

LINK BETWEEN MONITORING BEHAVIOR
AND ADOLESCENT ADJUSTMENT:
EXAMINATION OF MEDIATION EFFECTS

By

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CHAPTER I

INTRODUCTION

Adolescence can be a challenging developmental stage for both adolescents and parents. For instance, a number of key transformations occur impacting the young person and the parent-youth relationship. These transformations include advances in social cognition (Gryzman & Hudson, 2010), physical development (i.e., puberty, Morin, Maiano, Marsh, Janosz & Nagengast, 2011), and changes in the parent-child relationships itself (e.g., adolescent perception of parental authority; Paikoff & Brooks-Gunn, 1991; Smetana, 2000). Therefore, how parents monitor their teenagers during this stage of development is a critical aspect associated with adolescent adjustment. Moreover, the assessment of the monitoring construct has changed greatly. Specifically, prior to 2000, its assessment lacked consistency and consensus. However, after Stattin and Kerr's reconceptualization of the construct (Kerr & Stattin, 2000; Stattin & Kerr, 2000), there has been greater consistency in the field regarding how monitoring is assessed.

While it is important that research is consistent in its assessment of the monitoring construct, there is agreement in the literature regarding the importance of monitoring in shaping adolescent development. For instance, factors such as parental involvement, parental solicitation and child disclosure (which will be referred to as *monitoring behavior*) have been linked to adolescent antisocial behavior and academic achievement (Moilanen, Shaw, Criss & Dishion, 2009; Padilla-Walker, Harper & Bean, 2011; Pettit, Yu, Dodge & Bates, 2009; Steinberg, Fletcher & Darling, 1994). Moreover, there is evidence that these associations may be mediated by two factors: parental knowledge and parent-child relationship quality.

While there is empirical and theoretical evidence for the various links in the mediation pathway, there have been very few studies that explicitly have investigated parental knowledge and parent-child relationship quality as mediators (for exception see Han, Miller, & Waldfogel, 2010). Moreover, most of the studies in the literature on monitoring have been based on predominantly middle-class, European American samples. In addition, most studies in the literature focused only on one domain of adolescent development without exploring whether the findings were similar with other measures of adolescent adjustment.

There were two research goals of the current investigation:

1. The first goal was to examine the association between monitoring behavior (i.e., child disclosure, parental solicitation, parental involvement) and adolescent adjustment (i.e., antisocial behavior, substance use, academic achievement).
2. The second goal was to investigate whether parental knowledge and parent-child relationship quality mediate the link between monitoring behavior and adolescent adjustment.

CHAPTER II

LITERATURE REVIEW

Introduction

The following literature review contains five sections. The first section will cover the literature examining the various developmental changes and transformations (within the adolescent and within the parent-child relationship) that occur during adolescence. Next, I will examine how the monitoring construct has been defined, operationalized, and conceptualized in the literature. Third, I will review the literature examining the link between monitoring behavior (i.e., child disclosure, parental solicitation, parental involvement) and adolescent adjustment (i.e., antisocial behavior, substance use, academic achievement). Next, preliminary theoretical and empirical evidence showing possible mediators (i.e., parental knowledge and parent-child relationship quality) in this link will be highlighted. Finally, the limitations and gaps in the literature will be discussed, and the research goals and hypotheses for this thesis project will be stated.

Transformations during Adolescence

Adolescence is a critical stage of development characterized by transformations within the adolescent and within the parent-youth relationship (Steinberg & Morris, 2001). Expansions in cognition and social cognition occur as the youth is able to think more abstractly and display more advanced perspective-taking skills (Gryzman & Hudson, 2010). Additionally, the pubertal process occurs during this stage of development, resulting in physical changes to the adolescent's body (Morin et al., 2011). Not only do these changes impact how young people view themselves, but also how they feel others view them (Mezulis, Hyde, Simonson & Charbonneau, 2011).

Moreover, the pubertal process has been linked to changes in the parent-child relationship (Holmbeck, 1996). For example, the parent-child relationship is transformed from unilateral authority to more cooperative negotiation (Steinberg, 1990), in which the relationship is more peer-like and horizontal than vertical in nature (Paikoff & Brooks-Gunn, 1991). Parents relinquish their authority by providing the youth with more autonomy and independence (Smetana, 2000). In addition, there is less direct contact between the parent and child, and increased time spent with peers during adolescence (Chen, 2010). Furthermore, rules and curfews regarding activities during free time are negotiated and more flexible. Parents allow adolescents to make more decisions regarding personal issues, such as clothing, friends, music, and allowances (Smetana, 2000; Smetana & Asquith, 1994). Due to these transformations within the parent-child relationship, how parents monitor their adolescent's relationships, whereabouts, and activities may be especially crucial during adolescence.

History of the Monitoring Construct

Although extensive research has been conducted examining the parental monitoring construct, there has been some variation in the way in which it has been operationalized. Prior to 2000, there was a lack of consistency and consensus in how the construct was assessed. For example, some investigators used measures that tapped the frequency of communication the adolescent has with their parent regarding activities and events occurring in their life (e.g., "How often do you share thoughts and feelings with parents?"; Clark, Neighbors, Lesnick, Lynch & Donovan, 1998). Other researchers used items that assessed parental involvement or adult presence, which reflects the amount of time the adolescent spends in the presence of the parent doing things together, such as watching TV or riding in the car together (e.g., "How often do you spend time with your parent(s)?" ; Dishion & Loeber, 1985; Metzler, Noell, Biglan, Ary & Smolkowski, 1994). Monitoring also was measured using items that tap the extent to which parents were aware or knowledgeable of their children's daily activities, which has been referred

to as parental knowledge or awareness (e.g., “My parents know where I am after school”; Small & Luster, 1994).

While the assessment of the monitoring construct varied *prior* to 2000, there has been greater consistency and consensus *after* 2000. Kerr and Stattin greatly influenced the monitoring literature with their pair of papers that were published in 2000 (Kerr & Stattin, 2000; Stattin & Kerr, 2000). In particular, they argued that monitoring contained 3 components. The first component was *child disclosure* (e.g., “If you are out at night, when you get home, do you tell your parent what you have done that evening?”) that reflects the child’s willingness to divulge information to parents. The second component was *parental solicitation* (e.g., “During the past month, how often have you started a conversation with your child about his/her free time?”), which was defined by Stattin and Kerr (2000) as the parents requesting information from the child regarding the child’s daily activities, friends, and whereabouts of their child. The third component was *parental knowledge* (e.g., “Do your parents know what you do during your free time?”), which reflects the extent to which the parents are knowledgeable or aware of the child’s life and daily activities. Parental knowledge is seen as the outcome or end product of child disclosure and parental solicitation in that these are two ways that parents obtain knowledge. Stattin and Kerr (2000) also assessed what they referred to as *parental control* (e.g., “Does your child have to get your permission to stay out late on a weekday evening?”), which encompasses parents setting rules and curfews for their child to obey. While parental control does not assess communication or knowledge per se, it was proposed to facilitate the monitoring process.

In light of this reconceptualization of the monitoring construct, other researchers have incorporated child disclosure, parental solicitation, and parental knowledge items in measures of monitoring (Laird, Marrero & Sentse, 2010; Laird, Pettit, Dodge & Bates, 2003). The current thesis builds upon the previous conceptualization of the monitoring construct by focusing on what will be called *monitoring behavior* in the current study. Monitoring behavior reflects parent and adolescent behaviors (i.e., child disclosure, parental solicitation) or simply the parent and youth

spending time together (i.e., parental involvement) that facilitates the transfer of information about the adolescent's life and daily activities from youth to parent and thus should increase the level of parental knowledge.

