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Parental Monitoring, Personality, and Delinquency: Further Support for a Reconceptualization of Monitoring

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Abstract

Stattin and Kerr (2000) suggested reconceptualizing “parental monitoring” and presented evidence from a Swedish sample that challenged current operational definitions. We replicate and extend their findings. Parental knowledge (“monitoring”) related more strongly to child disclosure than to parental solicitation of information in a more ethnically-diverse U. S. sample. We then addressed whether adolescents’ personalities accounted for the links between child disclosure, parental knowledge, and delinquency. Solicitation, knowledge, and disclosure generally did not predict delinquency when controlling for adolescent personality. Personality contributed significant incremental validity to the statistical prediction of delinquency above and beyond solicitation, knowledge, and disclosure; the reverse was generally not true. Adolescents’ personalities largely account for the “parental monitoring”-delinquency association, which supports reconceptualizing monitoring.

Keywords

parental monitoring; personality; delinquency; adolescence; MPQ

Introduction

Researchers have long sought to understand juvenile delinquency because of its very clear social costs (Foster, Jones, & Conduct Problems Prevention Research Group, 2006). One approach to understanding delinquency focuses on parenting behaviors, which are commonly labeled “monitoring.” Recently, however, there has been a call to reconceptualize the way the parental monitoring construct is operationally defined, and evidence has been presented in support of this argument (Kerr & Stattin, 2000; Stattin & Kerr, 2000). A second approach to understanding delinquency utilizes measures of personality (e.g., Krueger, Schmutte, Caspi, Moffitt, Campbell, & Silva, 1994; Miller & Lynam, 2001, 2003). To our knowledge, these two lines of research – parental monitoring and personality – have not yet been integrated.

In the current study, we pursue this integration. A synthesis of the parental monitoring and personality approaches to understanding delinquency is needed because both monitoring and personality are well-known correlates of delinquency, but we lack an understanding of how

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they work together. Does the previous evidence supporting a reconceptualization of parental monitoring replicate in an ethnically-diverse U. S. sample? Are parental monitoring (and other related parent and adolescent behaviors discussed in the literature) and personality traits independent constructs or are they systematically related? If they are indeed related, what are the implications for the proposed reconceptualization of parental monitoring? We begin by reviewing parental monitoring and then discuss what is known about the prediction of delinquency by parental monitoring and personality separately.

The Parental Monitoring Construct

Although parental monitoring has been linked to various forms of delinquency in the empirical literature (e.g., Biglan, Duncan, Ary, & Smolkowski, 1995; Dishion, Capaldi, Spracklen, & Li, 1995; Metzler, Noell, Biglan, Ary, & Smolkowski, 1994), the exact nature and meaning of the parental monitoring construct and related measures has come under close scrutiny in recent years. Dishion and McMahon (1998) defined parental monitoring in terms of “parenting behaviors involving attention to and track of the child’s whereabouts, activities, and adaptations” (p. 61). This conceptualization, which has been utilized by many researchers over the years, focuses on activities in which parents actively engage, such as tracking the child. However, as Stattin and Kerr (2000) note, the measures of parental monitoring utilized by researchers typically have assessed the amount of *knowledge* parents have about their children rather than the active parenting behaviors in the definition above. For instance, common items determine how much information a parent knows but not the process by which the parent discovered this information. Thus, the historical construct of “parental monitoring” might be better understood as “parental knowledge.”

The Sources of Parental Knowledge

There are several means by which parental knowledge of their children’s lives could be acquired. One possibility is that parents simply solicit information from their children. A second possibility is that parents set rules and boundaries with their children, and, through this control of their children, they obtain knowledge. For instance, if a parent does not allow a child to leave the house after sunset, the parent could respond positively to a “parental monitoring” questionnaire item such as “I know where my child is at night.” These knowledge-acquisition processes of parental solicitation and parental control both represent active parenting behaviors and thus seem congruent with the definition of parental monitoring given by Dishion and McMahon (1998). However, a third possibility exists by which parents could obtain information about their children’s lives, which requires little to no activity on the part of the parent: child disclosure. It is possible that children simply tell their parents information about their lives, and, through this disclosure, parents learn more about their children (and thus increase their parental knowledge). These three processes – parental solicitation, parental control, and child disclosure – all represent means by which parents can possess knowledge about their children, although they differ with regard to how active (if at all) a parent must be to acquire the knowledge. Certainly, if a relatively parentally-passive means of obtaining information (i.e., child disclosure) serves as the major source of parental knowledge, the definition of “parental monitoring” as an active process, and potentially as a parenting behavior with causal implications for lessening delinquency, must be reevaluated, as was suggested by Stattin and Kerr (2000)¹.

¹This terminology not meant to imply that adaptive yet parentally-passive behaviors, such as spontaneous child disclosure of information, did not at least partially arise from active behaviors on the part of the parents at some point in the past. For example, although child disclosure is parentally-passive, the parent-child relationship dynamics that lead the child to disclose could have resulted from previous parentally-active behaviors (e.g., behavioral control; see Soenens, Vansteenkiste, Luyckx, & Goossens, 2006).

A series of studies has recently examined the role of solicitation, control, and children disclosure in parents' acquisition of knowledge about their children. In one study, a large sample of 14-year-old Swedish adolescents and their parents completed measures of parental solicitation, control, and knowledge (the latter being akin to historical assessments of "parental monitoring") as well as adolescent disclosure and normbreaking (Stattin & Kerr, 2000). Correlations of parental knowledge with solicitation, control, and disclosure in both child- and parent-report data revealed that parental knowledge showed markedly stronger associations with child disclosure than with either active parental behavior (i.e., solicitation or control), although all of these correlations were significant. The conclusion that parental knowledge is more strongly related to child disclosure than solicitation or control was bolstered further by hierarchical regression analyses, which indicated that adolescent disclosure alone predicted 44% of the variance in parental knowledge in child-report data (and 38% in parent-report), and the addition of solicitation and control to the regression model in a second step yielded a significant, but relatively quite small, increase in R^2 (3% increase in child-report and 5% increase in parent-report).

Additional research has investigated the importance of adolescent disclosure (e.g., Kerr, Stattin, & Trost, 1999). In one study, solicitation, control, disclosure, and adolescent delinquency data for over 1,000 Swedish 14-year-olds and their parents highlighted again the strong relation between child disclosure and parental knowledge (Kerr & Stattin, 2000). As in previous research, the correlation between disclosure and parental knowledge ($r = .70$ in child-report data, for instance) was markedly higher than the correlations between solicitation and knowledge ($r = .23$) and between control and knowledge ($r = .32$). Again, this research supports the notion that adolescents' free disclosure of information, rather than active parenting behaviors, is more strongly associated with the type of parental knowledge (i.e., "parental monitoring") that has been linked previously to both positive and negative outcomes for children.

Solicitation, Control, and Disclosure Predicting Delinquency

Numerous studies have linked "parental monitoring" broadly conceived to delinquent behaviors. Youths who experience low levels of monitoring have been shown to have increased use of drugs and tobacco (Biglan, Duncan, Ary, & Smolkowski, 1995; Fletcher, Darling, & Steinberg, 1995; Martins, Storr, Alexandre, & Chilcoat, 2008). Poorly monitored adolescents tend to have delinquent peers (Dishion, Capaldi, Spracklen, & Li, 1995). These youths also engage in risky sexual behaviors to a greater degree than their more monitored counterparts (Metzler, Noell, Biglan, Ary, & Smolkowski, 1994).

