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The Relationship Between Parental Knowledge and Monitoring and Child and Adolescent Conduct Problems: A 10-Year Update

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Abstract Inadequate parental monitoring is widely recognized as a risk factor for the development of child and adolescent conduct problems. However, previous studies examining parental monitoring have largely measured parental knowledge and not the active methods used by parents to track the activities and behavior of their children. The seminal work of Stattin and Kerr (Child Dev 71:1072–1085, 2000; Kerr and Stattin in Dev Psychol 36:366–380, 2000) has challenged the field to reinterpret the construct of parental monitoring, focusing on the active components of this parenting behavior. As a result, this area of research has witnessed a resurgence of activity. The goal of the current paper is to review the evidence regarding the relationship between parental knowledge and monitoring and child and adolescent conduct problems that has accumulated during the past decade. Forty-seven studies published between 2000 and 2010 were identified by searching major databases and bibliographies and were included in this review. This paper will examine the following areas: (a) "parental monitoring" as "parental knowledge"; (b) parental knowledge as driven by child disclosure; (c) the relationship between parental knowledge and monitoring and child and adolescent conduct problems; (d) bidirectional associations between parental knowledge and monitoring and child and adolescent conduct problems; (e) contextual influences on parental knowledge and monitoring; (f) antecedents of parental knowledge and monitoring; (g) clinical implications of research on parental knowledge and monitoring; and (h) limitations of existing research and future directions.

Keywords Parenting · Parental monitoring · Parental knowledge · Conduct problems · Delinquency

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Child and adolescent conduct problems define a broad range of behaviors, including aggression, oppositionality, delinquency, and antisociality. These behaviors are associated with several severe negative outcomes in later adolescence and adulthood, including school dropout, unemployment, and criminal behavior (Fergusson and Horwood 1998; Jessor 1998; Loeber and Dishion 1983). Childhood conduct problems are the leading reason for referrals to mental health services in the United States (Loeber et al. 2000). Additionally, the estimated cost to society as a result of these behavior problems ranges from $335 to $350 billion per year (as reported in 1998; Miller 2004). As a result of these adverse outcomes and the extreme cost to society, much research has focused on the prevalence, development, and prevention of conduct problems in children and adolescents.

Poor parenting is one of the many risk factors implicated in the development of conduct problems (Hinshaw and Lee 2003). Negative parenting behaviors shown to predict child conduct problems include low parental involvement, poor supervision, and harsh, inconsistent discipline (Frick et al. 1992; Hoeve et al. 2009; Loeber and Stouthamer-Loeber 1986; Patterson 1982; Patterson and Stouthamer-Loeber 1984; Stormshak et al. 2000). Additionally, studies have found that the development of child conduct problems results

from a bidirectional interaction of child and parent behavior (Colder et al. 1997; Collins et al. 2000; Hinshaw and Lee 2003; Laird et al. 2003a; Lytton 1990; Pettit and Arsiwalla 2008). These studies indicated that children are not passive recipients of parenting behavior, but rather are active participants in interactions with parents (Chamberlain and Patterson 1995; Donenberg and Baker 1993; Pardini 2008). Overall, research examining parenting as a risk factor for child conduct problems emphasizes that parents and children influence each other in a dynamic, reciprocal fashion.

Parental Monitoring as a Risk Factor for the Development of Conduct Problems

Parental monitoring is defined as "a set of correlated parenting behaviors involving attention to and tracking of the child's whereabouts, activities, and adaptations" (Dishion and McMahon 1998, p. 61). This definition identifies good parental monitoring as actively structuring the child's environment (e.g., enrolling the child in after-school programs, setting up play dates with friends, establishing rules about the child's activities) and actively tracking the child's whereabouts (e.g., contacting the child via cell phone, checking in with the parents of the child's friends). It is also important to acknowledge that the structure of parental monitoring changes as the child moves from childhood to adolescence. During childhood, parental monitoring takes place mostly within the context of the home and school. As the child grows into adolescence and young adulthood, parents must adjust their techniques to monitor the teenager's unsupervised activities with peers and within the broader community.

Early studies on parental monitoring followed from clinical observations noting that parents with conduct-disordered children often fail to supervise, track, and set rules regarding their children's behavior and activities (Glueck and Glueck 1950; Hirschi 1969; Patterson 1982; Patterson and Dishion 1985; Patterson and Stouthamer-Loeber 1984). Since then, research has continued to document the consistent link between parental monitoring and child and adolescent conduct problems (Crouter and Head 2002; Dishion and McMahon 1998; Sampson and Laub 1994; Weintraub and Gold 1991). Poor parental monitoring has also been identified as the best predictor of adolescent antisocial behavior as compared to other parenting behaviors (Loeber and Dishion 1983; Loeber and Stouthamer-Loeber 1987). Furthermore, low levels of parental monitoring were significantly associated with serious criminal behavior (according to court records) in adult males as measured 30 years later (McCord 1979).

However, research on parental monitoring is limited by the use of differing and vague definitions. As a result, the terminology used to refer to parental monitoring in previous studies has been inconsistent. The various definitions of parental monitoring have included direct supervision, knowledge of the child's whereabouts, telephone contact between the parent and child, and rules about the child's activities. Despite the wide use of the term "parental monitoring," there still remains little agreement regarding the definition of this construct.

Purpose of the Current Paper

The seminal work by Stattin and Kerr (2000; Kerr and Stattin 2000) has further challenged the construct validity of parental monitoring by arguing that previous studies have examined parental knowledge and not the active parental efforts of attending to and tracking children and their activities. As a result, research examining parental monitoring has changed dramatically in the past decade, as researchers are attempting to shift their understanding of this construct. This paper will therefore specifically review studies published since Stattin and Kerr's work in 2000 that have examined the relationship between parental monitoring and child and adolescent conduct problems. The review will focus specifically on studies published between 2000 and 2010 that have attempted to address this new understanding of parental monitoring. Using these guidelines, 47 studies were included in this review as identified by searching major databases and bibliographies (see Table 1 for a summary of these studies).

However, even after publication of Stattin and Kerr's reinterpretation of parental monitoring, researchers continue to label the construct "parental monitoring" when the measure actually represents "parental knowledge" (e.g., Bailey et al. 2009; DiClemente et al. 2001; Dillon et al. 2008; Pettit et al. 2007; Smetana et al. 2002; Smetana and Daddis 2002). Additionally, some researchers have confounded their measure of parental monitoring by combining items related to parental knowledge with items addressing parental monitoring (e.g., Fisher et al. 2003; Hayes et al. 2004; Patrick et al. 2005; Pinderhughes et al. 2008). Notably, of the 47 studies reviewed for the current paper, 26 examined parental knowledge (and approximately half of these studies used the term "parental monitoring" to describe their measure of parental knowledge), while only 7 assessed parental monitoring. Furthermore, only 9 of the 47 studies examined parental monitoring and knowledge separately, demonstrating careful conceptualization and operationalization of their measures. These issues regarding terminology and methodology have muddled conclusions regarding parental monitoring and its relationship with child and adolescent conduct problems.

The current paper will examine the following areas, which have been the focus of research on parental

Table 1 Summary of reviewed studies examining the relationship between parental knowledge and monitoring and child and adolescent conduct problems

Study	Sample[a]	N[b]	Age[c]	Sex	Region/Ethnicity[d]	Design[e]	Measures/Reporter[f]
Bailey et al. (2009)	HR CO	808 (G1 to G2); 136 (G2 to G3)	G2: $M = 13.5$ at T1, $M = 27.5$ at T2; G3: $M = 9$ at T2	G1: 83% female, G2: 64% female; G3: 49% female	G1: 22% AA, 51% WH; G2: 23% AA, 38% WH; G3: 20% AA, 32% WH	L	EXT/TR; PK, harsh discipline, parent substance use, interparental abuse, demographic risk (single parent, low education, high neighborhood disorganization, poverty)/PR
Barrera et al. (2001)	CO	1450	7th grade ($M = \sim 12$)	~50% female	Small OR communities/500 WH, 546 HI, 404 NA	C	Family conflict, positive family relations, PK, deviant peer associations, ASB, poor school performance, substance use/CR
Burke et al. (2008)	CL	177	T1: range 7–12 (annual assessment until 17)	100% male	Pittsburgh, PA; Athens & Atlanta, GA/70% WH, 30% AA	L	Disruptive behavior disorders (ADHD, ODD, CD) symptoms/CR, PR, TR; supervision/PK, parent psychopathology and substance use, timid and harsh discipline, poor communication, parent involvement/PR
De Los Reyes et al. (2010)	CO	335 & mothers/female caregivers	T1: Grades 5 & 8; $M = 12.11$, SD = 1.60; range 9–16; T2: 1 year later; T3: 2 years later	182 females	Midsized southern city in moderate-to-high violence areas/91.3% AA, 3.6% WH	L	PK, child disclosure, parental solicitation/CR, PR; depression, DEL/CR; maternal depression, maternal stress/PR
DiClemente et al. (2001)	HR CO	522	Range 14–-18	100% female	100% AA	C	PK, STDs, risky sexual behavior, substance use, DEL/CR
Dillon et al. (2008)	CL	190 & guardians	$M = 15.57$, range 12–17	27 females	Miami, FL/113 HI, 77 AA	C	Family functioning, marijuana use, sexual risk/CR; EXT/PR; PM of peers/CR, PR
Dishion et al. (2004)	HR CO	206	T1: Range 9–10; yearly assessments until age 15–16	100% male	High crime neighborhoods in Pacific Northwest/90% WH	L	Deviant peer process, family management (monitoring, relationship quality, positive parenting)/OR; marijuana use/CR; ASB/CR, PR, TR
Eaton et al. (2009)	CO	575; 258 mothers	$M = 15.2$, SD = 2.01	58.3% female	MN/48.4% WH, 43.6% AS, 8% other	C	Personality, PK, parental solicitation, child disclosure, DEL/CR, PR
Fisher et al. (2003)	CO	191 families	Range 5–8	~46% female	OR/mainly WH	C	Family structure, parental solicitation, PK/PR, TR, INT
Fletcher et al. (2004)	CO	2,568	T1: 9th, 10th, 11th, or 12th grade; T2: 1 year later	54% female	WI & CA/66% WH, 16% AS, 11% HI, 7% AA	L	Parental warmth, PM, PK, behavior problems (substance use, DEL)/CR
Hayes et al. (2004)	CO	1,285	$M = 14.67$, SD = .51; range 13–16	52.3% female	Victoria, Australia/NR	C	Family management (parental control, solicitation and knowledge), family conflict, adolescent problem behavior/CR
Jacobson and Crockett (2000)	CO	424	Grades 7–12	227 females	Rural PA/100% WH	C	SES, family structure, maternal employment, PK, DEL, sexual activity, emotional adjustment, school functioning/CR
Jones et al. (2003)	CO	277 families	T1: $M = 11.40$, range 7–15; T2: 15 months later	50% female	Southeastern US/100% AA	L	Extrafamilial factors (neighborhood structure, risks, mother's social support), family factors (# of children, family income, parent conflict), mother factors (age, education, depression), child factors (age, sex), PK/PR; behavior problems/CR