Theoretically, one could argue that monitoring behavior is captured in Baumrind's demandingness parenting style dimension. Demandingness reflects the extent to which parent expects and demands mature, responsible behavior from the youth (Baumrind, 1966). Both authoritative and authoritarian parents display high levels of demandingness, and as such, are likely to display high levels of monitoring behavior. However, because authoritative and authoritarian parents differ in their levels of responsiveness (i.e., the extent to which parents responds to the child in a warm and sensitive manner; Morris, Silk, Steinberg, Myers & Robinson, 2007), how monitoring behavior is expressed likely differs. For instance, authoritative parents are more likely than authoritarian parents to encourage autonomy and independence (Bugental & Grusec, 2006), which may be more conducive for child disclosure compared to parental solicitation and parental involvement. In contrast, because authoritarian parents utilize parent-centered discipline (i.e., focusing on needs of parent rather than child; Baumrind, 1966), parental solicitation may be emphasized more than child disclosure regardless of youth age. In sum, while authoritative and authoritarian parents may display high levels of monitoring behavior, the exact form of this construct may differ.

Link between Monitoring and Adolescent Adjustment

Since the (re)conceptualization of the construct, an extensive body of literature has demonstrated that high levels of monitoring behavior (i.e., child disclosure, parental solicitation, and parental involvement) were related to low levels of youth antisocial behavior and substance use and high levels of academic achievement (Padilla-Walker et al, 2011; Scaramella, Conger, Spoth, & Simons, 2002; Simpkins et al., 2009). It is possible that when parents and adolescent discuss the adolescent's life and activities (via parental solicitation or child disclosure) or when the parent spends time with the adolescent, the young person perceives their parent as being

interested and concerned for their well-being, which boosts the youth to excel in school, avoid partaking in substance use, and associating with deviant peers (Moilanen et al., 2009; Steinberg et al., 1994). Indeed, empirical evidence from the literature seems to support this idea. For example, researchers (Marshall, Tilton-Weaver & Bosdet, 2005; Padilla-Walker et al., 2011) have reported a significant and negative association between child disclosure and adolescent antisocial behavior. Moreover, studies have demonstrated that parental involvement is positively related to academic achievement and negatively related to behavior problems (Hsu, Zhang, Kwok, Li & Ju, 2011; Pettit et al., 2009; Simpkins et al., 2009). Additionally, other evidence has shown a negative association between parental solicitation and adolescent antisocial behavior (Padilla-Walker et al., 2011; Vieno, Nation, Perkins, Pastore & Santinello, 2010). In sum, past research has shown a significant link between monitoring behavior and adolescent adjustment.

Mediation Effects

While research has shown monitoring behavior to be linked to adolescent adjustment, it is important to explore potential mediators in this link (see Figure 1). Mediators are factors that explain *why* the independent variable and dependent variable are related (Baron & Kenny, 1986). Testing mediation models is important because it provides valuable information regarding the underlying mechanisms and pathways linking two variables (Criss, Shaw, Moilanen, Hitchings, & Ingoldsby, 2009). There are two possible factors that will be examined as possible mediators in this investigation: parental knowledge and parent-youth relationship quality. As mentioned earlier, parental knowledge has been operationalized as the level of awareness a parent has regarding their adolescents activities, whereabouts, and affiliations (e. g., “How difficult is it to know where your adolescent is and what he or she is doing?”; Laird et al., 2003). The second possible mediator, parent/youth relationship quality, is defined as whether the youth and parent perceive their relationship as warm and supportive (e. g., “Most of the time, your mother is warm and loving toward you.”; Shelton & van den Bree, 2010).

The first criterion for mediation is that the independent variable must be related to the dependent variable (Baron & Kenny, 1986). As mentioned in the previous section, there has been empirical and theoretical evidence to support the link between monitoring behavior and adolescent adjustment. The next criterion for mediation is that the independent variable must be related to the mediator (1986). Past research has shown that high levels of monitoring behavior to be related to high levels of parental knowledge and parent-child relationship quality (Huang, Murphy, & Hser, 2011; Laird, Criss, Pettit, Dodge & Bates, 2008; Parker & Benson, 2004). Parental knowledge has been hypothesized in the literature to be the end product of monitoring behavior (Kerr & Stattin, 2000; Masche, 2010). That is, parents are thought to obtain information about their adolescents via child disclosure, parental solicitation, and parental involvement. In addition, monitoring behavior during adolescence may lead to mutual trust and affection, enhancing the quality of the parent-adolescent relationship (Huang et al., 2011). For example, when both parents and their children have frequent conversations about the youth's life and daily activities, it may boost the levels of mutual trust in the relationship as both members of the dyad are demonstrating a clear interest in each other and are both willing to share information (Tokic & Pecnik, 2010).

Empirical evidence in the literature has shown significant links between monitoring behavior and parental knowledge and parent-child relationship quality. For instance, Parker and Benson (2004) reported a positive correlation between parental monitoring (i.e., knowledge regarding child's activities and friends) and a secure parent-child attachment. Tokic and Pecnik (2010) reported that parents who were available and present (i.e., parental involvement) for their adolescents reported higher levels of parental knowledge compared to other families. Other empirical evidence has shown that high levels of child disclosure and high levels of parental solicitation were related to high levels of parental knowledge (Hamza & Willoughby, 2010). In sum, the literature has demonstrated positive associations between monitoring behavior and parental knowledge and parent-child relationship quality.

The final criterion for mediation is that the mediator must be significantly related to the dependent variable (Baron & Kenny, 1986). Research has shown that high levels of parental knowledge and positive parent-child relationship quality to be related to low levels of youth antisocial behavior and substance use and high levels of academic achievement (Hair, Moore, Garrett, & Cleveland, 2008; Lee, Daniels, & Kissinger, 2006). For instance, the results from several studies indicated a positive association between positive parent-child relationship quality (i.e., parents who are nurturing and supportive) and academic achievement (Gonzales, Cauce, Freidman & Mason, 1996; Lee et al., 2006; Vivona, 2000). Additional evidence has shown that positive parent-child relationship quality to be significantly and inversely related to adolescent deviant behavior (e.g., antisocial behavior and substance use), (Hair et al., 2008; Mason, Hitchings, McMahon & Spoth, 2007; Metzler, Biglan, Ary & Li, 1998). Other research focusing on parental knowledge has shown this factor to be negatively related to adolescent substance use (Fletcher, Steinberg & Williams-Wheeler, 2004; Tebes, et al., 2010; Wang, Simons-Morton, Farhart, & Luk, 2009). This is consistent with the findings from Kerr and Stattin (2000) who reported high levels of parental knowledge to be related to low levels of delinquency and high levels of positive school performance.

There are several reasons why parent-child relationship quality may be significantly related to adolescent adjustment. First, numerous theories have highlighted the importance of the parent-child relationship in promoting positive child and adolescent outcomes. For instance, according to the Social Control Theory (Hirschi & Stark, 1969; Parsai, Marsiplia & Kulis, 2010), adolescents who have a positive bond or an attachment with their parents are more likely to be sensitive to their parents' morals and philosophies, averting the youth from participating in substance use and deviant behaviors. Moreover, parents who demonstrate to the youth that they are there when the youth needs support, along with being attentive and concerned for the youth's welfare, inspire the young person to do better in school (Blonda & Adalbjamardottir, 2009).