As noted above, however, the "parental monitoring" measures that yielded many such findings seemingly assessed parental knowledge rather than active parenting behaviors. In addition, parental knowledge is more strongly related to child disclosure than parental efforts such as solicitation or control. These findings draw into question the exact nature of the association between "parental monitoring" and delinquency. For example, it might be that the link between parental knowledge and delinquency is accounted for largely by adolescent disclosure (seemingly the largest source of parental knowledge) and only minimally by parents themselves.

The links among active parenting behaviors of solicitation and control, the child behavior of disclosure, and adolescent delinquency have been investigated. Stattin and Kerr (2000) found that child disclosure alone predicted 15% of the variance in normbreaking; the addition of solicitation and control to the regression model yielded a small increase in R^2 (3%). Similarly, another study regressed a wide variety of measures of child adjustment on solicitation, control, and child disclosure (Kerr & Stattin, 2000). Across these models, solicitation and control tended to have relatively small and typically non-significant effects in the statistical prediction of the

adjustment variables, whereas child disclosure showed markedly stronger associations with better adjustment and was significant across all but one case. The results of these studies highlight the importance of child disclosure, not only as the prime source of parental knowledge, but also as a stronger predictor of delinquency than the active parenting behaviors of solicitation and control.

Toward a Reconceptualization of Parental Monitoring

These studies indicate that for Swedish adolescents and their parents, child disclosure relates more strongly to parental knowledge than does either parental solicitation or control. In addition, it is adolescent disclosure that appears to drive the historical association between “parental monitoring” (typically measures of parental knowledge) and delinquency. Such findings have prompted Stattin and Kerr (2000) to call for a reconceptualization of parental monitoring. They suggest reserving the term “parental monitoring” for active parenting behaviors and paying increased attention to the reasons why parental knowledge is so strongly related to delinquency.

Several research groups have attempted to refine further the parental monitoring construct and its relations with delinquency (e.g., Fletcher, Steinberg, & Williams-Wheeler, 2004; Lahey, Van Hulle, D’Onofrio, Rodgers, & Waldman, 2008), and the examination of child disclosure dynamics seems particularly worthwhile in investigating delinquency. Soenens, Vansteenkiste, Luyckx, and Goossens (2006) utilized structural equation modeling to determine the role that parenting might play in child disclosure and found that parenting behaviors relate to parental knowledge through direct as well as indirect effects. These findings suggest that child disclosure may be facilitated by certain parenting behaviors, and they thus reaffirm the importance of parents in the monitoring-delinquency association. There is a continued need, however, to understand better the dynamics of child disclosure and to identify other pathways which facilitate it. Stattin and Kerr (2000) suggested several hypotheses to account for the association between disclosure and normbreaking behaviors, including the notion that child temperament could be a third variable that links child disclosure and delinquency. While the authors’ contend that temperament will likely not account for the entirety of the observed relation between disclosure and normbreaking, the temperament hypothesis is a compelling one that deserves empirical investigation, especially in light of previous personality research and its potential to inform the proposed reconceptualization of parental monitoring.

Given this temperament-related hypothesis, researchers must consider the possibility that variation in adolescent disclosure (and thus likely parental knowledge, due to their strong association) may reflect an underlying individual difference variable (i.e., propensity to disclose information to parents) and that this individual difference may largely drive the link between child disclosure, parental knowledge, and delinquency. It is conceivable, for example, that personality traits such as conformity in adolescents could lead adolescents both to disclose more information to their parents (to avoid parental punishment) and to refrain from delinquent behaviors (to avoid legal punishment or physical harm). If adolescents’ personalities do indeed underlie the association between disclosure, knowledge, and delinquent behaviors, any putative causal link between increasing disclosure/knowledge and decreasing delinquency might be spurious. In such a scenario, the relation between disclosure/knowledge and delinquency might reflect an intervening third variable – adolescent personality. Indeed, like parental monitoring, personality has a long history of being investigated with regard to delinquency, as discussed in the following section.

Personality and Delinquency

Personality traits have been associated with delinquent and antisocial behaviors in many previous studies. Research in this area has illustrated that models of normal personality such

as the Big Three, as assessed by the Multidimensional Personality Questionnaire (MPQ; Tellegen, 1982), and the Big Five predict delinquency (e.g., Heaven, 1996; Krueger et al., 1994; Miller & Lynam, 2003). A recent meta-analysis conducted by Miller and Lynam (2001) found that, across different inventories, similar personality traits underlie these associations. Miller and Lynam identified 59 studies that examined relations between antisociality and four structural models of personality (including the three-factor model proposed by Tellegen, 1985, which is utilized in the present study). They conceptualized the eight personality dimensions found to relate moderately to antisocial behavior in these studies as measures of either agreeableness or conscientiousness. These findings further support the notion that normal personality traits assessed via omnibus personality measures are linked to delinquent and antisocial behaviors.

In addition to the negative behavioral tendencies assessed in the studies above, researchers have also found significant relations between personality traits and a broad range of other delinquent behaviors. For example, Hundleby (1986) found that illicit drug use could be predicted by personality traits. Elkins, King, McGue, and Iacono (2006), utilizing the MPQ, extended this finding to include nicotine and alcohol use in adolescents. Delinquent sexual behaviors and maladaptive sexual attitudes (e.g., attraction to sexual aggression) also show significant correlations with personality traits (Bogaert, 1993). Finally, one study by Martins, Storr, Alexandre, and Chilcoat (2008) found significant links of adolescent substance abuse to sensation-seeking personality and parental monitoring. These findings indicate that personality and parental monitoring are related to similar manifestations of adolescent delinquency. Such similarities highlight the importance of understanding how personality, parental monitoring, and delinquency relate to one another.

The Current Study

Parental monitoring (i.e., parental knowledge) has been conceptualized as having a negative association with adolescent delinquency. It is clear from the extant literature, however, that parental knowledge and personality are both related to similar domains of delinquency, such as criminality, substance use, and sexual behaviors. One compelling theory to account for these similarities integrates the notion that child disclosure is the primary source of parental knowledge: certain adolescent personality traits may be associated with both child disclosure (and thus parental knowledge) and delinquency. Such a result could support the notion that adolescent disclosure, parental knowledge, and delinquency may be related through, and possibly may emerge from, the personality traits of adolescents. Indeed, the putative relationship between “parental monitoring” and delinquency might itself be a reflection of both variables’ associations with personality. If, on the other hand, personality does not account for the disclosure/knowledge-delinquency relationship, it seems plausible that parental knowledge and/or child disclosure have relationships to delinquent behaviors distinct from those of personality, and that increasing levels of disclosure or knowledge may in fact be independently associated with decreased delinquency. To address this theoretical ambiguity, we investigated the interplay of an active parenting behavior (i.e., solicitation), a passive parental/active child behavior (i.e., child disclosure), parental knowledge, and personality simultaneously to determine their interrelations and their respective utilities for understanding and predicting delinquency.