Table 1 continued

Study	Sample[a]	*N*[b]	Age[c]	Sex	Region/Ethnicity[d]	Design[e]	Measures/Reporter[f]
Keijsers et al. (2010)	CO	289 families	T1: *Mode* = 14; T2: 1 year later	150 females	Urban areas of Netherlands/100% Dutch	L	PM, PK, adolescent disclosure/PR, CR; leisure time with parents and peers, DEL/CR
Keijsers et al. (2009)	CO	309 families	T1: 10th grade, *Mode* = 13.4 (annual assessment)	160 females	Netherlands/100% Dutch	L	PM, child disclosure/CR, PR; parental support, DEL/CR
Kerns et al. (2001)	CO	176 families	3rd grade ($M = 9.12$) & 6th grade ($M = 12.08$)	90 females	NR/89% WH, 6% AA	C	Attachment/CR; willingness to serve as attachment figure/PR; PK, child disclosure/CR, PR
Kerr and Stattin (2000)	CO	1,186; 1,077 parents; 36 teachers	14	Mixed (% NR)	Mid-sized city in Sweden/NR	C	PK, PM, child disclosure, child adjustment (DEL, depression, low self-esteem, failure expectations, deviant friends, poor relations with parents, feeling controlled)/CR, PR; school problems/CR, PR, TR
Kerr and Stattin (2003a)	CO	1,186; 1,077 parents	T1: 14; T2: 2 years later	NR	Mid-sized city in Sweden/NR	L	Study 1: DEL, child disclosure, PM, parental support, parents' bad reactions to disclosure/CR, PR. Study 2: child problem behavior, parent "gut-level" reaction, PM/CR, PR
Kerr et al. (2010)	CO	938; T1: 713 parents, T2: 830 parents	T1: $M = 13.51$, SD = .53; T2: range 14–17	Mixed (% NR)	Small city in Sweden/NR	L	PK, PM, child disclosure, DEL, parent–child relationship quality/CR, PR
Kerr et al. (2008)	CO	T1: 1,641, 1,225 parents; T3: 1,471, 943 parents	T1: 4th–8th grade, range 10–14; T3: 2 years later	NR	Sweden/NR	L	DEL/CR; child defiance and disclosure, parental "gut-level" reactions, PM/PR
Kiesner et al. (2009)	CO	T1: 303, 140 parents; T2: 286, 267 parents	T1: $M = \sim 14$; T2: 1 year later	~50% female	Moderate-sized Italian city & metropolitan Canadian city/146 Italian; 123 French Canadian	L	PM, child disclosure, ASB/CR, PR; substance use/CR
Kilgore et al. (2000)	HR	123 families	T1: $M = 53.7$ months (start Head Start); T2: end Head Start; T3: K	74 females	Low-income, impoverished, high crime Midwestern metropolitan area/100% AA	L	Child conduct problems/TR, PR, OR; PM/TR, PR; parent discipline/TR, OR; family income and disadvantage/PR and records; school characteristics/school records
Klein et al. (2000)	CL	212 mom–child dyads	T1: $M = 8.92$, SD = 1.75; range 6–12; T2: 12–14 months later	51% female	Low-income New Orleans, LA neighborhoods/100% AA	L	Child stressful life events, depression/CR; mom's age at birth, education level, HIV status, reading ability, psychological distress, stressful life events, economic stress, child anxious-depressive mood, child disruptive behavior, PK/PR; supportive mom–child relationship/CR, PR
Lahey et al. (2008)	CO	3,545 & mothers	T1: range 12–13 & 14–15; T2: range 16–17	~47% female	USA/~47% WH, 30% AA, 21% HI	L	PK, child disclosure, parent limit setting, neighborhood risk, peer pressure, DEL/CR

Table 1 continued

Study	Sample[a]	*N*[b]	Age[c]	Sex	Region/Ethnicity[d]	Design[e]	Measures/Reporter[f]
Laird et al. (2009)	CO	404 & parents	Range 10–16 (7 time points)	51.9% female	Nashville, Knoxville, TN & Bloomington, IN/85.1% WH	L	Distal supervision (PK and family rules for behavior), peer ASB/CR; behavior problems, neighborhood safety, SES/PR
Laird et al. (2008)	CO	504 & parents	Ages 12, 13, 14, 15, 16 (annual assessment)	50% female	Nashville, Knoxville, TN & Bloomington, IN/% NR	L	PK, peer ASB/CR; DEL/CR, PR
Laird and Marrero (2010)	CO	218 mom–teen dyads	T1: $M = 11.92$, range 10.58–13.75; T2: 1 year later	49% female	Southern US city/49% WH, 47% AA, 3% AS, 1% HI	L	Child disclosure, depression, behavior problems, authority beliefs/CR; child rule-breaking, trust/PR
Laird and Marrero (2011)	CO	C1: 106 mom–teen dyads; C2: 85 mom–teen dyads	C1: $M = 11.39$; C2: $M = 12.47$	C1: 55% female; C2: 49% female	Midsized southern US city/45% WH, 50% AA, 2.8% AS, 1% HI	C	Middle school transition, pubertal development, unsupervised activities, PK/CR, PR; authority beliefs, autonomy expectations, disclosure/CR; PM/PR
Laird et al. (2010a)	CO	218 & mothers	T1: $M = 11.5$, SD = .51; T2: 1 year later	51% female	Mid-sized southern US city/49.1% WH, 47.2% AA	L	Child disclosure, PM/CR, PR; ASB, unsupervised time, legitimacy beliefs/CR
Laird et al. (2010b)	CO	86 parent–child dyads	6th, 7th, 8th grade	59% female	Baton Rouge, LA/42% WH, 52% AA	L	Behavior problems, depression, parent–adolescent relationship quality, PM, child disclosure, perceived parental knowledge/CR
Laird et al. (2003a)	CO	396 & parents	T1: $M = 14.33$, SD = .33; range 9th–12th grade	52% female	Nashville, Knoxville, TN & Bloomington, IN/17.4% ethnic minority	L	PK, DEL/CR, PR
Laird et al. (2003b)	CO	426 & parents	T1: 8th grade, $M = 14$, SD = .33; (annual assessment)	50% female	Nashville, Knoxville, TN & Bloomington, IN/83% WH, 16% AA	L	PK/CR; ASB, parental involvement/CR, PR; enjoyment of parent–adolescent relationship, parental lack of follow-through/PR
Neumann et al. (2010)	CO	4,597	T1: 12 (annual assessment until 17)	49% female	Edinburgh/94.2% WH	L	ASB, informal social control, family type, impulsivity, PK/CR; neighborhood economic deprivation/census data; low family income/school records
Pardini et al. (2008)	HR CO	Varied (729–122)	6.5–16.5 (assessment every 6 months)	100% male	Pittsburgh, PA/95.85% either WH or AA	L	Child conduct problems/PR, TR; parenting practices (PK, communication, physical punishment, positive reinforcement, timid parenting, parental involvement)/PR
Patrick et al. (2005)	CO	267	T1: $M = 5.3$; T2: 1st grade; T3: 3rd/4th grade	133 females	Low SES neighborhood in a mid-sized city/29% ethnic minority	L	Child disclosure, PM/PR, CR; PK/CR, PR, TR; early parental warmth and communication/OR; early tracking/PR; child conduct problems/OR, PR, TR, CR
Pettit et al. (2007)	CO	522 & parents	pre-K, 5th, 6th, 8th, 11th grade	51% female	Nashville, Knoxville, TN & Bloomington, IN/80% WH, 18% AA, 1.9% other	L	PM, PK, behavior-change campaign, resistant-to-control (RTC) temperament, proactive parenting/PR
Pettit and Laird (2002)	CO	T1: 585; T2: 456	T1: $M = 5$ (annual assessment until 14)	NR	Nashville, Knoxville, TN & Bloomington, IN/80% WH, 18% AA, 1.9% other	L	Harsh discipline, proactive teaching, EXT/PR; parental involvement, PK, parental rules/PR, CR; DEL, anxiety/TR, PR, CR

Table 1 continued

Study	Sample[a]	*N*[b]	Age[c]	Sex	Region/Ethnicity[d]	Design[e]	Measures/Reporter[f]
Pettit et al. (2001)	CO (CDP)	440 and their parents	T1: 5; T2: 3rd–5th grade; T3: 8th & 9th grade	50% female	Nashville, Knoxville, TN & Bloomington, IN/17% ethnic minority at T3	L	PK/CR, PR; DEL/CR, PR, TR; early parenting style, SES, marital status, EXT/PR
Pinderhughes et al. (2008)	HR	368	T1: $M = 6.33$, SD = .42 (annual assessment until 10th grade)	49% female	Durham, NC; Nashville, TN; Seattle, WA; rural PA/49% ethnic minority	L	PM, PK, warmth, communication, behavioral control, parent self-efficacy, SES, neighborhood, family stress, experience of racial socialization, religiosity/CR, PR
Richards et al. (2004)	CO	205 & parents	5th–8th grade	55% female	Low-income urban area/ 100% AA	C	PK, DEL/CR, PR; drug and alcohol use/CR; aggression/ PR
Smetana et al. (2002)	CO	86 & mothers	$M = 13.08$, SD = 1.32, range 11–15	42 females	Upstate NY, middle-class area/100% AA	C	PK, family decision making, family rules, problem behaviors/CR, PR; parent–adolescent conflict, attachment to parents/CR; parent–adolescent communication/OR
Smetana and Daddis (2002)	CO	93 & mothers	T1: $M = 13.11$, SD = 1.29; T2: 1 year later	47 females	Upstate NY, middle-class area/100% AA	L	PK/CR and PR; beliefs about parental authority, perceptions of restrictive parenting/CR
Soenens et al. (2006)	CO	690; 566 mothers, 519 fathers	$M = 17$; range 15–21	342 females	Midsized Belgian city/NR	C	Parenting (responsiveness, psychological control, behavioral control), disclosure, PK/CR, PR; peer and self substance use, peer and self DEL/CR
Stattin and Kerr (2000)	CO	703; 539 parents	14	Mixed (% NR)	Rural Sweden/NR	C	PK, PM, child disclosure, child behavior problems, parent–child relationship, family closeness/CR, PR
Vieno et al. (2009)	CO	840; 657 mothers	$M = 12.58$, SD = .93; range 11–15	Mixed (% NR)	Padova (midsized city in NE Italy)/95.3% Italian	C	Parent–child closeness, parental control, ASB/CR, PR; disclosure, PK/CR
Weisskirch (2009)	CO	196 & parents	Range 13.52–19.31; $M = 16.25$, SD = 1.17	76% female	Suburban CA city/83% WH	C	Cell phone usage, truthfulness, call initiation, PK/CR, PR; family relations/CR
Willoughby and Hamza (2011)	CO	2,941	Range 14–17 (9th–12th grade)	50.3% female	Ontario, Canada/92.4% Canadian	L	PK, PM, family fun activities, adolescent disclosure, substance use, DEL/CR

NR Not reported

[a] HR = high-risk, CO = community sample, CL = clinical. [b] G1 = 1st generation, G2 = 2nd generation, G3 = 3rd generation, T1 = 1st time point, T2 = 2nd time point, T3 = 3rd time point, C1 = Cohort 1, C2 = Cohort 2. [c] Reported as age in years, unless otherwise noted. [d] AA = African American, WH = White/Caucasian, HI = Hispanic, NA = Native American, AS = Asian. [e] L = longitudinal, C = cross-sectional. [f] EXT = externalizing behavior, TR = teacher report, PK = parental knowledge, PR = parent report, PM = parental monitoring (parental solicitation and control), ASB = antisocial behavior, CR = child report, DEL = delinquency, INT = interviewer report, SES = socioeconomic status, OR = observer report

monitoring during the past decade: (a) "parental monitoring" as "parental knowledge"; (b) parental knowledge as driven by child disclosure; (c) the relationship between parental knowledge and monitoring and child and adolescent conduct problems; (d) bidirectional associations between parental knowledge and monitoring and child and adolescent conduct problems; (e) contextual influences on parental knowledge and monitoring; (f) antecedents of parental knowledge and monitoring; and (g) clinical implications of research on parental knowledge and monitoring. The paper will then close with a discussion of the limitations of existing research and directions for future research.