In addition, the literature has suggested possible reasons why parental knowledge is linked to low levels of antisocial behavior and substance use and high levels of school grades. In particular, parents who are more knowledgeable or aware of their children's daily activities are in a better position to intervene if the child goes astray (Laird et al., 2008). In other words, parents who know that their child is associating with deviant peers or are doing poorly in school can take steps to intervene and discourage the negative behaviors. Thus, parental knowledge may serve as a feedback component in the socialization process (Crouter, MacDermid, McHale & Perry-Jenkins, 1990) allowing parents to determine whether their advice and socialization efforts are being effective. This is also consistent with psychologists who argued that monitoring knowledge plays an important role in deterring children and adolescents from delinquent-reinforcing situations and environments (Dishion & McMahon, 1998; Patterson, 2002).

In summary, evidence from the literature has provided empirical and theoretical support that parental knowledge and parent-child relationship quality may mediate the link between monitoring behavior (i.e., parental solicitation, child disclosure, parental involvement) and adolescent adjustment (i.e., antisocial behavior, substance use, academic achievement). However, while there is evidence for the various links in the mediation model, there has only been one published study that actually tested mediation models involving these factors. In particular, Han et al. (2010) found that parental knowledge served as a significant mediator in the association of the parent involvement and adolescent delinquency. Clearly, additional research is needed.

Summary, Research Goals, and Hypotheses

In summary, past research has shown that adolescence is characterized by a number of critical transformations within the adolescent and within the parent-child dyad. In addition, the assessment of the monitoring construct varied greatly until the (re)conceptualization of the construct by Stattin and Kerr (Kerr & Stattin, 2000; Stattin & Kerr, 2000). Moreover, several investigations have found monitoring behavior (i.e., child disclosure, parental solicitation, parental involvement) to be significantly related to adolescent adjustment. While the literature has

added to our understanding of the monitoring construct, there have been several gaps in the literature. First, as mentioned earlier, there has been only one published study (Han et al., 2010) that has explicitly tested parental knowledge and parent-child relationship quality as possible mediators in the link between monitoring behavior and adolescent adjustment. Second, most of the studies in the literature regarding monitoring have been based on predominantly middle-class, European American samples (e.g., Clark et al., 1998; Laird et al., 2008; Lee et al., 2006; Metzler et al., 1994). Finally, the majority of empirical studies are limited as they only assessed a single adolescent outcome (Hsu et al., 2011; Laird et al., 2003; Padilla-Walker et al., 2011; Tebes et al., 2010; Vieno et al., 2010). This is critical as the mediation pathways involving monitoring behavior and adolescent adjustment may vary depending on adolescent outcome.

To address these gaps and limitations in the literature, there were two major research goals of the current project. The *first research goal* was to analyze the association between monitoring behavior (i.e., parental solicitation, child disclosure, and parental involvement) and adolescent adjustment (i.e., antisocial behavior, substance use, and school grades). It was hypothesized that high levels of parental solicitation, child disclosure, and parental involvement would be related to low levels of youth antisocial behavior and substance use and high levels of school grades. The *second research goal* was to explore whether parental knowledge and parent-child relationship quality mediated the link between monitoring behavior and adolescent adjustment. There have been very few studies that have explicitly tested this mediation model. However, based on theoretical and empirical evidence focusing on the individual links in the model, it was expected that some evidence for mediation would be found in the current study. Specific hypotheses regarding whether there would be full mediation (i.e., link between independent variable and dependent variable is not significant while controlling for mediator) or partial mediation (i.e., link between independent variable and dependent variable remains significant when controlling for the mediator) were not made given due to the lack of evidence in the literature.

CHAPTER III

METHODS

Participants and Procedure

The sample consisted of 206 families with adolescents who participated in the Family Youth Development Project (FYDP). The purpose of the FYDP was to examine predictors and outcomes of adolescent emotion regulation. Data were collected from both adolescents (M age = 13.37, SD = 2.32; 51% female; 29.6% European American, 32% African American, 19.4% Latino American, 19% other ethnic groups) and their primary caregivers. Most of the primary caregivers were the biological mothers of the adolescents (83.3% biological mothers, 10.7% biological fathers, 2% grandparents, 4% other). The sample was predominantly comprised low-income ($Median$ annual income = \$40,000; 20% of families made less than \$20,000 per year) families with an average of 4.35 people living in each home and 38.7% headed by single parents. In addition, 38.7% of the families reported that they received welfare assistance during the past year. Both the parent and the adolescent participated in an extensive 2½ hour assessment that included semi-structure interviews on resilience, separate questionnaires, and a set of interaction tasks together that were videotaped. The questionnaires assessed various aspects of their lives such as demographics, parent psychopathology, adolescent temperament, adolescent adjustment, and parenting practices/styles.

Measures: Overview

All of the factors used in the primary analyses were created by averaging parent and youth reports. While some of the associations between parent and youth reports were not extremely strong in magnitude, this approach was used in the current study for parsimonious

reasons (i.e., fewer analyses). In addition, Whitbeck, Hoyt and Ackley (1997) argue for the importance of multiple reports when addressing family practices. They provide evidence that indicates minor discrepancies appear in individual reports regarding family processes; thus, multiple reports can balance out possible biases between parent and child reports. The items for each factor used in the study are listed in Appendix A.

Measures: Monitoring Behavior

There were three monitoring behavior factors: parental solicitation, child disclosure, and parental involvement. These measures were created for the Child & Adolescent Relationship Lab (CARL) Project (PI: Dr. Michael Criss), though the parental solicitation and child disclosure instruments were similar to those used in Stattin and Kerr's research (Kerr & Stattin, 2000; Stattin & Kerr, 2000). All items on these scales were rated on a 5-point Likert scale (1 = "never," 2 = "hardly ever," 3 = "sometimes," 4 = "frequently," and 5 = "very often") by both the parent and adolescent. *Parental solicitation* reflects the frequency which parents initiate conversations with their adolescent regarding the adolescent's life and daily activities. This measure was based on 6 items (e.g. "During the past year, how often did you begin or start conversations with your adolescent about what they did after school?"). The parent and youth reported factors for parental solicitation were each created by averaging the 6 items (α s = .83 and .79, for parent and youth reports respectively). The final measure was based on the mean ($r = .29, p < .001$) of parent and youth reports. *Child disclosure* also was based on 6 items and reflects the frequency that the youth initiated or started conversations with their parents regarding their lives and daily activities (e.g., "How often did you begin or start conversation with mother/father about what you did during free time?"). The parent and youth reported child disclosure factors were each created by averaging the 6 items (α s = .88 and .86, for parent and youth reports respectively). The final measure for child disclosure was based on the average ($r = .30, p < .001$) of parent and youth reports. The last construct of monitoring behavior, *parental involvement*, consisted of 10 items

(e.g., “During the past year, how often did you and your mother watch TV together?”) and refers to how often the parent and child spend time together. The parent and youth reported parental involvement factors were each created by averaging the 10 items (α s = .79 and .83 for parent and youth reports respectively). The final parental involvement factor was created by averaging ($r = .41, p < .001$) parent and youth reports.