In the present study, we first attempted to replicate the previous finding (Kerr & Stattin, 2000; Stattin & Kerr, 2000) that parental knowledge was more strongly associated with a passive parenting behavior (i.e., child disclosure) than with an active parenting behavior (i.e., parental solicitation) in a large and ethnically diverse sample of American adolescents. Such a replication would further bolster the authors’ call for a reconceptualization of “parental monitoring” and our understanding of the sources of parental knowledge. Second, we

hypothesized the existence of significant interrelations between parental solicitation, parental knowledge, child disclosure, and personality traits in our sample due to the general tendency of personality traits to relate to a broad array of constructs (Roberts & Jackson, 2007) as well as the conceptual similarity between some parental monitoring behaviors and personality traits (e.g., child disclosure and extraversion). Third, we predicted that solicitation, knowledge, disclosure, and personality would all significantly correlate with delinquency in our sample based on the findings of previous research reviewed above. Fourth, we hypothesized that the inclusion of personality in a regression with solicitation, knowledge, and disclosure would reduce or remove the ability of the latter three to predict delinquency. This hypothesis is based on the notion that solicitation, knowledge, and disclosure are sufficiently a function of adolescent personality (and parental response thereto) that personality will account for the association between these constructs and delinquency. Finally, based on the above reasoning, we hypothesized that personality would contribute incremental validity to the prediction of delinquency above and beyond solicitation, knowledge, and disclosure, but the reverse would not generally be true.

Method

Participants

The present research was conducted as part of the Sibling Interaction and Behavior Study (SIBS) at the University of Minnesota. McGue et al. (2007) provide a more detailed account of the recruitment procedures for this study. Briefly, SIBS participants include 409 adoptive and 208 non-adoptive families, and each family consists of at least one rearing parent and a pair of adolescent siblings from 11 to 21 years of age. Families were recruited via records provided by Minnesota adoption agencies (adoptive families) and state birth records (non-adoptive families). 63.2% of adoptive and 57.3% of non-adoptive families contacted agreed to participate, and a brief inventory administered to 73% of non-participating families suggested participating families were generally representative of the larger adoptive and non-adoptive populations (McGue et al., 2007).

The current study examined SIBS data from 575 adolescents. These participants were 58.3% female, and their average age was 15.2 years ($SD = 2.01$). 258 mothers of these adolescents also participated, providing mother-report parental monitoring data on about 427 of the adolescents (the majority of the participating mothers had two children in the study, and these mothers reported separately on each child). Sample sizes vary slightly across analyses due to missing data, however. The adolescents identified their ethnicity as 48.4% Caucasian, 43.6% Asian, and 8% other; mothers identified as 97.9% Caucasian. Asian adolescents were largely adopted; the Caucasian adolescent group, representative of Minnesota natives, was comprised of both biological and adopted children.

Procedure

Families were assessed at the University of Minnesota. Mothers and children completed a comprehensive battery of measures to assess personality, parental knowledge, parental solicitation, child disclosure, delinquency, and so on. All participants received a small honorarium, and the families' travel expenses were reimbursed.

Measures

Personality—Adolescents' self-reported personality data was collected using a 133-item version of the Multidimensional Personality Questionnaire (Tellegen, 1982) with age-inappropriate items removed. The personality data utilized for the present study includes six of the 11 primary personality trait scales of the MPQ: aggression, alienation, control, harm avoidance, stress reaction, and well-being. The six scale version was administered to make this

long, adult-oriented measure more tractable for children (for a more detailed discussion, see Johnson, Hicks, McGue, & Iacono, 2007). Because the MPQ was empirically and deductively designed to be an *omnibus* measure of personality, all six of these scales were utilized in an attempt to capture the maximum possible breadth of the personality construct. The personality items also comprise two validity scales: True Response Inconsistency (TRIN) and Variable Response Inconsistency (VRIN). TRIN safeguards against a true or false bias in a participant's responses; VRIN ensures participants do not answer similar questions inconsistently. More detailed information about the development and psychometric properties of the MPQ have been reported elsewhere (Tellegen, 1982; Tellegen & Waller, in press). In addition, the MPQ has been utilized by other research groups to predict delinquency. While charges have been levied that some traits assessed by personality instruments (e.g., aggression) show confounding item overlap with measures of delinquency, previous research on the MPQ has shown that removal of conceptually overlapping items did not significantly change associations between traits and delinquency (Krueger et al., 1994); for this reason, we utilized all scale items to estimate individual's true trait scores with higher reliability.

Parental solicitation, parental knowledge, and child disclosure—Mothers and adolescents completed a 15-item self-report inventory comprised of three substantive areas (each consisting of five items): *parental solicitation* about the adolescent's life, *parental knowledge* about the adolescent's life, and *child disclosure* of information to his or her parent. Each item was a statement, which the participant rated on a 5-point Likert scale from "never" to "always." Examples of adolescent-report items (and associated substantive area) include: "My mother/father asks where I go at night" (parental solicitation), "My mother/father knows where I go at night" (parental knowledge), and "I tell my mother/father where I go at night" (child disclosure). In addition to the nighttime items, the inventory items included the following, with stems altered appropriately as above to assess solicitation, knowledge, and disclosure: "with whom I spend time," "how I spend my money," "where I am most afternoons after school," and "what I do with my free time." Parent-report questions differed slightly in wording but not content (e.g., "I ask this child where he/she goes at night," "This child tells me where he/she goes at night," and "I know where this child goes at night"). Adolescents responded to each question separately for their mothers and fathers, but only responses for the mother were utilized in the current study so as to more easily compare child- and mother-reported monitoring; mothers responded to each question separately for each of their children participating in the study. Parental solicitation, parental knowledge, and child disclosure scale scores were calculated by summing the ratings of the appropriate five items (e.g., parental solicitation score was the sum of five parental solicitation items).

These three scales were created several years ago as part of the SIBS study and have not been reported on previously. The items show a high degree of conceptual overlap with those used in recent research (e.g., Kerr & Stattin, 2000, who also created measures of these constructs for their research). Due to the large amount of time required to assess the adolescents on the wide variety of measures in the SIBS study, many inventories must be truncated to some degree for inclusion. Thus, parental solicitation, parental knowledge, and adolescent disclosure were assessed, while parental control (which is utilized by Kerr & Stattin, 2000, and Stattin & Kerr, 2000) was not due to time constraints. Reliabilities for each of the three scales assessed were high. The alpha reliabilities of the parental inquiry scale items were .83 (adolescent-report) and .88 (mother-report). The alpha reliabilities of the adolescent disclosure scale items were .86 (adolescent-report) and .90 (mother-report). The alpha reliabilities of the parental knowledge scale items were .85 (adolescent-report) and .90 (mother-report). Corrected item-total correlations and "alpha if item deleted" analyses indicated that the removal of any item would not meaningfully alter the psychometric properties of the scale. The alpha reliabilities of all three scales taken together as comprising one latent construct (i.e., all 15 items) were .

.92 (adolescent-report) and .92 (mother-report), which supports the notion that these scales likely tap related psychological phenomena.