"Parental Monitoring" as "Parental Knowledge"

Stattin and Kerr's (2000; Kerr and Stattin 2000, 2003a, b) seminal work argues that previous measures of parental monitoring have actually assessed the end product of monitoring (i.e., knowledge gained about children and their activities) and therefore have not tapped into the actual active methods of monitoring. Of these knowledge measures, most have focused on children's and adolescents' perceptions of the amount of knowledge obtained by their parents (Laird et al. 2010b). For example, previous measures used as indicators of parental monitoring have included the following questions: (a) "How much do your parents really *know* who your friends are?"; (b) "Do your parents *know* where you are when you are away from home?"; and (c) "In my free time away from home, my parents *know* who I'm with and where I am" (italics added for emphasis; Crouter and Head 2002; Stattin et al. 2010). Their argument calls into question the validity of empirical research documenting the relationship between parental monitoring and child and adolescent conduct problems. According to Stattin and Kerr's viewpoint, the most appropriate conclusion to draw from these studies is that high levels of "parental knowledge," not "parental monitoring," are associated with low levels of child and adolescent conduct problems.

Stattin and Kerr (2000) hypothesized three possible sources of this parental knowledge: (a) child disclosure (children tell parents about their activities spontaneously), (b) parental solicitation (parents ask children and/or children's friends for information), and (c) parental control (parents use rules and restrictions to limit children's ability to engage in activities without informing their parents). Parental solicitation and control are considered to be active parental efforts to attend to and track children's activities, whereabouts, and peer associations. To test their hypothesis regarding these three sources of parental knowledge, Kerr and Stattin (2000) created a 15-item monitoring questionnaire. A principal components factor analysis of this measure revealed three factors: (a) child disclosure (e.g., "Do you usually tell how school was when you get home?" and "Do you keep a lot of secrets from your parents about what you do during your free time?"); (b) parental solicitation (e.g., "Have your parents talked with the parents of your friends?" and "How often do your parents initiate a conversation about things that happened during a normal day at school?"); and (c) parental control (e.g., "Do you need to have your parents' permission to stay out late on a weekday evening?" and "If you have been out very late one night, do your parents require that you explain what you did and whom you were with?"). In keeping with this recent reconceptualization, the remainder of this paper will reserve the term "parental monitoring" for the active parental monitoring techniques of solicitation and control.

To further test their three-factor hypothesis, Stattin and Kerr (2000) examined data from 703 14-year-old children living in rural Sweden. According to both parent and child report, child disclosure, parental solicitation, and parental control were positively associated with parental knowledge. However, the correlation was strongest between child disclosure and parental knowledge, indicating that parents received more information from child disclosure than from either parental solicitation or control. Child disclosure accounted for a majority of the variance in parental knowledge (44% according to child report; 38% according to parent report), and the addition of parental solicitation and control explained a significant but relatively small increase in variance (3% according to child report; 5% according to parent report). Child disclosure, but not parental solicitation or control, has also been found to be a significant longitudinal predictor of parental knowledge, as more child disclosure led to more parental knowledge 1 year later (Kerr et al. 2010). Whereas earlier studies assumed that parents mainly gain knowledge about their children through their own active monitoring efforts, Stattin and Kerr's findings have consistently indicated that child disclosure is the key component in parental knowledge.

Throughout Stattin and Kerr's studies (Kerr and Stattin 2000, 2003a; Stattin and Kerr 2000), parental knowledge has been shown to be negatively associated with child conduct problems. Additionally, higher levels of child disclosure and parental control and lower levels of parental solicitation predict lower levels of conduct problems, with child disclosure as the best predictor of conduct problems in these analyses. This finding is surprising, given that researchers have previously assumed that parental solicitation would be associated with fewer conduct problems (e.g., Dishion and McMahon 1998). The interpretation of this finding could suggest that the more parents ask

children about their whereabouts and activities, the more likely children are to engage in problematic behaviors. Following this viewpoint, Stattin and Kerr (2000) suggested that children may view parental solicitation as invasive and overly controlling, and may react to this intrusion by engaging in even more conduct problems. Alternatively, this finding could also indicate that increased levels of parental solicitation are a *reaction* to children with concurrently high levels of problematic behavior. The direction of this finding is not clear, given that Stattin and Kerr's early studies (Kerr and Stattin 2000, 2003a; Stattin and Kerr 2000) were cross-sectional in nature. However, several longitudinal analyses have documented that more parental solicitation predicts more child conduct problems, even after controlling for current and prior levels of child conduct problems (Kerr et al. 2010; Kiesner et al. 2009; Willoughby and Hamza 2011). Furthermore, parental control has been found to lead to negative feelings of being controlled among adolescents (Kerr and Stattin 2000). These feelings of being controlled were associated with a range of adjustment problems, including depression and low self-esteem. Parental solicitation and control also do not appear to encourage future child disclosure nor deter future conduct problems (Kerr et al. 2010). This evidence suggests that parental monitoring may not be as effective as previously thought and may in fact have a negative effect on children's adjustment and behavior.

Several researchers have cautioned that Stattin and Kerr's conclusions may be interpreted as evidence that parents have little to no effect on whether children will engage in conduct problems (Brody 2003; Fletcher et al. 2004; Lahey et al. 2008). In terms of practical implications, other researchers have posited that Stattin and Kerr's findings will lead to the idea that parents do not need to monitor their children's behavior (Capaldi 2003). These researchers argue that such an interpretation would be inconsistent with the broader monitoring literature supporting the link between parental knowledge and monitoring and conduct problems (e.g., Crouter and Head 2002; Dishion and McMahon 1998; Patterson and Stouthamer-Loeber 1984). Additionally, these researchers note that parents may have a direct effect on whether children disclose on not. This effect is hypothesized to operate through a positive and supportive parent–child relationship, which in turn may lead to more child disclosure. Fletcher et al. (2004) tested a model whereby parental warmth was included with parental knowledge, control, and solicitation. The findings from this longitudinal study indicated that the relationship between parental warmth and child conduct problems was mediated by parental knowledge, such that warm parents were also more knowledgeable. The authors also found support for direct and indirect (through parental knowledge) effects of parental control and solicitation on child conduct problems. These findings led Fletcher and colleagues to conclude that parental monitoring does matter and can have a direct influence on the likelihood that children will engage in conduct problems.

Stattin and Kerr (2000; Kerr and Stattin 2000, 2003a, b; Kerr et al. 2010) have been careful in framing their conclusions and interpretations of their findings, stating that they do not believe that parents have no influence on child behavior. Rather, Stattin and Kerr have noted that there was still a relationship between parental monitoring and child conduct problems in their studies, even after controlling for child disclosure. Therefore, an important area of future research should include an exploration of additional factors that might have an influence on the relationship between child and adolescent conduct problems and parental monitoring.

Parental Knowledge as Driven by Child Disclosure

Researchers are beginning to recognize that parental knowledge involves both parent-driven (i.e., monitoring [solicitation and control]) and child-driven (i.e., child disclosure) processes. Child disclosure is also consistently found to be the strongest predictor of parental knowledge when compared to parental solicitation and control, even among children with initial high levels of conduct problems and regardless of the quality of the parent–child relationship (Crouter and Head 2002; Kerr and Stattin 2000; Stattin and Kerr 2000). This strong link between child disclosure and parental knowledge has been replicated in many studies (Eaton et al. 2009; Keijsers et al. 2009, 2010; Soenens et al. 2006; Vieno et al. 2009; Willoughby and Hamza 2011). However, Lahey et al. (2008) suggested that this relationship might be spurious, as children who do not engage in delinquent behaviors may also be children who openly disclose to their parents. In this way, parental knowledge may be nothing more than an indirect expression of the child's level of delinquency. To test this proposition, Lahey et al. conducted a study with data from the National Longitudinal Survey of Youth (NLSY) and found that parental knowledge was a unique predictor of later delinquent behavior, independent of the child's concurrent level of delinquency. This finding further supports the inclusion of child disclosure as an important component of parental knowledge.

Given the consistent evidence that child disclosure is strongly and positively related to parental knowledge, it is important to determine what factors promote or prevent children from openly providing information to their parents. Several avenues have been proposed, including the need for parents to create an open and interactive home environment to encourage child disclosure (Kerr and Stattin 2000;

Stattin and Kerr 2000). Along these lines, a positive parent–child relationship is positively related to child disclosure and negatively related to conduct problems (Vieno et al. 2009). Similarly, high levels of parental trust (Kerr et al. 1999; Smetana and Metzger 2008; Smetana et al. 2006), authoritative parenting (Darling et al. 2006), engagement in enjoyable family activities (Keijsers et al. 2010; Willoughby and Hamza 2011), and parental responsiveness (Smetana 2008; Soenens et al. 2006) are strongly linked to high levels of child disclosure. Another way in which parents can promote child disclosure is responding in a positive manner during previous disclosure efforts (Hayes et al. 2003, 2004, 2007; Kerr and Stattin 2000; Tilton-Weaver et al. 2010). These findings suggest several ways in which parents can enhance the likelihood of child disclosure, such as spending time with their child, being warm and responsive to their child's needs, and enhancing the quality of the parent–child relationship.

Research attention has increasingly focused on children and adolescents as "information managers" who strategically determine what and how much their parents know about their activities and peer associations (Tilton-Weaver and Marshall 2008). Adolescents may choose to keep information from their parents for any number of reasons, such as hiding maladaptive behavior, wanting to avoid punishment for problematic behavior, establishing autonomy, or maintaining boundaries and privacy (Finkenauer et al. 2002; Smetana and Metzger 2008). Adolescents also engage in a wide variety of strategies to keep information from their parents, including nondisclosure, avoiding, lying, and secrecy (Keijsers and Laird 2010; Smetana 2008). Secrecy and concealment longitudinally predict more engagement in delinquent behavior (Frijns et al. 2010) whereas disclosure predicts less antisocial behavior (Laird and Marrero 2010). Therefore, the type of nondisclosure strategy has important implications for later adolescent problem behavior.