Measures: Mediator Variables

For the purpose of the thesis project, two variables were examined as possible mediators between the link of monitoring behavior and adolescent adjustment: parental knowledge and parent-adolescent relationship quality. The items on each scale were each rated on a 5-point Likert scale (1 = “never,” 2 = “hardly ever,” 3 = “sometimes,” 4 = “frequently,” and 5 = “very often”). *Parental knowledge* reflects the extent to which the parent was aware of knowledgeable of the youth’s life and daily activities (e.g., “How often did you really know what your child did with friends?”) and was created for the Child and Adolescent Relationship Lab (CARL) Project, though the items were similar to those in Stattin and Kerr’s research (Kerr & Stattin, 2000; Stattin & Kerr, 2000). The parent and youth reported parental knowledge factors were each created by averaging the 6 items (α s = .85 and .90 for parent and youth reports respectively). The final parental knowledge factor was based on the mean ($r = .29, p < .001$) of parent and youth reports. *Parent-youth relationship quality* measure was adapted from the Adult-Child Relationship Scale (ACRS; Criss, Shaw, & Ingoldsby, 2003) and the Student-Teacher Relationship Scale (Pianta, 2001). This instrument assesses the extent to which the parent and child have an open, warm, and mutually responsive relationship. The scale consists of 10 items (e.g., “If upset about something, I would talk with my mother about it?”) which were averaged to create the parent- and adolescent-reported factors (α s = .84 and .92 for parent and youth reports respectively). The final parent-youth openness factor was created by averaging ($r = .39, p < .001$) parent and youth reports.

Measures: Adolescent Adjustment

There were three adolescent adjustment factors: antisocial behavior, substance use, and academic achievement. All items assessing antisocial behavior and substance use were rated on a 5-point Likert scale (1 = “never,” 2 = “1-2 times,” 3 = “3-4 times,” 4 = “5-6 times,” and 5 = “7 or more times”) and were adapted from the Problem Behavior Frequency Scale (Farrell, Danish, & Howard, 1992; Farrell, Kung, White, & Valois, 2000). *Adolescent antisocial behavior* consisted of 26 items that asked how often in the past year the youth displayed aggressive and delinquent behaviors (e.g., “During the past year, how many times did you get into a fight in which someone was hit?”). Both parent and youth reports of antisocial behavior were created by averaging the 26 items (α s = .92 and .92 for parent and youth reports respectively). The final antisocial behavior factor was created by averaging ($r = .51, p < .001$) parent and youth reports. *Adolescent substance use* addressed the frequency of youth drinking, smoking cigarettes, and illegal drug use (e.g., “During the past year, how many times did you use marijuana?”). Both parent and youth reports of substance use were created by averaging the 9 items (α s = .84 and .82 for parent and youth reports respectively). The final substance use factor was created by averaging ($r = .71, p < .001$) parent and youth reports. The final adolescent adjustment factor was academic achievement which reflects the student’s grade point average in four classes: English, math, science, and history. This instrument was developed for the FYDP. Both parent and youth reported *academic achievement* factors were created by averaging the 4 items (α s = .86 and .78 for parent and youth reports respectively). The final academic achievement factor was created by averaging ($r = .80, p < .001$) parent and youth reports.

CHAPTER IV

RESULTS

Analytic Plan:

Descriptive statistics and (within-variable domain) bivariate correlations were computed. Next, to examine Research Goal #1, a series of multiple regressions were computed where the link between monitoring behavior and adolescent adjustment were analyzed while statistically controlling for adolescent age, adolescent sex, and family income. Separate regressions were computed for each measure of monitoring behavior (i.e., parental solicitation, child disclosure, and parental involvement) and adolescent adjustment (i.e., antisocial behavior, substance use, and school grades). To examine Research Goal #2, the three criteria for mediation (via Baron & Kenny, 1986) were tested through a series of regressions in which adolescent age, adolescent sex, and family income were entered as covariates. In addition, Sobel's test was used to determine whether the indirect effect was significant.

Descriptive Statistics and Bivariate Correlations:

Descriptive statistics are listed in Table 1. Bivariate correlations are listed in Table 2. Within-domain correlations were consistent with expectations. Specifically, parental solicitation was positively related to child disclosure and parental involvement. Child disclosure was positively associated to parental involvement. In addition, high levels of parental knowledge were related to high levels of parent-youth relationship quality. Bivariate correlations within adolescent adjustment domain indicated that adolescent antisocial behavior was significantly and positively

related to adolescent substance use and negatively related to adolescent school grades. Moreover, high levels of adolescent substance use were related to low levels of school grades.

Research Goal #1:

As a reminder, the first research goal was to examine the association between monitoring behavior and adolescent adjustment. To address this goal, a series of regressions were computed where demographic factors (youth age, youth sex, and family income) were entered on Step 1, and the monitoring behavior factor (parental solicitation, child disclosure, or parental involvement) was entered on Step 2 in the prediction of adolescent adjustment (antisocial behavior, substance use, or school grades). Separate regressions were computed for each monitoring behavior and adolescent adjustment factor. As indicated in Table 3, parental solicitation was not significantly linked to antisocial behavior, substance use, or school grades when controlling for adolescent age, sex, or family income. High levels of child disclosure were linked to low levels of antisocial behavior and high levels of school grades while controlling for adolescent age, sex, and family income. Child disclosure was not significantly related to substance use. High levels of parental involvement were related to low levels of antisocial behavior and substance use, and high levels of school grades. In sum, the findings indicated that, in general, high levels of child disclosure and parental involvement were both significantly related to adolescent adjustment even after controlling for youth age, sex, and family income.

Research Goal #2:

The second research goal was to investigate whether parental knowledge and parent-child relationship quality mediated the link between monitoring behavior and adolescent adjustment. Following the recommendations of Baron and Kenny (1986), a series of regressions were computed examining the various pathways in the mediation analyses. In each regression, youth age, sex, and family yearly income were entered as covariates on Step 1. Because parental solicitation was not significantly related to any of the three adolescent adjustment factors and because child disclosure was not significantly related to substance use, these pathways were not

examined in the mediation analyses.

The mediation analyses involving child disclosure are displayed in Table 4. The first criterion for mediation is that the independent variable must be related to the dependent variable. As indicated in column 3 in Table 4, high levels of child disclosure were related to low levels of youth antisocial behavior and high levels of school grades. Next, the independent variable must be related to the mediator. The results indicated that high levels of child disclosure were significantly related to high levels of parental knowledge and parent-youth relationship quality (column 4, Table 4). Third, the mediator must be related to the dependent variable. The regression analyses demonstrated that high levels of parental knowledge and parent-youth relationship quality were significantly related to low levels of youth antisocial behavior and high levels of school grades. Because the three criteria were met, Sobel's statistic for indirect effects (Sobel, 1982) was computed for each mediation pathway. As indicated in column 7 in Table 4, the Sobel's statistic was significant in each case indicated significant indirect effects. Finally, to determine the type of mediation (partial vs. full), a series of regressions were computed where child age, sex, and family income were entered on Step 1, the mediator variable (parental knowledge or parent-youth relationship quality) on Step 2, and child disclosure on Step 3. As shown in Column 6, child disclosure was not longer significant in each regression providing evidence of full mediation (Little, Card, Bovaird, Preacher, & Crandall, 2007).