Delinquency—Delinquency was assessed via a 21-item modified version of the Delinquent Behavior Inventory (DBI; Gibson, 1967), which adolescents completed in a self-report format. Each item consisted of a delinquent behavior (e.g., “taking money from home with no intention of returning it”), and the adolescent reported how frequently he or she had engaged in it: “never,” “once,” or “more than once.” Responses were summed to provide a total delinquency score, with higher total scores representing participation in more delinquent behaviors. Alpha reliability of the scale was .89. Corrected item-total correlations and “alpha if item deleted” analyses indicated that the removal of any item would not meaningfully alter the psychometric properties of the scale.

Data Analysis and Missing Values

Statistical analyses, conducted in Mplus (Muthén & Muthén, 2007), consisted of correlations and multiple regressions of the three parental monitoring scales, six MPQ trait scales, and the DBI. As the data were clustered by family (i.e., two siblings sharing one mother), this clustering was taken into account in our analyses by using a robust maximum likelihood estimator (MLR) that corrects for the dependence within families as well as non-normality of variable distributions (see Muthén & Muthén, 2007, and associated technical appendices). No subjects were missing MPQ scale data, although three participants, whose TRIN and VRIN scores indicated questionable response validity, were removed from the dataset. Missing data for a solicitation, knowledge, or disclosure scale item prevented the calculation of the relevant scale score. Subjects with missing data on one or more scales were excluded from analyses involving only those scales for which they had missing data.

We considered the possibility that age and sex differences in the adolescent-report data might confound statistical results if all data were uncorrected and/or analyzed simultaneously. To address this, we split the data and computed centered adolescent-report scores as follows. The personality; adolescent-report solicitation, knowledge, and disclosure scales; and delinquency data were separated by adolescent sex, and each sex’s data were divided into six age bands designed to minimize the age range per group while keeping the age range broad enough to include a reasonable number of participants. Means for each of these groups were calculated for the solicitation, knowledge, and disclosure scales; the six personality scales; and DBI. The appropriate group mean was subtracted from the participants’ scores on these scales, which yielded centered scores. Mother-report data were not centered in this manner, because maternal age was not a primary concern. Following this procedure, all data, including mother-reports, were standardized into z-scores. All analyses were conducted separately by sex, for two reasons: 1) to examine potential sex differences, and 2) to make the analysis results of this study maximally congruent with previous research on parental monitoring, which divided adolescents by sex (e.g., Kerr & Stattin, 2000).

Results

The Associations among Solicitation, Knowledge, and Disclosure across Sex and Reporters

Our first aim involved exploring the associations between solicitation, knowledge, and disclosure to determine whether previous findings (Kerr & Stattin, 2000; Stattin & Kerr, 2000) would replicate in a large and ethnically diverse sample of American adolescents. The correlations among the parental monitoring scales based on either adolescent- or mother-report, given separately for male and female adolescents in Table 1, highlight the strong relations among the three parental monitoring scales when they are rated by the same rater. Patterns of correlations found in male and female adolescent-report data resembled each other, with all

intercorrelations among the three monitoring scales showing significance at the $p < .01$ level for both sexes. Consistent with previous research, parental knowledge was more highly correlated with child disclosure than parental solicitation in both female ($r = .812$ vs. $r = .492$, difference significant at $p < .05$) and male ($r = .730$ vs. $r = .499$; $p < .05$) adolescents, according to the adolescents' reports.

Mother-report parental monitoring followed largely similar correlational patterns. All correlations among the three mother-report scales were significant at the $p < .01$ level for both male and female adolescents. Again, parental knowledge was correlated to a greater degree with child disclosure than with parental solicitation in both female ($r = .695$ vs. $r = .321$; $p < .05$) and male ($r = .774$ vs. $r = .272$; $p < .05$) adolescents. These results indicate that the mothers in this study believed that their level of knowledge was more closely related (especially in the case of male adolescents) to information disclosed by their adolescent children than to their own efforts to obtain information through direct questioning, which replicates previous research.

Markedly different patterns of correlations appeared when agreement between the adolescent- and mother-reports of each of the parental monitoring scales was examined separately by adolescent sex. In male adolescents, all combinations of adolescent- and parent-report solicitation, knowledge, and disclosure scales produced significant correlations and relatively high levels of agreement ($r = .33$ to $.41$). For female adolescents, agreement between mothers and their daughters ranged from $r = .10$ to $.23$; the level of agreement between mothers and daughters was not significant for parental solicitation (but was significant for parental knowledge and child disclosure). The level of parental solicitation agreement was significantly higher for mothers and sons than for mothers and daughters ($p < .001$). Levels of agreement in parental knowledge and child disclosure were higher in magnitude in males than females, and these differences themselves trended toward significance ($p < .1$ for both comparisons).

The Associations among Solicitation, Knowledge, Disclosure, and Personality

Our second aim involved exploring the associations among solicitation, knowledge, disclosure, and personality. The interrelations among solicitation, knowledge, disclosure, and personality traits were complex, as can be seen in Table 2. In females, none of the personality scales correlated significantly with adolescent-reported parental solicitation or mother-reported parental solicitation. For females, adolescent reports of child disclosure and parental knowledge were, however, significantly correlated with all six personality traits. Mother-reported adolescent disclosure by their daughters correlated significantly with harm avoidance and control, and mother-reported parental knowledge correlated significantly with harm avoidance, control, and aggression as well.

Fewer personality traits showed significant relationships to solicitation, knowledge, and disclosure in males, although the general pattern of trait control showing the strongest correlations with solicitation, knowledge, and disclosure continued. Similar to females, neither adolescent- nor mother-report parental solicitation scales were significantly correlated with personality traits. Male adolescent-report child disclosure showed significant correlations with well-being ($r = .143$; $p < .05$) and control ($r = .283$; $p < .01$). The same pattern held for male adolescent-report parental knowledge, with the addition of aggression ($r = -.175$; $p < .05$). Mother-reported child disclosure for males was only significantly correlated with control ($r = .219$; $p < .05$); control was also the only significant correlate of mother-reported parental knowledge in males ($r = .213$; $p < .05$).

The Associations among Solicitation, Knowledge, Disclosure, and Delinquency

Our next aim first involved exploring the associations among solicitation, knowledge, disclosure, and delinquency. Table 2 reports the correlations between the adolescent- and mother-report solicitation, knowledge, and disclosure scales and the DBI for both boys and girls. In general, solicitation, knowledge, and disclosure, regardless of data source or adolescent sex, were negatively related to delinquency (i.e., greater solicitation, knowledge, or disclosure being linked to lower levels of delinquency) and often significantly so. There were some differences between females and males, however. In females, each of the three adolescent-report solicitation, knowledge, and disclosure scales correlated significantly with delinquency; in the males, only parental knowledge significantly correlated with delinquency. Mother-reports of the links between solicitation, knowledge, disclosure, and delinquency also showed gender differences. Mother-report of the association between child disclosure and delinquency was significantly higher in males than females ($r = -.430$ vs. $r = -.152$; $p < .05$); similarly, the correlation between parental knowledge and delinquency in mother-report data was significantly higher in males than females ($r = -.476$ vs. $r = -.253$; $p < .05$). These results replicate previous “parental monitoring” research that found associations between parental knowledge (“monitoring”) and delinquency; these findings also replicate previous research (e.g., Kerr & Stattin, 2000) that found the link between child disclosure and delinquency was of greater magnitude than the link between parental solicitation and delinquency.