In summary, the evidence largely supports the important role that child disclosure plays in the parental knowledge process. Implications from these findings highlight the need to consider how both parents and children contribute to parental knowledge. As this research evidence continues to accumulate, suggestions regarding intervention targets to enhance the likelihood of child disclosure may be indicated.

The Relationship Between Parental Knowledge and Monitoring and Child and Adolescent Conduct Problems

Despite the well-documented relationship between parental knowledge and child conduct problems, the reasons for this association are poorly understood. One possible explanation is that parental knowledge disrupts the process by which antisocial peers introduce adolescents to new and increasing levels of conduct problems. Laird et al. (2008) conducted a longitudinal study utilizing growth mixture modeling to explore the hypothesis that parental knowledge moderates the relationship between deviant peers and adolescent delinquency. They identified two groups in their sample: one characterized by moderate but decreasing levels of parental knowledge and the other defined by high and stable levels of this knowledge. They found that adolescents in the moderate-decreasing group reported higher and increasing levels of delinquent behavior as well as more associations with deviant peers as compared to the high-stable group. Thus, it appears that when parents are highly knowledgeable, adolescents may be less likely to establish contact with deviant peers who would likely introduce them to delinquent behavior.

More recently, several sophisticated longitudinal designs have been published examining the relationship between parental knowledge and monitoring and child and adolescent conduct problems. One such study examined these associations in an intergenerational framework. Taking data from the Seattle Social Development Project (SSDP), Bailey et al. (2009) examined data from grandparents (first generation; G1), parents (second generation; G2), and grandchildren (third generation; G3). Higher G1 parental knowledge was associated with lower G2 problem behaviors (including conduct and attention problems and oppositional behavior). However, this association was not replicated when G2 knowledge and G3 problem behaviors were examined. Furthermore, while the problem behaviors demonstrated intergenerational continuity, parental knowledge did not. Specifically, parental knowledge from G1 to G2 showed a low degree of continuity while G2 and G3 parental knowledge was not significantly associated. While this study does not provide strong evidence for the relationship between parental knowledge and child problem behaviors or for the intergenerational transmission of parenting practices, it does represent an area of longitudinal research that should be explored in the future. Inclusion of genetically informed models may help elucidate possible intergenerational effects.

Studies have also documented decreases in parental knowledge (Laird et al. 2003a, 2009) as well as parental monitoring (Keijsers et al. 2009; Kerr et al. 2010; Smetana et al. 2002) as children enter adolescence. Given this well-established decrease, it is important to identify factors that may influence this change in parental knowledge and monitoring over time. In a study of 522 children and their parents from the Child Development Project (a multisite dual-cohort longitudinal study examining child and family development; Dodge et al. 1990), parents were asked whether they had attempted to change their child's

previous negative behavior (Pettit et al. 2007). Various behavior-change strategies were reported by parents in this study, including seeking treatment from a psychologist or counselor, consulting friends and relatives, enhancing discipline strategies, and establishing more routine and structure in the child's life. Three years later, parents who reported that they successfully changed their child's behavior reported less of a decline in and higher levels of knowledge over time as compared to those who unsuccessfully attempted to change their child's behavior. In an additional study, parents who were highly involved in their children's lives (i.e., spent a large amount of time with their children during weekdays and weekends) reported more consistent and stable parental knowledge through adolescence (Pettit and Laird 2002). Further, the association between high levels of knowledge and low levels of adolescent conduct problems was stronger when parental involvement was low, suggesting that knowledge may compensate for parents who are unable or unwilling to be highly involved in the lives of their children.

This well-documented decrease in knowledge and monitoring throughout the adolescent years is to be expected due to increasing adolescent autonomy and parent–adolescent conflict, both of which are hypothesized to disrupt the monitoring, disclosure, and knowledge processes (Laird et al. 2010b; Masche 2010). Lower levels of parental knowledge have also been reported among children who have transitioned into middle school as well as those who have reached advanced pubertal status (Laird and Marrero 2011). Despite this general decrease in parental knowledge and monitoring over time, several researchers have observed that the links between these parenting behaviors and conduct problems tend to strengthen over time (Jacobson and Crockett 2000; Laird et al. 2003a; Pardini et al. 2008). This finding provides further evidence for the importance of continued knowledge and monitoring during adolescence as a means to discourage conduct problems.

Several studies have also identified individual child and adolescent characteristics that influence the relationship between parental knowledge and monitoring and child conduct problems. For example, adolescent personality traits have been shown to provide incremental validity to the prediction of adolescent delinquency, above and beyond parental solicitation and knowledge and child disclosure (Eaton et al. 2009). Additionally, weak authority beliefs (i.e., beliefs that parents do not have absolute authority and should therefore not make rules regarding personal issues; Smetana 1988) and more time spent in unsupervised activities are associated with less maternal knowledge (Laird and Marrero 2011; Smetana and Daddis 2002). Discrepancies between adolescents' and parents' authority beliefs may also precede decreases in parental knowledge, partly due to the likelihood that these disagreements will increase parent–adolescent conflict and thereby disrupt the knowledge process (Laird et al. 2010b). However, among adolescents with such weak authority beliefs and more unsupervised activity, parental solicitation was found to predict less antisocial behavior (Laird et al. 2010a). This finding is in contrast to previous studies indicating that more parental solicitation is associated with more conduct problems (Kerr et al. 2010; Kiesner et al. 2009; Stattin and Kerr 2000; Willoughby and Hamza 2011). Therefore, it appears that parental solicitation can be effective in deterring some adolescents from conduct problem behavior.

Bidirectional Associations Between Parental Knowledge and Monitoring and Child and Adolescent Conduct Problems

Consistent with transactional models (Lytton 1990; Pardini 2008; Sameroff 1975), research in this area is increasingly documenting that parents and children influence each other in a dynamic, bidirectional manner. Given the traditional focus on parent effects coupled with recent work examining child effects (i.e., child disclosure), consideration of these bidirectional models is of paramount importance in the parental monitoring literature. However, only a handful of studies have included child and parent effects simultaneously, which would enable researchers to specifically examine these bidirectional processes.

The Child Development Project is one such example of a study that has examined bidirectional associations (Laird et al. 2003a). In this project, data were collected annually from 396 adolescents over the course of 4 years beginning when they were 14 years old on average. The authors specifically examined parental knowledge and child delinquency, and found that decreases in knowledge were associated with increases in parent-reported delinquency over time. The findings also provided support for bidirectional associations, as lower knowledge predicted more delinquency 1 year later while more delinquency predicted less parental knowledge 1 year later. Furthermore, the addition of cross-lagged effects significantly improved the fit of the model, indicating that time-specific increases in parental knowledge predicted subsequent time-specific decreases in delinquency, over and above the underlying developmental trajectories. This finding strongly supports the proposition that bidirectional effects are a crucial component in the association between parental knowledge and child conduct problems.

In another study, Willoughby and Hamza (2011) gathered data from 2,941 Canadian high school students and found support for child effects, as cross-lagged analyses

demonstrated that high levels of child problem behavior (i.e., substance use and delinquency) predicted lower levels of parental control. There was also evidence of parent effects in this study, as low control and high solicitation predicted more child problem behaviors. Examination of the cross-lagged effects also revealed bidirectional effects, as higher levels of knowledge predicted fewer problem behaviors and more problem behaviors predicted lower parental knowledge. Taken together, the authors described these results as a "family-centered process," as child, parent, and bidirectional effects were all present.

Using data from the Pittsburgh Youth Study, a longitudinal examination of boys from ages 6 to 16, Pardini et al. (2008) found bidirectional associations between parental knowledge, as well as a number of other parenting behaviors (e.g., positive reinforcement, physical punishment), and child conduct problems. Furthermore, child age moderated the bidirectional relationship between low parental knowledge and teacher-reported conduct problems, as these associations strengthened as child age increased. These bidirectional findings may be interpreted as evidence that increased parental knowledge deters adolescents from conduct problems or that parents disengage from the knowledge process as children continue to engage in these behaviors during adolescence.

Whereas some studies have found significant cross-lagged effects between parental monitoring and child conduct problems, one study reported that these constructs are related to each other longitudinally, but not because of bidirectional effects (Kiesner et al. 2009). Rather, the links between these constructs reflect the concurrent correlations (i.e., at Time 1) and stability in these child and parent behaviors. The authors posit that future studies need to consider both the potential bidirectional effects and the concurrent associations between parental monitoring and child conduct problems. In sum, the majority of the emerging evidence suggests that the influence of both parents and children needs to be considered in studies of parental knowledge and monitoring and child conduct problems. Continued use of statistically sophisticated techniques to more closely examine bidirectional associations is an essential direction for future research.

Contextual Influences on Parental Knowledge and Monitoring

To fully understand the structure of the relationship between parental knowledge and monitoring and child conduct problems, these parenting behaviors must be placed within broader contextual factors that influence family functioning (Dishion and McMahon 1998). Building from Bronfenbrenner's (1989) ecological model, these contextual variables include ethnicity, sex of the child and the parent, family demographics (e.g., socioeconomic status (SES), marital status), and neighborhood characteristics. Specifically, the importance of high levels of parental knowledge and monitoring to deter children from conduct problems may vary as a function of ethnicity, sex, and family and neighborhood characteristics. Continued examination of these contextual factors will help elucidate the circumstances under which parental knowledge, solicitation, and control are particularly important.

The relationship between parental knowledge and monitoring and child conduct problems has been documented in North American (e.g., Bailey et al. 2009; DiClemente et al. 2001; Eaton et al. 2009; Fletcher et al. 2004; Laird and Marrero 2011; Laird et al. 2003a; Pettit et al. 2007; Willoughby and Hamza 2011), European (e.g., Keijsers et al. 2010; Kerr and Stattin 2000, 2003a; Kerr et al. 2010; Soenens et al. 2006; Stattin and Kerr 2000; Vieno et al. 2009), and Australian samples (Hayes et al. 2003, 2004, 2007). Several researchers working with North American samples have sought to determine whether these findings hold across different ethnicities. The majority of these studies have not found any significant differences, instead noting more similarities than differences in parental knowledge and monitoring between different ethnic groups (Laird et al. 2010a; Pardini et al. 2008).

However, it is important to keep in mind that very few studies on parental knowledge and monitoring have specifically examined ethnic differences. Studies with ethnic minority populations generally tend to only investigate one specific homogenous group (i.e., African American children) as opposed to comparing diverse ethnicities (e.g., Kilgore et al. 2000; Klein et al. 2000; Richards et al. 2004). Consistent with the broader literature, these studies indicate that higher levels of parental knowledge and monitoring are associated with lower levels of conduct problems among African American children and adolescents. However, the vast majority of studies on parental knowledge and monitoring have examined samples composed primarily of Caucasian families. The inclusion of diverse samples to fully examine similarities and differences in these parenting behaviors among different ethnic groups is a crucial direction for future research.