Turning to the mediation analyses involving parental involvement (see Table 5), the regressions indicated that high levels of parental involvement were significantly related to low levels of youth antisocial behavior and substance use and high levels of youth school grades (after controlling for youth age, sex, and family income) (Criterion 1; displayed in column 3). In addition, parental involvement was significantly and positively related to parental knowledge and parent-youth relationship quality as indicated in column 4 (Criterion 2). Finally, the analyses showed that high levels of parental knowledge and parent-youth relationship quality were significantly related to low levels of youth antisocial behavior and substance use and high levels

of school grades, as displayed in column 5 in Table 5. Moreover, the Sobel's Test Statistic for Indirect Effects was significant in each case. Finally, as indicated in column 6 in Table 5, parental involvement was no longer significantly related to youth antisocial behavior, substance use, and school grades after controlling for the mediators (and the demographic variables) indicating that parental knowledge and parent-youth relationship quality served as full mediators in these links. In sum, research showed that parental knowledge and parent-youth relationship quality served as a significant and full mediator in the links between child disclosure and antisocial behavior and school grades. In addition, there was evidence for full mediation in the link between parental involvement and all three adolescent outcomes.

CHAPTER V

DISCUSSION

The purpose of the present study was to investigate two research goals. The first goal was to examine the link between monitoring behavior and adolescent adjustment. The second research goal was to determine whether parental knowledge and parent-child relationship quality mediated this association. The results indicated that high levels of child disclosure and parental involvement were related to low levels of antisocial behavior and high levels of school grades; parental involvement also was significantly and inversely related to youth substance use. Parental solicitation was not significantly related to any of the adolescent outcomes. Additionally, the analyses indicated that parental knowledge and parent-child relationship quality served as full mediators in these associations. Overall, the results offer evidence that monitoring behavior plays an important part in shaping adolescent adjustment.

Research Goal #1:

The first research goal was to investigate the link between monitoring behavior (i.e., parental solicitation, child disclosure, parental involvement) and adolescent adjustment (i.e., antisocial behavior, substance use, school grades). Youth age, sex, and family income were entered as covariates in the analyses because previous research has reported these factors to be linked to adolescent adjustment and monitoring behavior (e.g., Blondal & Adalbjarnardottir, 2009; Mason et al., 2007; Simpkins et al., 2009). The findings supported the hypothesis as high levels of child disclosure and parental involvement were related to low levels of antisocial behavior and high levels of school grades. These results are consistent with previous research that reports child disclosure as being linked to positive child adjustment (Keijsers, Frijns, Branje &

Meeus, 2009; Kerr, Stattin & Burk, 2010, Padilla-Walker et al., 2011). It is likely that parent-adolescent interactions that incorporate mutual communication and spending time together is perceived by the youth as the parent being concerned and interested in their child's well-being, which inspires the youth to excel in school and avoid behaviors that may disappoint their parents (Moilanen et al., 2009; Scaramella et al., 2002; Steinberg et al., 1994). Additionally, parents are in a better position to provide guidance and support to the youth when the adolescents provides the parent with information regarding daily activities (Crouter et al., 1990; Hamza & Willoughby, 2010; Keijsers et al., 2009) However, child disclosure was not related to adolescent substance use. It is possible that adolescents engaging in substance use may have more reasons to refrain from disclosing information about their daily activities to their parents (Keijsers et al., 2009). Furthermore, adolescent may choose what information they wish to disclose to their parents as way to maintain a private sphere and in order to regulate what personal information their parents acquire (Marshall et al., 2005; Smetana & Asquith, 1994).

It is important to note that even though child disclosure was linked to monitoring behavior, parental involvement had a stronger association. Indeed, parental involvement was related to all three adolescent adjustment factors. Consistent with previous research, parents who spend time with their children may directly influence the youth's behaviors and whom they interact with on a daily bases (Blondal & Adalbjarnardotti, 2009; Simpkins et al., 2009; Scaramella et al., 2002). For instance, parents investing time in their adolescents (i.e., riding in a car, playing games, sporting/school events, watching TV, etc.) allows them opportunities to have direct contact with their adolescent's friends, school officials, and others. Therefore, involved parents are in a better position to intervene when their teenager interacts with deviant peers or display behaviors that are inappropriate (Simpkins et al., 2009; Patterson, Reid, & Dishion, 1992). Furthermore, a parent who nurtures and is involved in their youth's life may display interest and care for their son or daughter, which may encourage the young person to excel in school and avoid possible actions that could embarrass their parents (Conger et al., 1992; Hsu et al., 2011).

Parental solicitation was not significantly linked to adolescent adjustment in the present study. This is consistent with other research that failed to find a significant link between parental solicitation and adolescent adjustment (e.g., Keijsers, Branje, VanderValk, & Meeus, 2010). According to Kerr et al. (2010), parental solicitation may be a direct reaction of the parent when they already realize that their youth is participating in negative behaviors. That is, parents may ask more questions regarding the youth's daily activities when the parent realizes the youth is participating in undesirable behaviors or interacting with deviant peers. It is also conceivable that adolescents may perceive parent solicitation to be somewhat intrusive (Kerr & Stattin, 2000). Thus, instead of being related to positive adolescent outcomes, parental solicitation may have had little or no impact on adolescent adjustment. Although age was used as a covariate in these analyses, it may serve as a moderator in the link between parental solicitation and youth adjustment. In a conference paper based on this dataset, Lee and colleagues (Lee, Smith, Seay, Morris & Criss 2011) found that parental solicitation was significantly and *positively* linked to antisocial behavior in older (but not younger) adolescents. Since older adolescents are seeking greater autonomy and independence from their parents (Smetana, 2000), they may perceive their parents as being intrusive when they ask questions regarding the youth's daily activities.

Research Goal #2:

The second goal of the current investigation was to examine parental knowledge and parent-youth relationship quality as mediators in the link between monitoring behavior and adolescent adjustment. Results indicate that both parental knowledge and parent-child relationship quality play an important role in the association between monitoring behavior and adolescent adjustment. Specifically, parental knowledge and parent-child relationship quality fully mediated the link between monitoring behavior and adolescent adjustment. That is, monitoring behavior influenced adolescent adjustment indirectly (and not directly) via the two mediators. These results are consistent with Han et al. (2010) who reported that parental knowledge served as a significant mediator in the link between parental involvement and

adolescent delinquency. The present study adds to Han et al. (2010) results by the inclusion of other monitoring behavior and adolescent adjustment factors and by examining these associations in older adolescents. Overall, these patterns of findings suggest monitoring behavior (i.e., child disclosure and parental involvement) can enhance communication and interactions between parent and child, which can lead to an increased level of knowledge while building mutual trust and affection enhancing the parent-child relationship (Huang et al., 2011), which in turn, can influence adolescent adjustment.