The Associations among Personality Scales and Delinquency

We hypothesized that, like solicitation, knowledge, and disclosure, personality traits would also show significant associations with delinquency. Table 2 reports the correlations between the adolescent- and mother-report MPQ personality scales and the DBI for both boys and girls. Personality traits in general were related to delinquency. In females, all six personality scales correlated significantly with delinquency. In males, five of the six personality scales correlated significantly with delinquency; only well-being did not show a significant delinquency correlation in males. Trait aggression and control were the best predictors of delinquency in males and females (all significant at $p < .01$). Females also showed a notable association between alienation and delinquency ($r = .357$), which was markedly higher than this correlation in males ($r = .150$) and almost significantly different ($p = .055$).

Brief Summary

A brief summary of the results discussed up to this point with regard to the study’s hypotheses is warranted. We first attempted to replicate previous findings (Kerr & Stattin, 2000; Stattin & Kerr, 2000). We found that solicitation, knowledge, and disclosure scales, reported by both adolescents and mothers, did indeed replicate this previous research by showing expected patterns of interrelationship as well as negative associations with delinquency. Second, we hypothesized the presence of significant interrelations between parental solicitation, parental knowledge, child disclosure, and personality traits. This hypothesis was largely supported in that some personality traits were significantly related to parental knowledge and child disclosure, although these patterns differed between male and female adolescents as well as between adolescent- and mother-report data. Third, we hypothesized that parental solicitation, parental knowledge, child disclosure, and personality would show significant links to delinquency. Our results broadly supported this hypothesis, but again there was some variability across reporters and adolescent sex.

The Role of Personality in the Parental Monitoring-Delinquency Association

The results of the analyses above supported the possibility that solicitation, knowledge, disclosure, and personality were interrelated, and thus their associations with delinquency may not have been independent of one another. Our fourth aim addressed this possibility. We

attempted to uncover the ways in which the solicitation/knowledge/disclosure-delinquency association changed with the consideration of personality traits. To accomplish this, we ran a series of regressions with varying sets of predictors. The first regression in a group of analyses (e.g., investigating adolescent-report parental solicitation and personality) consisted of the solicitation, knowledge, or disclosure scale (in this example, adolescent-report parental solicitation) predicting delinquency, which yielded a standardized regression weight for the scale in addition to a model R^2 . The next analysis included the solicitation, knowledge, or disclosure scale as well as the six MPQ personality scales (in this example, the six MPQ scales in addition to adolescent-report parental solicitation) estimating delinquency. This analysis yielded a new standardized regression weight for the solicitation, knowledge, or disclosure scale – in a model where personality was included – and a new model R^2 . This process was repeated for all combinations of solicitation/knowledge/disclosure scales and personality.

Table 3 includes the standardized regression weights for each of the solicitation, knowledge, and disclosure scales when estimating delinquency alone as well as the weights for each of these scales when all six personality scales were also included to predict delinquency. The regression weights and R^2 for each model are organized by adolescent sex as well as by whether the solicitation, knowledge, or disclosure scale utilized in the model resulted from adolescent- or mother-report. For example, the standardized regression weight for female adolescent-reported parental solicitation alone predicting delinquency was $-.145$ ($p < .05$; model $R^2 = .02$). When female adolescent-reported parental solicitation *and the six MPQ scales* were used simultaneously to estimate delinquency, the standardized regression weight for female adolescent-reported parental solicitation fell to $-.095$ (not significant; n. s.) and the model R^2 increased significantly to $.29$ ($p < .05$).

As can be seen in Table 3, when personality was included in the regressions of the solicitation, knowledge, or disclosure scales predicting delinquency, the standardized regression weights of the solicitation, knowledge, or disclosure scales were often reduced from significant to non-significant levels. For female adolescents, the standardized regression weights for adolescent-reported parental solicitation, parental knowledge, and child disclosure all were reduced in significance (p -values changed from $< .05$ to n. s., $< .01$ to n. s., and $< .01$ to $< .05$, respectively) when personality was included in the regression models. A similar trend held for female adolescents' mother-reported child disclosure ($p < .01$ to n. s.) and parental knowledge ($p < .05$ to n. s.). The presence of the personality scales in the analyses also yielded significantly increased model R^2 values in all cases. For example, in females, when delinquency was regressed only on mother-report parental solicitation, the resulting model R^2 was less than $.01$. The model R^2 increased to $.29$, a significant improvement, when this parental solicitation scale *and all six personality scales* were used to predict delinquency.

Of the male adolescent-report solicitation, knowledge, and disclosure scales, only parental knowledge significantly predicted delinquency originally. The inclusion of the six personality scales into the regression lowered this parental knowledge scale regression weight to nonsignificance when predicting delinquency, while the model R^2 significantly increased from $.09$ to $.28$. Male adolescents' mother-reported child disclosure and parental knowledge scales showed large reductions in their standardized regression weights with the inclusion of the personality scales (e.g., $-.430$ to $-.327$). Although there was no reduction in statistical significance for these variables, the model R^2 of both sets of analyses increased significantly with the inclusion of the six personality scales (i.e., $R^2 = .19$ to $.37$, and $R^2 = .23$ to $.41$, each significant at $p < .05$), thus highlighting the strong associations these personality traits have to delinquency. The male (and female) adolescents' mother-reported parental solicitation scale did not significantly predict delinquency by itself, but the inclusion of personality in the prediction model led to a significant increase in R^2 in this case as well.

In summary, the regression weights of the solicitation, knowledge, and disclosure scales for estimating delinquency were often reduced in significance when personality was incorporated into the statistical model. The inclusion of personality also tended to increase the model R^2 significantly. The weight reductions observed differed somewhat between adolescent- and mother-reported data as well as by the sex of the adolescent; that said, the overall pattern of regression weight decline was relatively generalized across these factors. Personality contributed incremental validity to the estimation of delinquency above and beyond the solicitation, knowledge, and disclosure scales as evidenced by the significant increases in model R^2 .

The Incremental Validity of Solicitation, Knowledge, and Disclosure over Personality in Delinquency Prediction

The previous analyses have indicated that personality contributes incrementally to the prediction of delinquency over and above parental solicitation, parental knowledge, and child disclosure, as can be seen in the significant increases in model R^2 values. To address our final hypothesis – that solicitation, knowledge, and disclosure would not contribute incremental validity to delinquency prediction over and above personality – we conducted analyses parallel to those above, with the exception that the six personality scales were entered into the regression equation first, and the solicitation, knowledge, and disclosure scales were entered as a second step. Entering the solicitation, knowledge, and disclosure scales separately and then simultaneously allowed for the discrimination of potential incremental validity of each of these scales as well as any incremental validity of a more inclusive “all monitoring-related variables” construct (that is, parental solicitation, parental knowledge, and child disclosure taken together).