Of the few studies that have identified ethnic differences, African American parents have been found to engage in less monitoring of their children and adolescents (as measured by a combination of items assessing parental knowledge, solicitation, and control) than Caucasian parents (Pettit et al. 2007; Pinderhughes et al. 2008). In an additional study, a problem behavior model in which inadequate parental knowledge was hypothesized to influence both engagement in problem behavior (i.e., antisocial behavior, poor academic performance, and substance use)

and association with deviant peers was compared between American Indian, Hispanic, and Caucasian 7th graders (Barrera et al. 2001). The model showed relative consistency across the three ethnic groups, with the exception of a stronger link between parental knowledge and deviant peer associations for American Indian adolescents than for Hispanic and Caucasian adolescents. Differences in parental monitoring of peers (a subtype of parental monitoring conceptualized as parental supervision and knowledge of a child's peers in addition to direct involvement in child and peer activities) between African American and Hispanic adolescents have also been examined (Dillon et al. 2008). In this study, higher levels of parental monitoring of peers were related to lower levels of externalizing behavior among African American adolescents; however, parental monitoring of peers was unrelated to externalizing behavior among Hispanic adolescents.

The sex of the child is frequently included in studies of parental knowledge and monitoring. Several researchers have reported that girls are monitored more than boys and that parents are more knowledgeable about their daughters than their sons (Dishion and McMahon 1998; Jacobson and Crockett 2000; Keijsers et al. 2010; Kerr and Stattin 2000; Laird et al. 2008; Laird et al. 2003a; Neumann et al. 2010; Pettit et al. 2001; Richards et al. 2004; Smetana and Daddis 2002; Stattin and Kerr 2000; Vieno et al. 2009; Willoughby and Hamza 2011). This finding may reflect broader social concerns about girls' exposure to and engagement in conduct problems and antisocial behavior (Pettit et al. 2007). Stattin and Kerr have also indicated that girls tend to disclose to their parents more than boys. Additionally, boys report greater decreases in parental knowledge over time (across the high school years) as compared to girls (Jacobson and Crockett 2000; Laird et al. 2003b). Despite these mean differences observed between girls and boys, several researchers have concluded that the overall pattern of results is similar for both sexes (Kerr and Stattin 2000; Kerr et al. 2010; Keijsers et al. 2010; Stattin and Kerr 2000). However, some studies have shown that parental knowledge and monitoring are more strongly associated with lower levels of delinquent behavior in girls than in boys (Kerr et al. 2008; Pettit et al. 2001, 2007). This finding may be because parents are more knowledgeable of girls' behavior and are therefore better able adjust their level of monitoring accordingly. On the other hand, parents may work less diligently to change boys' conduct problems, since this behavior is viewed as more normative for boys than for girls (Hinshaw and Lee 2003).

The sex of the parent has also been examined, and significant differences in knowledge and monitoring between mothers and fathers have been identified. Specifically, mothers tend to be more knowledgeable about their children's lives than fathers (Crouter and Head 2002). This finding is likely due to the traditional parental roles held by mothers, who are often considered the parent primarily responsible for the care of children. Mothers also tend to communicate more frequently and openly with their children, and as such are more likely to have knowledge of children's activities and peer groups than fathers. Additionally, sons perceive more knowledge and parental control from fathers whereas daughters perceive more of these parenting behaviors from mothers (Vieno et al. 2009). Adolescents are also generally more inclined to disclose to their mother than to their father, again likely reflecting traditional parenting roles (Keijsers et al. 2010; Smetana et al. 2006).

In terms of family demographics, a number of studies have identified that more knowledge is observed in high SES and intact families (i.e., dual-parent households) as compared to low SES and single-parent families (Crouter and Head 2002; Kerns et al. 2001; Laird et al. 2003b; Neumann et al. 2010; Pettit and Laird 2002). This finding suggests that it may be particularly challenging for low SES, single parents to be knowledgeable about children's activities, whereabouts, and peer associations. Barriers to high levels of knowledge among these families include isolation, limited financial resources, low social support, and stress (Dishion and McMahon 1998; Pettit et al. 2001, 2007). A constellation of risk factors, including young motherhood, low education level, psychological distress, stressful life events, and economic hardship, is particularly disruptive to knowledge processes (Klein et al. 2000).

Further examination of various family types suggests differences in knowledge between biological and stepparent families. Specifically, as compared to intact biological families, stepfather families exhibit much lower levels of parental knowledge; however, no significant difference in overall parental knowledge is observed between biological and stepmother families (Fisher et al. 2003). Parental employment status is also related to parental knowledge, especially among mothers. For mothers who work full time, high levels of knowledge are associated with low levels of adolescent problem behavior (i.e., delinquency and sexual activity; Jacobson and Crockett 2000). High levels of parental knowledge may therefore compensate for low levels of direct supervision among mothers with full-time employment. For fathers, high levels of work demands and stress are related to low parental knowledge and negative father–child relationships (Crouter and Head 2002).

Moving beyond these micro-level influences, the effect of living in a high-risk, inner-city neighborhood (characterized by high levels of poverty, crime and unemployment) has also been considered in studies of parental knowledge and monitoring. It could be assumed that high levels of knowledge and monitoring would be observed in

high-risk neighborhoods, as these parenting behaviors could protect children from the inherent dangers in these areas (Dishion and McMahon 1998; Wilson 1980). In support of this hypothesis, African American parents living in urban areas report higher levels of parental knowledge than those living in rural areas (Jones et al. 2003). Alternatively, it is possible that low levels of parental knowledge and monitoring would be seen in high-risk neighborhoods, as various emotional, social, and financial stressors may interfere with effective parenting behaviors (Ceballo and McLoyd 2002). Accordingly, living in high-risk areas and attending high-risk schools (e.g., schools with greater proportions of children living in poverty, poor academic outcomes) have been shown to be risk factors for low levels of parental knowledge (Laird et al. 2009; Neumann et al. 2010) and monitoring (Kilgore et al. 2000). Additionally, the link between low parental monitoring and conduct problems is particularly strong for adolescents living in high-risk neighborhoods who also spend a large amount of unsupervised time with peers (Laird et al. 2010a). Overall, the results from a number of studies indicate that parental knowledge and monitoring processes may be particularly important but difficult to implement in high-risk neighborhoods.

In conclusion, these contextual variables indicate specific situations where these parenting behaviors may be most needed and beneficial. The findings summarized here further suggest possible moderators of the relationship between parental knowledge and monitoring and child conduct problems (Menaghan 2003). Findings from these moderation analyses will help inform preventive and intervention techniques by identifying families most at risk for experiencing barriers to high levels of parental knowledge and effective parental monitoring. However, these possible moderators are notably unstable, as results tend to vary depending on the type of sampling and methodology utilized. Replication of findings with these moderators is a critical step for future research. Furthermore, when comparing multiple groups within a sample (e.g., different ethnicities, sexes), it is important to determine whether the measurement and structure of the construct are equivalent across groups (i.e., invariance testing; Byrne et al. 1989; Meredith 1993). Invariance testing with measures of parental knowledge and monitoring is a crucial step to more fully understand how these contextual factors influence these parenting behaviors and if the findings reported in the extant literature hold across different groups.

Antecedents of Parental Knowledge and Monitoring

Considering the large body of previous and current research linking parental knowledge and monitoring to child and adolescent conduct problems, several researchers have turned their attention to examining the foundation of these important parenting behaviors. It is clear that some parents engage in high levels of parental monitoring while other parents engage in ineffective or low levels of monitoring. An essential question for researchers involves discovering the source(s) of this difference. Belsky's (1984) process model of the determinants of parenting posits that individual parent and child characteristics directly influence parental functioning. In keeping with this model, several factors have been implicated as early childhood antecedents of parental knowledge and monitoring, including parenting style, early child conduct problems, child temperament, and parent–child relationship quality.

In several longitudinal studies, a proactive parenting style has been shown to precede high levels of parental knowledge (Pettit et al. 2001, 2007; Pettit and Laird 2002). Proactive parenting is defined as the use of anticipatory techniques to prevent children from developing later problematic behavior. Parents who endorse this type of parenting style take a "before-the-fact" approach to child conduct problems, assuming that the development of early positive behaviors will prevent the development of later negative behaviors. The link between proactive parenting and parental knowledge likely reflects broader parental values that emphasize the importance of helping children internalize societal standards and expectations regarding behavior.

Early child conduct problems have been identified as another antecedent of parental knowledge and monitoring. It might be hypothesized that parents would respond to these early conduct problems by increasing their efforts in hopes of deterring children from continued negative behavior. Alternatively, it could also be the case that parents feel frustrated by these conduct problems and subsequently withdraw their efforts. These parents may "give up" as they feel powerless to change this early pattern of negative behavior. Several longitudinal studies have shown that parental knowledge and monitoring decline in response to early child conduct problems (Burke et al. 2008; Dishion et al. 2004; Kerr and Stattin 2003a; Kerr et al. 2010; Laird et al. 2003a; Patrick et al. 2005; Pettit and Laird 2002; Willoughby and Hamza 2011). High levels of adolescent antisocial behavior at the beginning of high school predict consistently low levels of parental knowledge throughout high school (Laird et al. 2003b). These findings suggest that parents are reacting to the behavior of their children rather than acting to prevent the continuation of these behavior problems.

Kerr and Stattin (2003a) found that child conduct problems predicted a change in parenting behavior 2 years later, such that parents engaged in less control, emotional support, encouragement, and positive communication with

their children as a result of high levels of this negative behavior. The authors provided several explanations for this change in parenting behavior following children's engagement in conduct problems. These explanations include disapproval and disappointment leading parents to withdraw emotional support, a desire to avoid the anxiety and worry associated with knowing their children are engaging in conduct problems, ignorance about the behavior due to children's ability to hide this information, feeling unable to manage or change these behaviors, and being intimidated by their children who are engaging in these behaviors. In this study, a series of longitudinal path models indicated the most support for parental feelings of intimidation and futility resulting in less subsequent parental monitoring.

Negative child behavior at home (i.e., defiance, low disclosure, and off-task behavior) has also been shown to predict lower parental monitoring efforts and more parental feelings of worry and distrust 2 years later (Kerr et al. 2008). Kerr and colleagues found longitudinal evidence that parents were responding to characteristics of their children, such that parents monitored more when children were open and warm and less when children were closed and cold. In addition to the child characteristics of openness and warmth, a resistant-to-control (RTC) temperament as measured during kindergarten has also been identified as an antecedent of low parental knowledge (Pettit et al. 2007). Children with this type of temperament are characterized as being difficult to manage and failing to follow parental directives to stop a particular behavior (Bates et al. 1998). Mothers of children with higher RTC reported a steeper decline in their knowledge over time as compared to mothers of children with lower RTC.