Implications for Service Providers and Interventionists:

The results from the current investigation have implications for service providers and interventionist. The findings suggest that parental involvement and communication remain important during adolescence though the manner in which parents acquire information from their adolescents appears to be very critical and may be tied to the changes in the relationship (Paikoff & Brooks-Gunn, 1991; Steinberg & Morris, 2001). Specifically, child disclosure and parental involvement were significantly linked to more positive adolescent outcomes, whereas parental solicitation was not. Given this information, it is recommended that service providers working with families with adolescents encourage parents to stay engaged and informed regarding their youth's daily activities and create a supportive and nurturing environment where the youth feels comfortable telling the parent about their daily life. In addition, parents should be advised that simply spending time with the adolescent may lead to more positive outcomes than constantly hounding the youth for information about their daily life and activities. Interventions focused on decreasing delinquent behavior during adolescence have emphasized these points. For instance, Dishion and Kavanagh (2002) focused on monitoring and parent-youth communication in their intervention and prevention program and found it to be a critical component in reducing delinquent and antisocial behavior

Limitations and Future Directions:

Although this investigation does provide valuable information regarding the role that

monitoring behavior plays in shaping adolescent adjustment, there were limitations that must be acknowledged. First, although there is strength in using both parent and child reports (Kerr & Stattin, 2010), other approaches and methods (e.g., interviews, direct behavior observation, school archival data on youth behavior) could provide additional evidence regarding monitoring behavior and adolescent adjustment. Moreover, as indicated in the appendices, different informants may provide slightly different patterns of findings. In addition, this study was cross-sectional. Although there is strong theoretical evidence that monitoring behavior shapes adolescent adjustment, it is also possible that youth adjustment influenced monitoring (Laird, Pettit, Bates, & Dodge, 2003). It also should be emphasized that the current sample included predominantly high-risk families. Therefore, the findings might have been somewhat different in more middle-class and low-risk samples. Finally, it must be acknowledged that this was not meant to be an exhaustive examination of all possible factors that could mediate the link between monitoring behavior and youth adjustment. Indeed there are other factors that may mediate this link, such as social information processing, emotion regulation, and cognitive attribution styles.

Conclusions:

In conclusion, the current study examined the link between monitoring behavior (i.e., parental solicitation, child disclosure, parental involvement) and adolescent adjustment (i.e., antisocial behavior, substance use, school grades) and whether parental knowledge and parent-youth relationship quality mediated this link. Findings support the hypotheses in showing that high levels of child disclosure and parental involvement were significantly related to low levels of youth antisocial behavior and school grades. In addition, high levels of parental involvement were related to low levels of adolescent substance use. The results also showed that parental knowledge and parent-adolescent relationship quality fully mediated or explained the link between monitoring behavior and adolescent outcomes. The results from this study have clear implications for policy makers, service providers, and interventionists.

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APPENDICES

Table 1: *Descriptive statistics*

	<i>N</i>	<i>M</i>	<i>SD</i>
<u>Monitoring Behavior:</u>			
Parental Solicitation	206	3.55	.66
Child Disclosure	206	3.07	.78
Parental Involvement	206	3.43	.61
<u>Mediators:</u>			
Parental Knowledge	206	3.80	.76
Parent-Youth Relationship Quality	206	3.84	.68
<u>Adolescent Adjustment:</u>			
Adolescent Antisocial Behavior	206	1.58	.45
Adolescent Substance Use	206	1.11	.29
Adolescent School Grades	205	3.16	.67
<u>Demographic Variables:</u>			
Adolescent Age	206	13.38	2.31
Adolescent Sex	206	51% female	
Family Yearly Income	188	48164.35	34179.28

Table 2: *Bivariate correlations*

	2	3	4	5	6	7	8	9	10	11
<u>Monitoring Behavior:</u>										
1. Parental Solicitation	.66**	.48**	.45**	.48**	-.14*	-.08	.09	-.07	-.06	.10
2. Child Disclosure		.59**	.55**	.61**	-.27**	-.14*	.22**	-.24**	-.20**	.04
3. Parental Involvement			.47**	.56**	-.30**	-.26**	.23**	-.25**	-.12	.10
<u>Mediators:</u>										
4. Parental Knowledge				.52**	-.39**	-.28**	.34**	-.16*	-.16*	.13
5. Parent-Youth Relationship Quality					-.37**	-.20**	.38**	-.21**	-.18**	.13
<u>Adolescent Adjustment:</u>										
6. Adolescent Antisocial Behavior						.50**	-.43**	.13	.18*	-.17*
7. Adolescent Substance Use							-.24**	.37**	.06	-.05
8. Adolescent School Grades								-.26**	-.24**	.25**
<u>Demographic Variables:</u>										
9. Adolescent Age									-.00	.09
10. Adolescent Sex _a										-.03
11. Family Yearly Income										

Note: *** $p < .001$, ** $p < .01$, * $p < .05$, _a = coded 0 = female and 1 = male

Table 3: *Multiple regressions examining link between monitoring behavior and adolescent adjustment controlling for demographic variables*

Step	Predictors	Antisocial Behavior		Substance Use		School Grades	
		Std. β	ΔR^2	Std. β	ΔR^2	Std. β	ΔR^2
1	Adolescent Age	.10	.06**	.35***	.12***	-.29***	.19***
	Adolescent Sex _a	.19**		.04		-.24***	
	Family Yearly Income	-.17*		-.09		.27***	
2	Parental Solicitation	-.12	.07	-.05	.11	.07	.19
1	Adolescent Age	.10	.06**	.35***	.12***	-.29***	.19***
	Adolescent Sex _a	.19**		.04		-.24***	
	Family Yearly Income	-.17*		-.09		.27***	
2	Child Disclosure	-.19**	.09**	-.03	.11	.15*	.21*
1	Adolescent Age	.10	.06**	.35***	.12***	-.29***	.19***
	Adolescent Sex _a	.19**		.04		-.24***	
	Family Yearly Income	-.17*		-.09		.27***	
2	Parental Involvement	-.26***	.11***	-.19**	.14**	.14*	.21*

Note: *** $p < .001$, ** $p < .01$, * $p < .05$; _a = coded 0 = female and 1 = male

Table 4: Summary of regressions testing for mediation involving the link between child disclosure and adolescent adjustment

Mediator	Dependent Variable	IV → DV	IV → Mediator	Mediator → DV	IV → DV _a	Sobel's
		Std. β	Std. β	Std. β	Std. β	Statistic
Parental Knowledge	Antisocial Behavior	-.19**	.50***	-.33***	-.04	-4.00***
Parental Knowledge	School Grades	.15*	.50***	.29***	.01	3.84***
Parent-Youth Relationship Quality	Antisocial Behavior	-.19**	.58***	-.36***	.02	-4.52***
Parent-Youth Relationship Quality	School Grades	.15*	.58***	.29***	-.03	4.05***

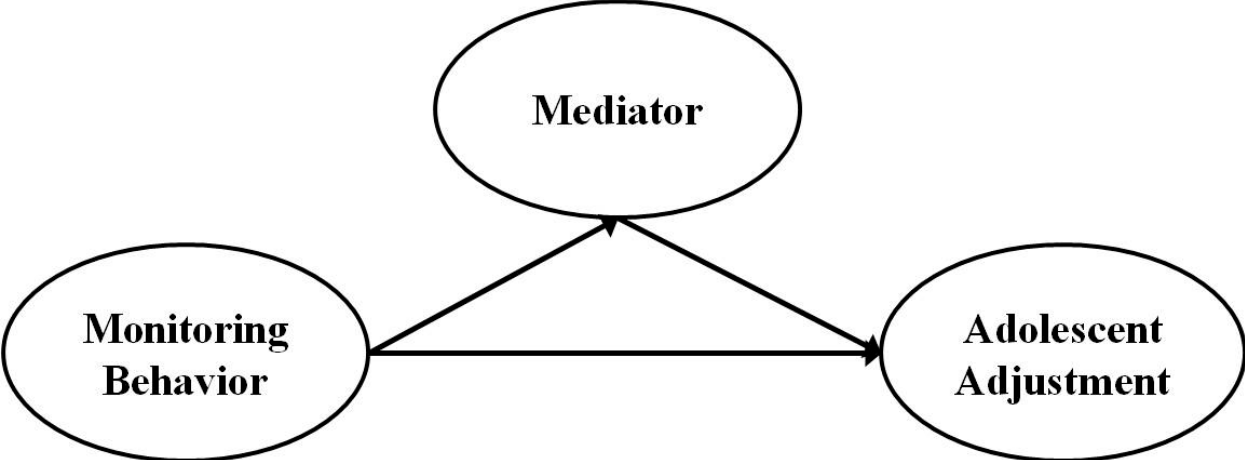
Note: *** $p < .001$, ** $p < .01$, * $p < .05$; All of the regressions reflect standardized betas controlling for youth age, sex, and family yearly income on step 1; _a = controlling for demographic variables and mediator