Table 4 presents the results of these analyses. In female adolescents, neither adolescent- nor mother-report individual solicitation, knowledge, or disclosure scales contributed to a significant increase in R^2 above that of personality. In addition, the simultaneous inclusion of all three of these scales in the second step did not indicate they provided incremental validity in general above personality. For example, female adolescents’ personalities predicted 29% of the variance of delinquency; in the cases of both adolescent- and mother-report, the solicitation, knowledge, and disclosure scales (included simultaneously) increased this value by only 2% (a non-significant increase). In males, no single adolescent-report solicitation, knowledge, or disclosure scale led to a significant increase in R^2 over and above personality. The inclusion of all three scales together, however, did lead to a significant increase in R^2 , which indicated some incremental validity of all three scales (when considered together) in males above personality. That said, the magnitude of this increase, though significant, was somewhat small (i.e., explanation of 26% versus 32% of the variance), especially when compared with the increase seen when personality was added to the solicitation, knowledge, and disclosure scales in the previous analyses (e.g., for parental solicitation, explanation of 2% of the variance increasing to explanation of 29% of the variance with the addition of personality).

Only mother-report data in males showed marked incremental validity of solicitation, knowledge, and disclosure scales over and above that of personality in the prediction of delinquency. The inclusion of child disclosure, parental knowledge, or the solicitation, knowledge, and disclosure scales together all led to significant increases in R^2 values. In the latter two cases especially, this increase was striking: the prediction of 26% of the variance in delinquency versus 42% of the variance after the inclusion of all three of the solicitation, knowledge, and disclosure scales.

Discussion

This study addressed five aims regarding the involvement of personality in the association between parental solicitation, parental knowledge (“parental monitoring”), child disclosure, and adolescent delinquency. The negative relation between “parental monitoring” and delinquency seen in previous research is intuitively appealing (e.g., children who are more closely “monitored” tend to have better behavioral outcomes) and seems to have numerous parenting applications, but these sorts of interpretations about the association between “parental monitoring” and delinquency are not necessarily accurate. As Stattin and Kerr (2000) argued, it appears that previous research on “parental monitoring” has utilized measures that actually assess parental *knowledge*. This knowledge, in fact, appears to emerge to a greater extent from child disclosure, a parentally-passive behavior (which may itself be facilitated by previous parentally-active behaviors), than from parentally-active behaviors such as solicitation of information or rule setting (Kerr & Stattin, 2000; Stattin & Kerr, 2000). Certainly, if the dynamics that have linked “parental monitoring” to delinquency in previous studies is due primarily to behaviors of the child and not the parent, serious concerns should arise about findings and implications from the “parental monitoring” literature. For these and other reasons, Stattin and Kerr (2000) called for a reconceptualization of the “parental monitoring” construct. Although it appears that parenting behaviors may account for child disclosure to some extent (Soenens, Vansteenkiste, Luyckx, & Goossens, 2006), further research is warranted to identify other factors that facilitate disclosure as well.

Aim One: Replicate Previous Findings in a Large, Ethnically-Diverse United States Sample

The finding that child disclosure related more strongly to parental knowledge than did parental solicitation or control deserves consideration, especially in light of their potential to change greatly the interpretation of the “parental monitoring” literature. However, the data upon which this finding rests emerged primarily from Swedish adolescents. We first sought to replicate the findings of Stattin and Kerr (2000; Kerr & Stattin, 2000) in a large, ethnically-diverse sample of adopted and non-adopted adolescents in the United States. Indeed, our results (see Table 1) dovetailed nicely with those of Stattin and Kerr by indicating that, across adolescent sex and adolescent- versus mother-report, a parentally-passive behavior (child disclosure) related to parental knowledge more strongly than did a parentally-active behavior (solicitation).

We believe these findings bolster Stattin and Kerr’s (2000) call for a reconceptualization of monitoring. In independent samples, consisting of large numbers of Swedish, Asian-American, and Caucasian-American adolescents, boys and girls, adolescent- and mother-report data, child disclosure has been shown to relate more strongly to parental knowledge than does parental solicitation. It thus seems that “parental monitoring” (i.e., parental knowledge) does indeed result to a greater extent from passive parental behaviors than from active ones. For our present purposes, however, another point is even more salient: the behavior of the *child* relates more strongly to parental knowledge (i.e., “parental monitoring,” which has been linked to desirable child outcomes) than does active behaviors of the parents such as solicitation of information or rule-setting.

Aim Two: Examine the Interrelations between Parental Solicitation, Parental Knowledge, Child Disclosure, and Personality

Stattin and Kerr (2000) suggested several hypotheses to account for the reason why children who disclose more information to their parents (and thus increase parental knowledge, and thus increase “parental monitoring”) have fewer normbreaking behaviors. One of these hypotheses, that the temperament of the child could serve as a third variable that links disclosure to delinquency, seemed particularly compelling for evaluation. Indeed, this hypothesis seems reasonable: children with certain personality traits (e.g., harm avoidance) are more likely to

disclose information to their parents (e.g., to avoid punishment) and are also less likely to engage in delinquent behaviors (e.g., to avoid punishment), while children with other personality traits might be less likely to disclose information and more likely to engage in delinquent behaviors. Such a finding would further support calls for a reconceptualization, because, not only would “parental monitoring” be a reflection of parental knowledge, which would itself be primarily a reflection of child disclosure of information, the link between parental knowledge, child disclosure, and delinquency, could be accounted for by the personality of the child.

To test the hypothesis that personality might account for any links between parental solicitation, parental knowledge, child disclosure, and delinquency, we first examined the way that solicitation, parental knowledge, and child disclosure and personality were interrelated. To our knowledge, no previous research has examined the way that “parental monitoring” (i.e., parental knowledge) and personality are related to one another; similarly, we are aware of no previous research that has attempted to link the Stattin and Kerr (2000) sources of information that we assessed (i.e., parental solicitation and child disclosure) to personality. The correlations between our three measures “monitoring-related” measures (parental solicitation, parental knowledge, and child disclosure) and our six personality scales (well-being, stress reaction, harm avoidance, control, alienation, and aggression) highlighted the heterogeneity of associations between solicitation/knowledge/disclosure and specific personality traits (Table 2). No personality traits correlated significantly with either adolescent- or mother-reported parental solicitation, the parentally-active behavior we studied. This indicated that the degree to which information was sought by mothers generally did not relate significantly to the personality traits of their children. In other words, both mothers and their children agreed that the child’s personality *did not* relate strongly to how much the mother inquired about his or her life. However, mothers and children also agreed that a child’s personality *did* relate to the child’s level of disclosure and the level of parental knowledge to some degree.

Aim Three: Examine how Solicitation, Knowledge, Disclosure, and Personality Relate to Delinquency

After establishing that solicitation, knowledge, and disclosure had significant associations with the child’s personality, it was necessary to establish the relations of these variables to delinquency. As expected, and in keeping with previous findings, many of the solicitation, knowledge, and disclosure scales showed significant correlations with delinquency, as displayed in Table 2. Mothers and daughters’ reports agreed that decreasing amounts of child disclosure and parental knowledge related to significantly greater levels of delinquency. Female adolescent-report of parental solicitation also negatively correlated with delinquency. Again, data regarding males showed a less complicated pattern of interrelations. In boys, only adolescent reports of parental knowledge were significantly correlated with delinquency. Increasing levels of both child disclosure and parental knowledge were also strongly associated with decreasing levels of delinquency in mother-reports of their sons.