Additionally, parental knowledge, parental monitoring, and child disclosure are often viewed as an outcome of the broader parent–child relationship (Crouter and Head 2002; Dishion and McMahon 1998; Laird et al. 2010b; Stattin and Kerr 2000). The viewpoint emphasized in the literature is that the knowledge and monitoring processes will only be effective when they are conducted within the context of a supportive and positive parent–child relationship (Barrera et al. 2001; Kerr et al. 1999; Kerns et al. 2001; Pettit and Laird 2002). In support of this argument, greater parental knowledge is associated with more parent–adolescent relationship enjoyment and more parental involvement (Laird et al. 2003b). Furthermore, adolescent conduct problems have been found to weaken the quality of the parent–child relationship. These reductions, in turn, partially mediated the relationship between low levels of parental knowledge and high levels of adolescent conduct problems.

In sum, several early parenting practices and child characteristics have been identified as antecedents of high levels of parental knowledge and monitoring. However, additional research is needed to identify additional factors that explain why some parents effectively engage in the knowledge and monitoring processes whereas others do not. Aside from determining the sources of these mean level differences, it will also be important to examine the developmental course of parental knowledge and monitoring. Although knowledge and monitoring decrease during adolescence, the amount and timing of this decrease vary widely among families (Laird et al. 2009). Examining the predictors of this differential change over time is an important direction for future research.

Clinical Implications of Research on Parental Knowledge and Monitoring

Given that a lack of parental knowledge and monitoring has been implicated as a risk factor for child and adolescent conduct problems, it is particularly important to determine how to help parents engage in effective levels of these parenting behaviors. Further, since child and adolescent disclosure plays a crucial role in the process of parental monitoring, an additional intervention target may be encouraging increased disclosure to parents. The extant literature suggests several potential directions for clinical interventions aimed at helping parents and children engage more effectively in the knowledge and monitoring processes. These avenues include increasing parental motivation to monitor, improving monitoring skills, helping parents develop more proactive parenting skills, and enhancing parent–child communication quality (Crouter and Head 2002; Dishion and McMahon 1998; Kerr et al. 2010; Pettit et al. 2007; Soenens et al. 2006). Research evidence also suggests that simply enhancing parental solicitation and control may not be beneficial, as these parenting behaviors may lead to higher levels of conduct problems and negative feelings of being controlled among children (Kerr and Stattin 2000, 2003a; Stattin and Kerr 2000). Rather, intervention programs targeting improvement in parent–child relationship qualities may be more effective (Hayes et al. 2007).

The Triple P-Positive Parenting Program (Sanders 1999; Sanders et al. 2003) and Parent Management Training-Oregon Model (PMTO; Patterson et al. 2010) are examples of existing broad parenting interventions that target improvements in parental monitoring. The goal of these behavioral family intervention programs is to provide parents with the support, strategies, and skills necessary to enhance the general functioning of the family. Included in these parenting skills is effective parental supervision and monitoring, appropriate discipline, realistic expectations of child behavior, and warm and supportive parent–child

relationships. Several randomized controlled efficacy trials with these programs have established that families receiving these interventions show significant improvements in child behavior, parenting skills, and general family functioning. Furthermore, findings from PMTO have showed that improvements in parental monitoring and appropriate discipline account for approximately three times as much variance in child behavior problems when compared to other parenting domains (Patterson 2005). Triple P and PMTO are strong examples of the many broad parenting programs that include improvements in parental monitoring as one of the components included in the intervention. However, dismantling studies are needed to determine whether improvements in parental monitoring in particular are an active ingredient in the effectiveness of these programs.

In addition to these broader interventions, "Informed Parents and Children Together" (ImPACT) is an intervention program specifically designed to increase African American parents' knowledge about adolescent health risk behaviors (i.e., substance use, sexual activity) (Li et al. 2002; Stanton et al. 2000). ImPACT is a home-based intervention where parents and adolescents view a video about parental knowledge and adolescent health risk behaviors (i.e., substance use and sexual activity). After viewing the video, parents and adolescents discuss the content and role-play a particular vignette. Randomized controlled trials evaluating this program indicated that parent and adolescent agreement regarding adolescent health risk behaviors is enhanced post-intervention. This finding suggests that this intervention may be effective in enhancing parental knowledge of adolescent behaviors.

Several intervention studies have also examined parental monitoring as a mediator of program effects. For example, in a randomized controlled trial with adolescents aged 11–15, Multidimensional Family Therapy (MDFT; Liddle 2002) demonstrated greater improvements in parental monitoring and larger decreases in adolescent substance use as compared to peer group therapy (Henderson et al. 2009). Improvements in parental monitoring (as assessed during the active phases of the intervention) mediated the association between treatment condition and increased abstinence from substance use. As an additional example, the Family Check-Up (FCU; Dishion et al. 2003) is a brief, three-session intervention that includes a family interview, assessment of parental monitoring (as measured with a combination of knowledge, solicitation and control items coded by observers), and a feedback session utilizing motivational interviewing techniques and identifying additional services to support improved family management strategies. Changes in parental monitoring during the course of the intervention mediated the association between intervention status (FCU vs. control) and later substance use.

Improvements in parental monitoring have also been included as a component of Multisystemic Therapy (MST; Henggeler et al. 1986), a program that has been shown to be effective in reducing child and adolescent delinquency. This intervention elicits change in delinquency by targeting multiple aspects of the social context (i.e., family, peers, community) to promote prosocial behavior. Increased parental monitoring is included as part of the family component of MST and has been shown to lead to decreases in delinquent behavior. Mediational models demonstrated that improved parental monitoring predicted decreases in deviant peer affiliations and delinquency, such that the sequence progressed from increased monitoring to fewer associations with deviant peers to lower adolescent delinquency (Huey et al. 2000). Of note, the majority of studies published on parental monitoring as a mediator of intervention effects have focused on adolescent substance use and abuse or other adolescent risk behaviors. There is clearly a great need for more attention to conduct problems as the outcome of interest in mediation studies with parental monitoring. The examination of parental monitoring in meditational models will continue to elucidate the potential causal role that this parenting behavior has on child and adolescent conduct problems. Future studies should continue to examine parental monitoring as a change mechanism through which prevention and intervention programs produce reductions in problematic behavior in children and adolescents.

Overall, these clinical studies support the argument that parental knowledge and monitoring processes are malleable and can be effectively targeted through intervention programs. A promising area of clinical research includes the use of technology, such as cell phones, to help parents keep better track of their children (Weisskirch 2009). It may be beneficial for intervention programs to consider various modalities through which parental monitoring can be delivered. Continued attention to experimental studies and theory development is needed to fully inform clinical prevention and intervention programs aimed at effecting change in the process of parental monitoring.

Limitations of Existing Research and Future Directions

Accumulating research on parental knowledge and monitoring over the past decade has provided a deeper understanding of how and why these parenting behaviors are related to later child and adolescent conduct problems. However, the majority of the research has continued to only assess parental knowledge and not parental monitoring. Therefore, much less is known about parental monitoring per se and how it is related to child conduct problems. There are several additional limitations of the

extant literature, including the use of inconsistent terminology, measurement and methodology concerns, lack of a developmental framework, and the relative sparseness of research in some areas. These limitations suggest that there are many unanswered questions regarding parental monitoring and its relationship to later child behavior. As the field moves forward, consideration of these questions is imperative to direct future research endeavors.

The terminology used to describe parental monitoring varies widely. This paper has already discussed the confusion between parental knowledge and parental monitoring. In addition to this broader problem in the conceptualization of this construct, the terms supervision, behavioral control, parental monitoring behaviors and parental monitoring efforts have all been used interchangeably with parental monitoring (Crouter and Head 2002). Many earlier studies used "supervision" in place of "monitoring," and as a result the use of this term has been especially criticized (Dishion and McMahon 1998). "Supervision" requires proximal contact between the child and the parent, as the parent is present and actively watching the child engage in some activity. However, "monitoring" involves a broader range of more distal parental actions, including setting rules and tracking children's activities and whereabouts when outside of the home environment. The use of different terms to describe parental monitoring underscores the need for a precise and consistent definition of this construct.

The difference between obtaining knowledge and monitoring has also been the focus of much debate, as not all methods of obtaining knowledge can be considered "monitoring" (Kerr et al. 2010; Stattin et al. 2010). For example, some studies use "monitoring" to refer to parental involvement in and supervision of children's activities outside of the home (Keijsers et al. 2010; Waizenhofer et al. 2004). Parents who are intensely involved in their child's activities and spend a lot of time with their child (e.g., attending sporting events, spending time with the child and his/her friends) will be well informed of their child's behavior, peers, and whereabouts. In these circumstances, the term "monitoring" may not be appropriate because parents gain knowledge not through child disclosure, control, or solicitation but through their own presence at these activities. This argument suggests that a more precise term, such as "parental involvement," should be used to describe this parenting behavior.

Parental monitoring has also been used to describe the process by which one parent exchanges information with the other parent. This process is usually described as fathers obtaining knowledge and information regarding children's activities from their wives (Crouter et al. 2005; Waizenhofer et al. 2004). However, since one parent has already obtained that information (through either child disclosure or parent-driven efforts), using "monitoring" to describe this sharing of information seems inaccurate. In this instance, even though a father has obtained knowledge, no new information regarding the child's activities and whereabouts has been gained. Therefore, Stattin et al. (2010) have argued that parental activities that result in knowledge must be differentiated from active parental monitoring strategies of solicitation and control.

Following Stattin and Kerr's (2000; Kerr and Stattin 2000) influential research, several authors have introduced terminology in an effort to more accurately describe and differentiate parental monitoring from parental knowledge. One such term that has emerged is "monitoring knowledge," which is sometimes referred to as "monitoring-relevant knowledge" (e.g., Hayes et al. 2004; Laird et al. 2003b). However, Stattin et al. (2010) have cautioned that this term is imprecise and open to interpretation. For instance, "monitoring knowledge" can be construed as the knowledge that parents need to monitor their children. On the other hand, this term may reflect the knowledge that parents obtain from monitoring. The term is therefore potentially misleading, as previous studies have consistently shown that parental knowledge comes more from child disclosure and less from parental active monitoring efforts. Future research will greatly benefit from consistent, precise terminology and an understanding of what parental monitoring means. Researchers should be sure to clearly operationalize their use of the term "parental monitoring" and to carefully describe the items composing the scale used to measure monitoring. Parental monitoring should be reserved for active tracking and surveillance behaviors of parents (i.e., solicitation and control; Kerr et al. 2010; Stattin and Kerr 2000), whereas parental knowledge or awareness should be labeled "knowledge."

