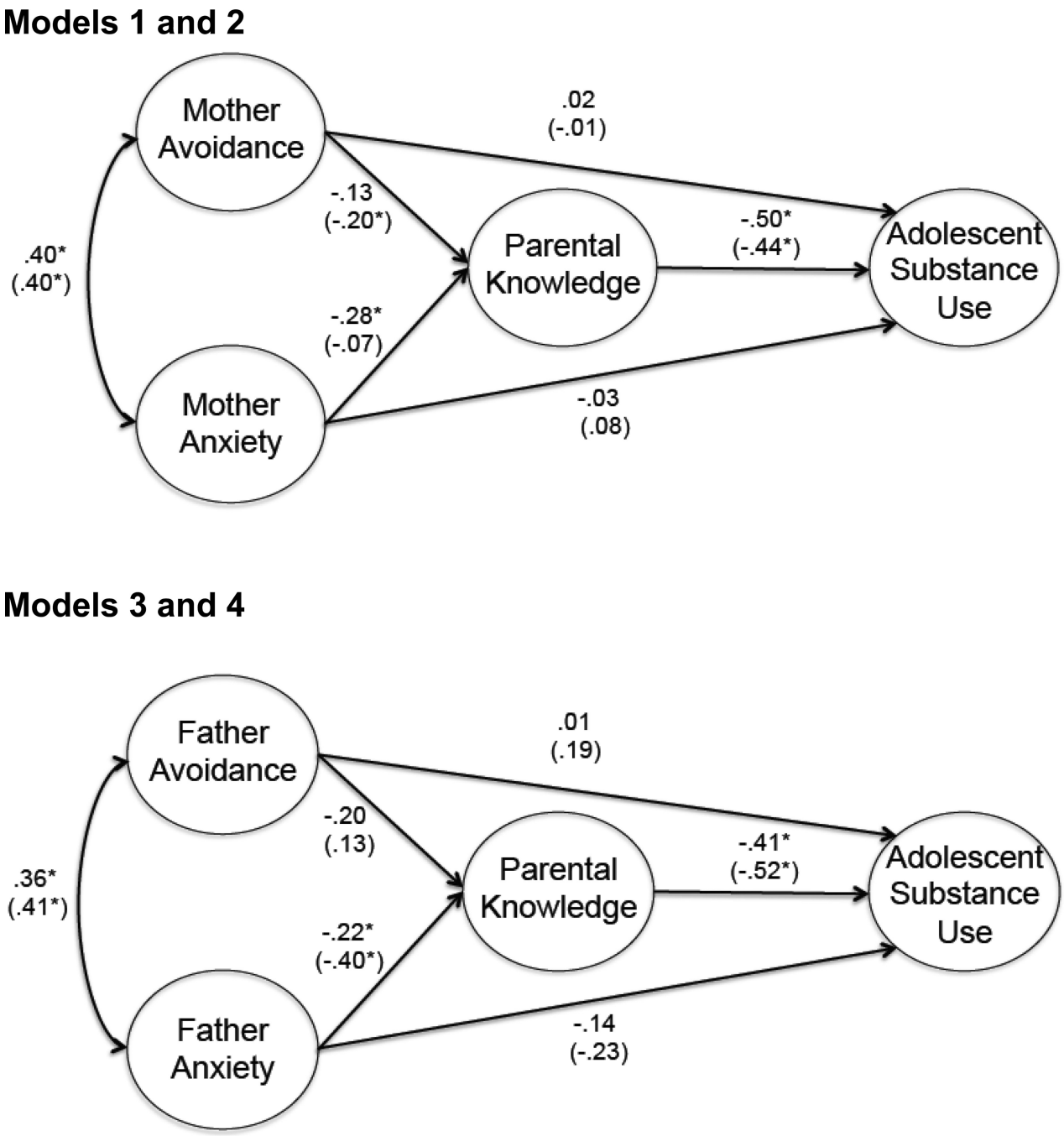

Figure 1. Structural equation models of associations among parental attachment style, parental knowledge, and adolescent substance use

Note. The numbers outside the parentheses are the standardized path coefficients from the models including parent-reported parental knowledge. The numbers inside the parentheses are the standardized path coefficients of the models including adolescent-reported parental knowledge.

Table 1

Standardized Covariances among Latent Variables

	Model 1				Model 2				Model 3				Model 4			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1. Avoidance	-	.40*	−.25*	.13	-	.40*	−.24*	.12	-	.41*	−.30*	.11	-	.41*	−.03	.12
2. Anxiety		-	−.29*	.10		-	−.13	.09		-	−.31*	.02		-	−.35*	.04
3. Parental Knowledge			-	−.51*			-	−.47*			-	−.42*			-	−.47*
4. Teen Self-Report Substance Use				–				–				–				–

Notes

*$p < .05$.

Model 1: Mom attachment style and mom-reported PK. Model 2: Mom attachment style and teen-reported PK. Model 3: Dad attachment style and dad-reported PK. Model 4: Dad attachment style and teen-reported PK.

Table 2

Fit Indices and Variance Explained for Each Model

Model	χ^2	*df*	*p*-value	*SRMR*	*CFI*	*TLI*	*RMSEA* [90% CI]	R^2 PK	R^2 Substance
Mother Models									
Model 1: Mom-reported PK									
Measurement Model	57.79	48	.16	.04	.99	.99	.03 [.00, .06]		
Structural Model	65.60	58	.23	.05	.99	.99	.03 [.00, .05]	.18	.28
Model 2: Teen-reported PK									
Measurement Model	68.41	59	.19	.04	.99	.99	.03 [.00, .05]		
Structural Model	82.19	70	.15	.05	.99	.99	.03 [.00, .05]	.10	.25
Father Models									
Model 3: Dad-reported PK									
Measurement Model	65.69	48	.05	.04	.98	.98	.04 [.01, .07]		
Structural Model	115.16	91	.04	.05	.97	.97	.04 [.01, .07]	.21	.22
Model 4: Teen-reported PK									
Measurement Model	73.24	59	.10	.04	.99	.98	.03 [.00, .06]		
Structural Model	92.83	70	.04	.05	.98	.97	.04 [.01, .06]	.17	.29