Personality traits almost always showed significant associations with delinquency (see Table 2). For some traits, the correlations were positive and for others negative. This trend was evident for both boys and girls. Only in females, however, did well-being significantly correlate with delinquency.

These findings support the hypothesis that parental solicitation, parental knowledge, child disclosure, and personality traits all significantly correlate with delinquency to some extent. Declines in the delinquency of both adolescent girls and boys were generally associated with increased levels of solicitation, knowledge, and disclosure. Personality traits also showed significant associations to delinquent behaviors. Some differing trends reported by boys and girls, and mothers and children, however, justify analyses separated by sex and data-source.

Overall, these analyses above have indicated the relatedness of solicitation, knowledge, disclosure and personality, and they have also indicated that these variables relate to delinquency. It therefore seemed warranted to conduct additional analyses to test whether or not these variables were *independently* related to delinquency.

Aim Four: Examine Whether Personality Reduces or Removes the Ability of Parental Solicitation, Parental Knowledge, and Child Disclosure to Predict Delinquency

For the most part, the parental solicitation, parental knowledge, and child disclosure scales predicted delinquency significantly when entered alone into a regression equation (see Table 3). In these cases, when personality was included in a subsequent regression model, the significance of these scales' standardized regression generally decreased, often to a nonsignificant level. This trend held relatively well for boys and girls, and adolescent- and mother-report data. Also of note was that the addition of personality to the regression models significantly increased the model R^2 value in every case. Often these increases were quite sizeable (e.g., R^2 increase from .00 to .29). Even when the inclusion of personality failed to decrease the significance of mother-reported child disclosure and parental knowledge in boys, significant increases in R^2 values (.19 to .37 and .23 to .41, respectively) highlighted the importance of personality in the prediction of delinquency above and beyond "parental monitoring" (i.e., parental knowledge), parental solicitation, and child disclosure.

Aim Five: Examine Whether Personality Contributes Incremental Validity to the Prediction of Delinquency Above and Beyond Parental Solicitation, Parental Knowledge, and Child Disclosure, and Whether the Reverse is True

Personality did show incremental validity above and beyond parental solicitation, parental knowledge, and child disclosure in the prediction of delinquency as evidenced by significant increases in R^2 values in every case (see Table 3). Parental solicitation, parental knowledge, and child disclosure scales, on the other hand, did not show a similarly robust, across-the-board incremental validity above and beyond personality (see Table 4). In females especially, solicitation, knowledge, and disclosure scales (when analyzed separately or simultaneously) did not contribute to the prediction of delinquency above and beyond personality. In male adolescent reports, only the simultaneous addition of the solicitation, knowledge, and disclosure scales (i.e., these three scales entered into a regression simultaneously) led to an increase in R^2 above that of personality. Even then, the magnitude of this increase was somewhat small, especially in comparison to the increases provided by personality over these three scales in the previous set of analyses. Only in males' mother-reports did these scales show what should be construed as notable improvements in delinquency prediction above personality. Judging on the whole, however, our results indicate that parental solicitation, parental knowledge, and child disclosure, do not *generally* contribute incrementally to the prediction of delinquency above personality in what appears to be a meaningful way.

General Discussion

The present study replicates previous research and provides further evidence in support of a reconceptualization of "parental monitoring." A large, ethnically-diverse sample of United States adolescents showed a similar pattern of interrelationships between parental solicitation, child disclosure, and parental knowledge: parental knowledge, which forms the basis of most historical "parental monitoring" research, is related more strongly to children's free disclosure of information than to parents' active solicitation of information. These previous findings (Kerr & Stattin, 2000; Stattin & Kerr, 2000) and our own warrant major reconsideration of the "parental monitoring" construct. However, additional analyses provided further support for a reconceptualization of "parental monitoring" from a different vantage point – the role of child personality.

While previous research has found that both “parental monitoring” and personality traits relate significantly to negative outcomes for children (Krueger et al., 1994; Martins, Storr, Alexandre, Chilcoat, 2008; Miller & Lynam, 2001, 2003; Stattin & Kerr, 2000), no studies have compared the predictive ability of both simultaneously. One goal of the present study was to determine the interrelations of these concepts as well as the association of each to delinquency when the other was considered. Parental solicitation, parental knowledge (“parental monitoring”), child disclosure, and personality all statistically predicted delinquency in this sample. However, when considered together with personality traits, the power of solicitation, knowledge, and disclosure to predict delinquency tended to be weak and non-significant. Personality predicted a significantly greater (and markedly larger) proportion of the variance of delinquency than did the other variables as well. Personality contributed incremental validity to the prediction of delinquency above and beyond solicitation, knowledge, and disclosure; the reverse generally was not the case.

These results highlight the importance of personality in understanding delinquency and the processes underlying “parental monitoring” as well as the close relations between personality and solicitation, knowledge, and disclosure. When the effect of personality was removed from these three scales, they lost a great deal of their ability to predict delinquency statistically. Personality, however, predicted delinquency strongly even when the effects were accounted for. These phenomena, coupled with the findings that child disclosure and parental knowledge (which itself is strongly associated with child disclosure) are related to adolescent personality, support the notion that the link between “parental monitoring” and delinquency is a reflection of these variables’ common association with personality.

These results further support a reconceptualization of “parental monitoring.” It seems as though the major findings of the “parental monitoring” research may have resulted to a large degree from adolescent personality, which linked child disclosure (which was associated with increased parental knowledge), parental knowledge (which was assessed by “parental monitoring” scales), and delinquency and served as an unmeasured third variable. Clearly, if this process underlies a significant portion of the association between “parental monitoring” and delinquency, a major reconceptualization is warranted. (It is not necessarily the case, based on the current study, that personality *predates* adolescent disclosure; this is a testable hypothesis for future research.) This reconceptualization could take many forms, but a few points seem worthy of consideration. First, as Stattin and Kerr (2000) suggested, the term “parental monitoring” should be reserved for the parentally-active processes (e.g., surveillance of a child) for which its use was intended. Second, researchers should attempt to parcel apart all sources of parental knowledge, and particularly they should attempt to understand the child disclosure-parental knowledge dynamic. Third, the consideration of personality must not be neglected. It is likely, for instance, that there are reasons above and beyond children’s personality why they would choose (or choose not) to disclose information to their parents. Such factors could include familial communication dynamics, parental personality, and so on. A successful reconceptualization of the “parental monitoring”-related topics will require the investigation of these sorts of parent-child-family-systems interaction models, in addition to personality traits, to ensure further research is theoretically viable and maximally informative.