Table 5: Summary of regressions testing for mediation involving the link between parental involvement and adolescent adjustment

Mediator	Dependent Variable	IV → DV	IV → Mediator	Mediator → DV	IV → DV _a	Sobel's
		Std. β	Std. β	Std. β	Std. β	Statistic
Parental Knowledge	Antisocial Behavior	-.26***	.42***	-.33***	-.15	-3.70***
Parental Knowledge	Substance Use	-.19**	.42***	-.19**	-.14	-2.50*
Parental Knowledge	School Grades	.14*	.42***	.29***	.03	3.57***
Parent-Youth Relationship Quality	Antisocial Behavior	-.26***	.51***	-.36***	-.10	-4.32***
Parent-Youth Relationship Quality	Substance Use	-.19**	.51***	-.16**	-.15	-2.09*
Parent-Youth Relationship Quality	School Grades	.14*	.51***	.29***	.01	3.90***

Note: *** $p < .001$, ** $p < .01$, * $p < .05$; All of the regressions reflect standardized betas controlling for youth age, sex, and family yearly income on step 1; _a = controlling for demographic variables and mediator

Figure 1: *Theoretical Model*



Appendix A: Items used to create each factor (youth reports)

Parental solicitation:

During the past year, how often did your mother begin or start conversation with you about:

1. what you did with friends?
2. what you did during free time?
3. what you did after school, at night, or on weekends?
4. your performances in school?
5. your use of the computer and Internet?
6. what you watched on TV or saw at the movies?

Child disclosure:

During the past year, how often did you begin or start conversation with you about:

1. what you did with friends?
2. what you did during free time?
3. what you did after school, at night, or on weekends?
4. your performances in school?
5. your use of the computer and Internet?
6. what you watched on TV or saw at the movies?

Parental involvement:

During the past year, how often did you and your mother:

1. eat a meal together?
2. go shopping together?
3. go to the movies together?
4. go to a sporting event together?
5. go to church together?
6. do something fun together?
7. watch TV, a videotape, or DVD together?
8. do household chores together?
9. play a board game or cards together?
10. drive in the car together?

Parental knowledge:

During the past year, how often did your mother really know:

1. what you did with friends?
2. what you did during free time?
3. what you did after school, at night, or on weekends?
4. your performances in school?
5. your use of the computer and Internet?
6. what you watched on TV or saw at the movies?

Parent-youth relationship quality:

To what extent are the following statements true about your relationship with your mother?

1. If upset about something, I would talk with my mother about it.
2. I liked telling my mother about myself.
3. It was easy for my mother to be in tune with what I was feeling.
4. I was open about sharing feelings and telling my mother about how things were going.
5. My mother liked asking me about how things were going.
6. If my mother was upset about something, she would talk with me about it.
7. My mother liked telling me about herself.
8. It was easy to be in tune with what my mother was feeling.
9. My mother was very open about sharing feelings and telling me how things were going.
10. I liked asking my mother about how things were going with her.

Adolescent antisocial behavior:

During the past year, how many times did you...

1. Break a rule at home?
2. Break a rule at school?
3. Break a rule somewhere other than home or school?
4. Get into trouble at home?
5. Get into trouble at school?
6. Get into trouble somewhere other than home or school?
7. Get in a fight in which someone was hit?
8. Threaten to hit another kid?
9. Threaten a teacher?
10. Threaten someone with a weapon?
11. Shove or push another kid?
12. Hit or slap another kid?
13. Throw something at someone?
14. Put down someone?
15. Spread a rumor?
16. Pick on someone
17. Exclude someone?
18. Insult someone's family?
19. Give mean looks?
20. Start a fight between others?
21. Skip school?
22. Damage property?
23. Steal from someone?
24. Cheat on a test?
25. Shoplift?
26. Get suspended from school?

Adolescent substance use:

During the past year, how many times did you...

1. Get drunk?
2. Smoke cigarettes?
3. Drink beer?
4. Drink wine or wine coolers?
5. Drink liquor?
6. Smoke marijuana?
7. Use over-the-counter "pep" or energy pills?
8. Use an over-the-counter medicine just to get high?
9. Use a prescription medicine just to get high?

Adolescent school grades:

During the past year, what was your grade for...

1. English
2. Math
3. Science (biology, chemistry, etc.)
4. History

Appendix B: Descriptive statistics for parent and youth reports

	Parent Reports			Youth Reports		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
<u>Monitoring Behavior:</u>						
Parental Solicitation	201	4.11	.70	206	3.01	.90
Child Disclosure	201	3.51	.86	206	2.65	1.03
Parental Involvement	204	3.54	.65	205	3.30	.79
<u>Mediators:</u>						
Parental Knowledge	201	4.06	.72	205	3.55	1.10
Parent-Youth Relationship Quality	204	4.07	.64	206	3.61	.97
<u>Adolescent Adjustment:</u>						
Adolescent Antisocial Behavior	204	1.62	.53	206	1.55	.50
Adolescent Substance Use	204	1.07	.26	206	1.45	.36
Adolescent School Grades	200	3.16	.75	204	3.18	.65

Appendix C: Bivariate correlations for parent and youth reports

	1	2	3	4	5	6	7	8	9	10	11
<u>Monitoring Behavior:</u>											
1. Parental Solicitation		.56***	.43***	.46***	.40***	-.15*	-.18**	.16*	-.19**	-.00	.12
2. Child Disclosure	.66***		.42***	.63***	.51***	-.25***	-.21**	.27***	-.27***	-.13	-.01
3. Parental Involvement	.44***	.61***		.43***	.33***	-.15*	-.18**	.23**	-.25***	-.09	.07
<u>Mediators:</u>											
4. Parental Knowledge	.39***	.39***	.38***		.42***	-.22**	-.28***	.35***	-.33***	-.05	.09
5. P-Y Relationship Quality	.41***	.54***	.59***	.42***		-.20**	-.20**	.42***	-.13	-.07	.16*
<u>Adolescent Adjustment:</u>											
6. Adolescent Antisocial Behavior	-.07	-.20**	-.27***	-.38***	-.27***		.43***	-.33***	-.01	.14	-.18*
7. Adolescent Substance Use	.00	-.07	-.22**	-.18**	-.19**	.51***		-.24**	.27***	.06	-.14
8. Adolescent School Grades	.10	.16*	.67*	.29***	.31***	-.38***	-.16*		-.25***	-.22**	.25**
<u>Demographic Variables:</u>											
9. Adolescent Age	.03	-.14*	-.78*	-.02	-.20**	.24***	.40***	-.24**		-.00	.09
10. Adolescent Sex _a	-.10	-.21**	-.11	-.20**	-.21**	.18**	.06	-.23**	-.00		-.03
11. Family Yearly Income	.07	.08	.08	.12	.08	-.10	.00	.22**	.09	-.03	