Coupled with this inconsistent terminology is the inconsistent implementation of measures of parental monitoring. Several different self-report measures of monitoring have been employed in the literature, including the Supervision/Involvement scale (Loeber et al. 1998) and the Parental Monitoring Questionnaire (Dornbusch et al. 1985). Furthermore, several measures have been constructed from selected items of other measures (e.g., Laird et al. 2003a; b; Pettit et al. 2001, 2007) and others were created to address specific hypotheses (Kerr and Stattin 2000; Stattin and Kerr 2000). While these represent common ways to develop a measure, no research has been conducted to determine whether these measures are valid and reliable. Given the extensive use of such measures in parental monitoring research, analysis of their psychometric properties is greatly needed. Standardized and consistent measurement of parental monitoring will also help resolve some of the terminology issues inherent in this research.

The use of self-report measures to assess parental monitoring has come under recent scrutiny, especially given that reports of children and parents are remarkably inconsistent (Crouter and Head 2002; De Los Reyes et al. 2010; Dishion and McMahon 1998; Keijsers et al. 2010; Pettit et al. 2001). There is also some argument regarding whether parent or child reports provide the most accurate and unbiased account of parental monitoring (Fletcher et al. 2004). Therefore, it is important that researchers consider obtaining both parent and child reports of monitoring to examine potential similarities and differences between these reporters. The use of measurement models may be particularly helpful, and analyses with both child and parent reports should use appropriate techniques to account for measurement error.

Another method used to assess parental monitoring includes examining the discrepancy between reports of the child's daily activities as provided by parents and children. A discrepancy score is often obtained through nightly telephone interviews, whereby higher scores indicate that the reports were consistent (Crouter and Head 2002). However, this measure has been criticized as a measure of knowledge and not the active methods of monitoring (Stattin et al. 2010). Regardless, if the focus can be shifted to solicitation and control, this method of gathering information from telephone conversations may be beneficial as a means to capture daily variations in parental monitoring as opposed to general impressions of overall monitoring reflected in self-report measures.

De Los Reyes et al. (2010) have also assessed discrepancies between parent and child reports through the use of standardized difference scores created after participants have completed self-report measures of parental solicitation, parental knowledge, and child disclosure. To create these scores, child and parent ratings were first converted into *z*-scores and then subtracted from each other. The authors suggest that these discrepancy scores, as opposed to reflecting measurement error or reporter bias, may serve as important predictors of later child adjustment. Specifically, discrepancies characterized by higher parent than child ratings predicted higher levels of later child delinquency. Notably, this finding was not replicated when individual child and parent reports were used as predictors of later delinquency.

A large proportion of the studies examining parental monitoring have been cross-sectional in nature, particularly those published in the early part of this decade. However, longitudinal methods are essential to fully understand how this parenting behavior is associated with child conduct problems over time. Additionally, some of the methods used to assess these longitudinal relations have not been particularly sound. For example, several studies have utilized structural equation modeling, but the analyses have been conducted with just-identified (i.e., saturated) models (e.g., Kerr et al. 2008, 2010; Richards et al. 2004; Soenens et al. 2006). In this type of model, all of the possible connections between exogenous and endogenous variables are estimated. In these instances, the estimates reproduce the correlation matrix perfectly, and model fit statistics therefore are not meaningful. The use of just-identified models has been criticized as these models cannot be rejected (and therefore the validity of the model cannot be tested) and are typically not the most parsimonious representation of the data (Kline 2005). These methodological concerns indicate that the continued use of sophisticated and rigorous longitudinal analyses is needed.

Furthermore, given the importance of examining how parental monitoring changes over time, growth curve models can be particularly informative. Laird et al. (2003a, b) have employed a statistically sophisticated technique known as autoregressive latent trajectory (ALT) models, in which latent growth curves and cross-lagged correlation models are combined (Bollen and Curran 2004; Curran and Bollen 2001). This analysis allows for the examination of growth or change in variables in addition to cross-lagged effects, while controlling for this growth over time. These models are useful given that cross-lagged effects may be difficult to detect when stability in variables is high (Kiesner et al. 2009). ALT models are particularly applicable to the study of bidirectional effects because the researcher is able to evaluate change in parent and child behavior over time in addition to the possibility of reciprocal effects.

Additional methodological concerns include the use of only two time points in longitudinal studies. To fully understand how parental monitoring and child conduct problems change over time, a longitudinal design incorporating several waves of data is needed. Consideration of bidirectional effects is also crucial, given research pointing to both parent and child effects on parental knowledge and monitoring. In the future, researchers therefore need to consider either incorporating cross-lagged effects in their analyses or testing alternative models in which the direction of effects is reversed. Lastly, the vast majority of studies have examined community samples. Much more work is needed to recruit and incorporate high-risk and clinical samples in studies of parental monitoring. It is possible that monitoring may appear very different for children who engage in clinically significant levels of conduct problems as compared to children who exhibit elevated but not clinical levels of this behavior (Capaldi 2003). This information may have far-reaching implications for the development of family-based interventions, which may need to be altered depending on the child's level of conduct problems.

An additional limitation is the relative lack of a developmental framework. As is widely understood, parent and

child behaviors change as children mature (Frick et al. 1999; Larson et al. 1996; Loeber 1982). Over time, parental monitoring shifts from immediate supervision at home in infancy and childhood to setting rules for unsupervised time with peers in later childhood and adolescence (Dishion and McMahon 1998). Additionally, the modality with which parental monitoring is delivered varies with age, as direct observation is more common with young children whereas communication is key with adolescents. In this way, monitoring processes move from proximal to more distal strategies, and the measurement of these behaviors needs to reflect this shift. These developmental differences in the manifestation of parental monitoring need to be explicitly modeled in future longitudinal studies (Bailey et al. 2009).

There are also several areas of the parental monitoring literature where research is relatively sparse. First, more research is needed examining moderators and mediators of the relationship between parental monitoring and child conduct problems. Moderation and mediation analyses will help elucidate the circumstances under which this relationship may be particularly strong as well as the mechanisms underlying this association. Potential moderators include the various contextual factors discussed earlier. However, very few of these factors have been specifically examined in a moderation analysis, and these statistical tests are an important direction for future research. Some potential mediators include parental motivation and ability to implement effective parenting behaviors, parental psychopathology, and child temperament (specifically, callous-unemotional traits), as evidence suggests that these factors are related to parenting behaviors and child conduct problems (Jones et al. 2003; Lahey et al. 1988; Pettit and Laird 2002; Wootton et al. 1997). Furthermore, children with conduct problems also frequently display differing co-occurring disorders, such as attention-deficit/hyperactivity disorder (ADHD; Hinshaw and Lee 2003). The potential role of these comorbid disorders has been largely ignored in the literature, but may play a role in how responsive children are to increased levels of parental monitoring (Burke et al. 2008). For instance, children with high levels of impulsivity and other characteristics of ADHD may be less sensitive to parental monitoring, thereby rendering this parenting behavior less effective. Consideration of these comorbid diagnoses and other associated behavior problems is needed to determine how parents can effectively engage in parental monitoring in a way that is tailored to the individual characteristics of children.

Second, more research is needed examining the antecedents of parental monitoring. Several studies have already suggested potential antecedents; however, additional factors need to be explored to provide a comprehensive understanding of how parental monitoring develops. Furthermore, the vast majority of studies on parental monitoring have examined adolescent samples, and therefore little is known about the early childhood factors associated with the development of this parenting behavior.

Third, very few studies have considered the broader family context. Parental monitoring is considered to be a component of a long-standing system of family interactions, yet only a handful of studies have considered how this context affects parental knowledge and monitoring (Dishion and McMahon 1998; Kerr et al. 1999; Pettit and Laird 2002; Stattin and Kerr 2000). In this regard, studies need to consider that these parenting behaviors are likely associated with several family factors, including relationship quality, conflict, warmth, and involvement. Furthermore, the entire family context needs to be examined, and as such, future research should attempt to include mothers and fathers as well as siblings and other important family members (Crouter and Head 2002). Future research also needs to focus on incorporating bidirectional associations between parental monitoring and child behavior in order to document these family interactions.

In terms of clinical studies, there is a relative lack of research evaluating parental monitoring as an intervention target. Dismantling studies are needed to fully explore whether changes in parental monitoring are an active ingredient in the effectiveness of these intervention programs. Additional attention needs to be paid to mediation models within these studies to explore the potential causal role of improved parental monitoring in the prevention and treatment of child conduct problems. Increased use of randomized controlled trials is also needed to fully examine the effectiveness of these intervention programs targeting parental monitoring. Overall, these four areas indicate crucial directions for future research. Examination of these areas will generate a deeper understanding of parental monitoring and may suggest potential targets for clinical interventions.

Conclusion

In the decade following publication of Stattin and Kerr's seminal papers (2000; Kerr and Stattin 2000), the field has seen an upsurge of research on parental knowledge and monitoring. These studies have greatly enhanced the field's understanding of these parenting behaviors and have continued to document the relationship between parental knowledge and monitoring and child and adolescent conduct problems. However, several important terminology and methodology issues need to be clarified in future studies. This area of research will greatly benefit from consistent definitions and operationalizations of parental monitoring.

Furthermore, in contrast to parental knowledge, the structure, development, correlates, and consequences of parental monitoring are still not well understood. Research is needed to examine parental monitoring separately from parental knowledge in order to more fully understand this parenting behavior. Additional areas that need to be addressed in future studies include the following: (a) antecedents of parental monitoring; (b) contextual influences on this parenting behavior, with specific attention to the broader family system; and (c) bidirectional associations between monitoring and child and adolescent conduct problems. Continued empirical work in these areas will help inform therapeutic strategies that can be employed to prevent the development and growth of child and adolescent conduct problems.

References

Bailey, J. A., Hill, K. G., Oesterle, S., & Hawkins, J. D. (2009). Parenting practices and problem behavior across three generations: Monitoring, harsh discipline, and drug use in the intergenerational transmission of externalizing behavior. *Developmental Psychology, 45*, 1214–1226.

Barrera, M., Jr., Biglan, A., Ary, D., & Li, F. (2001). Replication of a problem behavior model with American Indian, Hispanic and Caucasian youth. *Journal of Early Adolescence, 21*, 133–157.

Bates, J. E., Pettit, G. S., Dodge, K. A., & Ridge, B. (1998). Interaction of temperamental resistance to control and restrictive parenting in the development of externalizing behavior. *Developmental Psychology, 34*, 982–995.

Belsky, J. (1984). The determinants of parenting: A process model. *Child Development, 55*, 83–96.

Bollen, K. A., & Curran, P. J. (2004). Autoregressive latent trajectory (ALT) models: A synthesis of two traditions. *Sociological Methods Research, 32*, 336–383.

Brody, G. H. (2003). Parental monitoring: Action and reaction. In A. C. Crouter & A. Booth (Eds.), *Children's influence on family dynamics* (pp. 163–169). Mahwah, NJ: Erlbaum.

Bronfenbrenner, U. (1989). Ecological systems theory. *Annals of Child Development, 6*, 187–249.

Burke, J. D., Pardini, D. A., & Loeber, R. (2008). Reciprocal relationships between parenting behavior and disruptive psychopathology from childhood through adolescence. *Journal of Abnormal Child Psychology, 36*, 679–692.