Finally, it must be noted that personality itself does not spring fully-formed from a child’s genetic code. A long history of behavior genetic research has found that the variance of personality traits, on average, tends to be accounted for by genes and non-shared environmental effects relatively equally (Bouchard & Loehlin, 2001; Krueger & Johnson, 2008). This picture is further complicated by the notion that the environments that shape a child’s personality is due in no small part to his or her parents. It is possible that behaviors such as parental solicitation (and overall interest in a child’s life) could impact the development of children’s personalities, and these personalities then go on to account partially for the link between parental knowledge

and delinquency via increased child disclosure. The importance of parenting behaviors for child disclosure have been affirmed in previous research (Soenens, Vansteenkiste, Luyckx, & Goossens, 2006), although it is unclear where in these particular developmental models (if at all) child disclosure fits. The processes by which parenting might affect personality and disclosure are currently unclear, but they deserve serious attention. Indeed, the reconceptualization of “parental monitoring” might include consideration of the role that monitoring-related behaviors play in the development of early childhood personality.

Limitations and Future Directions

The results of this study must be considered in light of several limitations, which seem amenable to future research in this area. First, this study did not assess the full range of available “parental monitoring”-related variables and data sources. Most notably, Stattin and Kerr (2000) assessed the degree to which parents control the behaviors of their children by setting rules and so on. Parental control was not included in our dataset due to time constraints. However, we do not believe this would have changed our findings to a significant degree. Research that has included parental control found that it related less strongly to parental knowledge than did child disclosure or parental solicitation, and parental control and parental solicitation together predicted very little (3%) additional variance in normbreaking above and beyond child disclosure (Stattin & Kerr, 2000). In addition, this study did not utilize solicitation, knowledge, or disclosure as reported by fathers or adolescent reports of these variables regarding their fathers. A second limitation concerns the restricted range of personality traits assessed. The MPQ is an omnibus measure of normal personality comprised of 11 scales and 3 higher-order factors. This study, however, employed only six of these 11 scales and also did not investigate the role of the higher-order factors. It is likely that the inclusion of the five traits not assessed herein would bolster the ability of personality to predict delinquency and also further lessen the utility of parental solicitation, parental knowledge, and child disclosure. Future studies in this area should assess the *full* range of normal personality as measured by omnibus personality inventories. Finally, this study did not conduct biometric analyses of the genetic and environmental influences on solicitation, knowledge, and disclosure. We believe that these analyses could be informative, but their complexity prevented their inclusion in the current study.

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Correlations between adolescent- and mother-report solicitation, knowledge, and disclosure variables in female and male adolescents

Table 1

	ASK-A	TELL-A	KNOW-A	ASK-M	TELL-M	KNOW-M
ASK-A	--	.581**	.499**	.411**	.271**	.209*
TELL-A	.510**	--	.730**	.241**	.334**	.311**
KNOW-A	.492**	.812**	--	.240**	.387**	.361**
ASK-M	.099	.041	.015	--	.439**	.272**
TELL-M	.109	.209**	.219**	.483**	--	.774**
KNOW-M	.037	.167*	.233**	.321**	.695**	--

Correlations for females are listed below the diagonal; correlations for males are listed above the diagonal. ASK: parental solicitation; TELL: child disclosure; KNOW: parental knowledge. -A suffix indicates adolescent-report data; -M indicates mother-report data.

* = $p < .05$;

** = $p < .01$. Cell sizes (Ns) range from 173 to 334.

Table 2

Correlations between personality traits, delinquency, and adolescent- and mother-report solicitation, knowledge, and disclosure variables in female and male adolescents

	ASK-A	TELL-A	KNOW-A	ASK-M	TELL-M	KNOW-M	DBI
<u>Well-Being</u>							
<i>Females</i>	.103	.192**	.160**	-.004	.107	.053	-.153*
<i>Males</i>	.008	.143*	.176*	-.014	-.015	-.012	-.063
<u>Stress Reaction</u>							
<i>Females</i>	-.083	-.131*	-.175**	.026	-.015	-.024	.228**
<i>Males</i>	.117	-.115	-.106	.067	-.035	-.024	.170*
<u>Harm Avoidance</u>							
<i>Females</i>	.054	.134*	.149*	-.018	.161*	.154*	-.232**
<i>Males</i>	.006	.006	-.074	-.022	.109	.119	-.213**
<u>Control</u>							
<i>Females</i>	.030	.237**	.264**	.014	.235**	.219**	-.400**
<i>Males</i>	.128	.283**	.193**	-.073	.219*	.213*	-.403**
<u>Alienation</u>							
<i>Females</i>	-.079	-.207**	-.219**	.089	-.079	-.051	.357**
<i>Males</i>	.013	-.123	-.148	-.043	-.098	-.103	.150*
<u>Aggression</u>							
<i>Females</i>	-.096	-.226**	-.208*	.057	-.061	-.155*	.436**
<i>Males</i>	-.028	-.092	-.175*	.016	-.038	-.033	.413**
<u>Delinquency</u>							
<i>Females</i>	-.145*	-.283**	-.327**	.042	-.152**	-.253*	--
<i>Males</i>	.013	-.119	-.295*	-.158	-.430**	-.476**	--

ASK: parental solicitation; TELL: child disclosure; KNOW: parental knowledge; -A suffix indicates adolescent-report data; -M indicates mother-report data.

*
= $p < .05$;

**
= $p < .01$. Cell sizes (N s) range from 105 to 329.

Table 3

Standardized regression weights and R² of solicitation, knowledge, and disclosure variables predicting delinquency with and without personality

	Females			Males		
	Adolescent-Report Data	Mother-Report Data		Adolescent-Report Data	Mother-Report Data	
Model	Weight	Model R ²	Weight	Model R ²	Weight	Model R ²
ASK	-.145*	.02	.042	.00	-.158	.03
ASK + PER	-.095	.29 [†]	.065	.29 [†]	-.082	.26 [†]
TELL	-.283**	.08	-.152**	.02	-.430**	.19
TELL + PER	-.115	.29 [†]	-.044	.29 [†]	-.327**	.37 [†]
KNOW	-.327**	.11	-.253*	.06	-.476**	.23
KNOW + PER	-.156*	.30 [†]	-.070	.29 [†]	-.388**	.41 [†]

ASK: parental solicitation; TELL: child disclosure; KNOW: parental knowledge; PER: all six personality scales. For regression weights:

* = $p < .05$ and

** = $p < .01$.

[†] indicates a significant change in R² ($p < .05$) between a baseline model (i.e., ASK, TELL, or KNOW alone) and a model also including personality. Cell sizes (Ns) range from 94 to 186.

Table 4
Model R² values of personality predicting delinquency with and without solicitation, knowledge, and disclosure variables

	Females		Males	
	Adolescent-Report Data Model R ²	Mother-Report Data Model R ²	Adolescent-Report Data Model R ²	Mother-Report Data Model R ²
Model				
PER	.29	.29	.26	.26
PER + ASK	.29	.29	.26	.26
PER + TELL	.29	.29	.26	.37 [†]
PER + KNOW	.30	.29	.28	.41 [†]
PER + ALL	.31	.31	.32 [†]	.42 [†]

ASK: parental solicitation; TELL: child disclosure; KNOW: parental knowledge; ALL: all three scales (i.e., solicitation, knowledge, and disclosure); PER: all six personality scales.
[†] indicates a significant change in R² ($p < .05$) between a baseline model (i.e., all personality scales) and a model also including solicitation/knowledge/disclosure. Cell sizes (Ns) range from 94 to 186.