Note: *** $p < .001$, ** $p < .01$, * $p < .05$, _a = coded 0 = female and 1 = male; P-Y = parent-youth; correlations above the diagonal = parent report, correlations below diagonal = youth report

Appendix D: Multiple regressions examining link between monitoring behavior and adolescent adjustment controlling for demographic variables (parent and youth reports)

Step	Predictors	Antisocial Behavior				Substance Use			
		Parent Reports		Youth Reports		Parent Reports		Youth Reports	
		Std. β	ΔR^2	Std. β	ΔR^2	Std. β	ΔR^2	Std. β	ΔR^2
1	Adolescent Age	-.03	.05*	.22**	.10***	.25**	.08**	.38***	.15***
	Adolescent Sex _a	.12		.20**		.03		.04	
	Family Yearly Income	-.18		-.12		-.16*		-.03	
2	Parental Solicitation	-.14	.02	-.08	.10	-.11	.09	-.01	.15
1	Adolescent Age	-.03	.05*	.22**	.10***	.25**	.08**	.38***	.15***
	Adolescent Sex _a	.12		.20**		.03		.04	
	Family Yearly Income	-.18*		-.12		-.16*		-.03	
2	Child Disclosure	-.24**	.10**	-.14	.11	-.08	.09	-.10	.15
1	Adolescent Age	-.04	.05*	.22**	.10***	.25**	.08**	.38***	.15***
	Adolescent Sex _a	.14		.20**		.03		.04	
	Family Yearly Income	-.17*		-.11		-.16*		-.03	
2	Parental Involvement	-.14	.07	.22**	.14**	-.13	.10	-.16*	.17*

Appendix D continues

Appendix D (cont.)

		School Grades			
		Parent Reports		Youth Reports	
Step	Predictors	Std. β	ΔR^2	Std. β	ΔR^2
1	Adolescent Age	-.27***	.18***	-.27***	.17***
	Adolescent Sex _a	-.22**		-.22**	
	Family Yearly Income	.27***		.24**	
2	Parental Solicitation	.09	.01	.10	.18
1	Adolescent Age	.27***	.18***	-.27***	.17***
	Adolescent Sex _a	-.22**		-.22**	
	Family Yearly Income	.27***		.24**	
2	Child Disclosure	.21**	.22**	.08**	.18
1	Adolescent Age	-.28***	.19***	-.30***	.19***
	Adolescent Sex _a	-.22**		-.20**	
	Family Yearly Income	.28***		.27***	
2	Parental Involvement	.16*	.21*	.08	.20

Note: *** $p < .001$, ** $p < .01$, * $p < .05$; _a = coded 0 = female and 1 = male

Appendix E: Summary of regressions testing for mediation involving the link between child disclosure and adolescent adjustment (parent reports)

Mediator	Dependent Variable	IV → DV	IV → Mediator	Mediator → DV	IV → DV _a	Sobel's Statistic
		Std. β	Std. β	Std. β	Std. β	
Parental Knowledge	Antisocial Behavior	-.24**	.56***	-.21**	-.18*	-2.63**
Parental Knowledge	School Grades	.21**	.56***	.27***	.09	3.58***
Parent-Youth Relationship Quality	Antisocial Behavior	-.24**	.51***	-.44***	-.00	-5.08
Parent-Youth Relationship Quality	School Grades	.21**	.51***	.37***	.02	4.67***

Note: *** $p < .001$, ** $p < .01$, * $p < .05$; All of the regressions reflect standardized betas controlling for youth age, sex, and family yearly income on step 1; _a = controlling for demographic variables and mediator

Appendix F: Summary of regressions testing for mediation involving the link between child disclosure and adolescent adjustment (youth reports)

Mediator	Dependent Variable	IV → DV	IV → Mediator	Mediator → DV	IV → DV _a	Sobel's
		Std. β	Std. β	Std. β	Std. β	Statistic
Parental Knowledge	School Grades	.08**	.56***	.27***	.09	3.58***
Parent-Youth Relationship Quality	School Grades	.08**	.50***	.22**	-.03	4.67***

Note: *** $p < .001$, ** $p < .01$, * $p < .05$; All of the regressions reflect standardized betas controlling for youth age, sex, and family yearly income on step 1; _a = controlling for demographic variables and mediator

Appendix G: Summary of regressions testing for mediation involving the link between parental involvement and adolescent adjustment (parent reports)

Mediator	Dependent Variable	IV → DV	IV → Mediator	Mediator → DV	IV → DV _a	Sobel's
		Std. β	Std. β	Std. β	Std. β	Statistic
Parental Knowledge	School Grades	.16*	.38***	.27***	.09	3.19**
Parent-Youth Relationship Quality	School Grades	.16*	.31***	.37***	.05	3.47***

Note: *** $p < .001$, ** $p < .01$, * $p < .05$; All of the regressions reflect standardized betas controlling for youth age, sex, and family yearly income on step 1; _a = controlling for demographic variables and mediator

Appendix H: Summary of regressions testing for mediation involving the link between parental involvement and adolescent adjustment (youth reports)

Mediator	Dependent Variable	IV → DV	IV → Mediator	Mediator → DV	IV → DV _a	Sobel's
		Std. β	Std. β	Std. β	Std. β	Statistic
Parental Knowledge	Antisocial Behavior	-.22**	.34***	-.33***	-.12	-3.46***
Parental Knowledge	Substance Use	-.16*	.34***	-.16*	-.12	-2.06*
Parent-Youth Relationship Quality	Antisocial Behavior	-.22**	.55***	-.22**	-.13	-2.87**
Parent-Youth Relationship Quality	Substance Use	-.16*	.55***	-.13	-.13	-1.76

Note: *** $p < .001$, ** $p < .01$, * $p < .05$; All of the regressions reflect standardized betas controlling for youth age, sex, and family yearly income on step 1; _a = controlling for demographic variables and mediator

VITA

Tammy K. Lee

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Master of Science

Thesis: LINK BETWEEN MONITORING BEHAVIOR AND ADOLESCENT
ADJUSTMENT: EXAMINATION OF MEDIATION EFFECTS

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Title of Study: LINK BETWEEN MONITORING BEHAVIOR AND ADOLESCENT
ADJUSTMENT: EXAMINATION OF MEDIATION EFFECTS

Pages in Study: 53

Candidate for the Degree of Master of Science

Major Field: Human Development and Family Science

Scope and Method of Study:

The purpose of this cross-sectional study was to examine the link between monitoring behavior (parental solicitation, child disclosure, parental involvement,) and adolescent adjustment (antisocial behavior, substance use, academic achievement) and whether this link was mediated by parent-child relationship quality and parental knowledge. The sample consisted of 206 families with adolescent who participated in the Family and Youth Development Project.

Findings and Conclusions:

The results indicate that high levels of child disclosure and parental involvement were associated with low levels of antisocial behavior and high levels of academic achievement. In addition, following the criteria of Baron and Kenny (1986), parental knowledge and parent-child relationship quality were found to fully mediate the link between monitoring behavior and adolescent adjustment.

ADVISER'S APPROVAL: Dr. Michael Criss