Byrne, B. M., Shavelson, R. J., & Muthén, B. (1989). Testing for the equivalence of factor covariance and mean structures: The issue of partial measurement invariance. *Psychological Bulletin, 105*, 456–466.

Capaldi, D. (2003). Parental monitoring: A person-environment interaction perspective on this key parenting skill. In A. C. Crouter & A. Booth (Eds.), *Children's influence on family dynamics* (pp. 171–179). Mahwah, NJ: Erlbaum.

Ceballo, R., & McLoyd, V. C. (2002). Social support and parenting in poor, dangerous neighborhoods. *Child Development, 73*, 1310–1321.

Chamberlain, P., & Patterson, G. R. (1995). Discipline and child compliance in parenting. In M. H. Bornstein (Ed.), *Handbook of parenting: Vol. 4: Applied and practical parenting* (pp. 205–225). Mahwah, NJ: Erlbaum.

Colder, C. R., Lochman, J. E., & Wells, K. C. (1997). The moderating effects of children's fear and activity level on relations between parenting practices and childhood symptomotology. *Journal of Abnormal Child Psychology, 25*, 251–263.

Collins, W. A., Maccoby, E. E., Steinberg, L., Hetherington, E. M., & Bornstein, M. H. (2000). Contemporary research on parenting: The case for nature and nurture. *American Psychologist, 55*, 218–232.

Crouter, A. C., Bumpus, M. F., Davis, K. D., & McHale, S. M. (2005). How do parents learn about adolescents' experiences? Implications for parental knowledge and adolescent behavior. *Child Development, 76*, 869–882.

Crouter, A. C., & Head, M. R. (2002). Parental monitoring and knowledge of children. In M. H. Bornstein (Ed.), *Handbook of parenting: Vol. 3: Being and becoming a parent* (2nd ed., pp. 461–483). Mahwah, NJ: Erlbaum.

Curran, P. J., & Bollen, K. A. (2001). The best of both worlds: Combining autoregressive and latent curve models. In L. M. Collins & A. G. Sayer (Eds.), *New methods for the analysis of change* (pp. 107–135). Washington, DC: American Psychological Association.

Darling, N., Cumsille, P., Caldwell, L., & Dowdy, B. (2006). Predictors of adolescents' disclosure to parents and perceived parental knowledge: Between- and within-person differences. *Journal of Youth and Adolescence, 35*, 667–678.

De Los Reyes, A., Goodman, K. L., Kliewer, W., & Reid-Quiñones, K. (2010). The longitudinal consistency of mother–child reporting discrepancies of parental monitoring and their ability to predict child delinquent behaviors two years later. *Journal of Youth and Adolescence, 39*, 1417–1430.

DiClemente, R. J., Wingood, G. M., Crosby, R., Ionian, C., Cobb, B. K., Harrington, K., et al. (2001). Parental monitoring: Association with adolescents' risk behaviors. *Pediatrics, 107*, 1363–1368.

Dillon, F. R., Pantin, H., Robbins, M. S., & Szapocznik, J. (2008). Exploring the role of parental monitoring of peers on the relationship between family functioning and delinquency in the lives of African American and Hispanic adolescents. *Crime and Delinquency, 54*, 65–94.

Dishion, T. J., & McMahon, R. J. (1998). Parental monitoring and the prevention of child and adolescent problem behavior: A conceptual and empirical formulation. *Clinical Child and Family Psychology Review, 1*, 61–75.

Dishion, T. J., Nelson, S. E., & Bullock, B. M. (2004). Premature adolescent autonomy: Parent disengagement and deviant peer process in the amplification of problem behavior. *Journal of Adolescence, 27*, 515–530.

Dishion, T. J., Nelson, S. E., & Kavanagh, K. (2003). The family check-up with high-risk young adolescents: Preventing early-onset substance use by parent monitoring. *Behavior Therapy, 34*, 553–571.

Dodge, K. A., Bates, J. E., & Pettit, G. S. (1990). Mechanisms in the cycle of violence. *Science, 250*, 1678–1683.

Donenberg, G., & Baker, B. L. (1993). The impact of young children with externalizing behaviors on their families. *Journal of Abnormal Child Psychology, 21*, 179–198.

Dornbusch, S. M., Carlsmith, J. M., Bushwall, S. J., Ritter, P. L., Leiderman, H., Hastorf, A. H., et al. (1985). Single-parents, extended households, and control of adolescents. *Child Development, 56*, 326–341.

Eaton, N. R., Krueger, R. F., Johnson, W., McGue, M., & Iacono, W. G. (2009). Parental monitoring, personality, and delinquency: Further support for a reconceptualization of monitoring. *Journal of Research in Personality, 43*, 49–59.

Fergusson, D. M., & Horwood, L. J. (1998). Early conduct problems and later life opportunities. *Journal of Child Psychology and Psychiatry, 39*, 1097–1108.

Finkenauer, C., Engels, R. C. M. E., & Meeus, W. (2002). Keeping secrets from parents: Advantages and disadvantages of secrecy in adolescence. *Journal of Youth and Adolescence, 31*, 123–136.

Fisher, P. A., Leve, L. D., O'Leary, C. C., & Leve, C. (2003). Parental monitoring of children's behavior: Variation across stepmother, stepfather, and two-parent biological families. *Family Relations, 52*, 45–52.

Fletcher, A. C., Steinberg, L., & Williams-Wheeler, M. (2004). Parental influences on adolescent problem behavior: Revisiting Stattin and Kerr. *Child Development, 75*, 781–796.

Frick, P. J., Christian, R. E., & Wootton, J. M. (1999). Age trends in the association between parenting practices and conduct problems. *Behavior Modification, 23*, 106–128.

Frick, P. J., Lahey, B. B., Loeber, R., Stouthamer-Loeber, M., Christ, M. A. G., & Hanson, K. (1992). Familial risk factors to oppositional defiant disorder and conduct disorder: Parental psychopathology and maternal parenting. *Journal of Consulting and Clinical Psychology, 60*, 49–55.

Frijns, T., Keijsers, L., Branje, S., & Meeus, W. (2010). What parents don't know and how it may affect their children: Qualifying the disclosure-adjustment link. *Journal of Adolescence, 33*, 261–270.

Glueck, S., & Glueck, E. (1950). *Unraveling juvenile delinquency*. New York: The Commonwealth Fund.

Hayes, L., Hudson, A., & Matthews, J. (2003). Parental monitoring: A process model of parent–adolescent interaction. *Behaviour Change, 20*, 13–24.

Hayes, L., Hudson, A., & Matthews, J. (2004). Parental monitoring behaviors: A model of rules, supervision, and conflict. *Behavior Therapy, 35*, 587–604.

Hayes, L., Hudson, A., & Matthews, J. (2007). Understanding parental monitoring through analysis of monitoring episodes in context. *International Journal of Behavioral and Consultation Therapy, 3*, 96–108.

Henderson, C. E., Rowe, C. L., Dakof, G. A., Hawes, S. W., & Liddle, H. A. (2009). Parenting practices as mediators of treatment effects in an early-intervention trial of multidimensional family therapy. *The American Journal of Drug and Alcohol Abuse, 35*, 220–226.

Henggeler, S. W., Rodick, J. D., Borduin, C. M., Hanson, C. L., Watson, S. M., & Urey, J. R. (1986). Multisystemic treatment of juvenile offenders: Effects on adolescent behavior and family interactions. *Developmental Psychology, 22*, 132–141.

Hinshaw, S. P., & Lee, S. S. (2003). Conduct and oppositional defiant disorders. In E. J. Mash & R. A. Barkley (Eds.), *Child psychopathology* (2nd ed., pp. 144–199). New York: Guilford Press.

Hirschi, T. (1969). *Causes of delinquency*. Berkeley: University of California Press.

Hoeve, M., Dubas, J. S., Eichelsheim, V. I., van der Laan, P. H., Smeenk, W., & Gerris, J. R. M. (2009). The relationship between parenting and delinquency: A meta-analysis. *Journal of Abnormal Child Psychology, 37*, 749–775.

Huey, S. J., Jr., Henggeler, S. W., Brondino, M. J., & Pickrel, S. G. (2000). Mechanisms of change in multisystemic therapy: Reducing delinquent behavior through therapist adherence and improved family and peer functioning. *Journal of Consulting and Clinical Psychology, 68*, 451–467.

Jacobson, K. C., & Crockett, L. J. (2000). Parental monitoring and adolescent adjustment: An ecological perspective. *Journal of Research on Adolescence, 10*, 65–97.

Jessor, R. (1998). New perspectives on adolescent risk behavior. In R. Jessor (Ed.), *New perspectives on adolescent risk behavior* (pp. 1–10). Cambridge, UK: Cambridge University Press.

Jones, D. J., Forehand, R., Brody, G., & Armistead, L. (2003). Parental monitoring in African American, single mother-headed families: An ecological approach to the identification of predictors. *Behavior Modification, 27*, 435–457.

Keijsers, L., Branje, S. J. T., VanderValk, I. E., & Meeus, W. (2010). Reciprocal effects between parental solicitation, parental control, adolescent disclosure, and adolescent delinquency. *Journal of Research on Adolescence, 20*, 88–113.

Keijsers, L., Frijns, T., Branje, S. J. T., & Meeus, W. (2009). Developmental links of adolescent disclosure, parental solicitation, and control with delinquency: Moderation by parental support. *Developmental Psychology, 45*, 1314–1327.

Keijsers, L., & Laird, R. D. (2010). Introduction to special issue. Careful conversations: Adolescents managing their parents' access to information. *Journal of Adolescence, 33*, 255–259.

Kerns, K. A., Aspelmeier, J. E., Gentzler, A. L., & Grabill, C. M. (2001). Parent-child attachment and monitoring in middle childhood. *Journal of Family Psychology, 15*, 69–81.

Kerr, M., & Stattin, H. (2000). What parents know, how they know it, and several forms of adolescent adjustment: Further support for a reinterpretation of monitoring. *Developmental Psychology, 36*, 366–380.

Kerr, M., & Stattin, H. (2003a). Parenting of adolescents: Action or reaction? In A. C. Crouter & A. Booth (Eds.), *Children's influence on family dynamics* (pp. 121–151). Mahwah, NJ: Erlbaum.

Kerr, M., & Stattin, H. (2003b). Straw men, untested assumptions, and bi-directional models: A response to Capaldi and Brody. In A. C. Crouter & A. Booth (Eds.), *Children's influence on family dynamics* (pp. 181–187). Mahwah, NJ: Erlbaum.

Kerr, M., Stattin, J., & Burk, W. J. (2010). A reinterpretation of parental monitoring in longitudinal perspective. *Journal of Research on Adolescence, 20*, 39–64.

Kerr, M., Stattin, H., & Pakalniskiene, V. (2008). Parents react to adolescent problem behaviors by worrying more and monitoring less. In M. Kerr, H. Stattin, & R. C. M. E. Engels (Eds.), *What can parents do? New insights into the role of parents in adolescent problem behavior* (pp. 91–112). West Sussex, England: Wiley.

Kerr, M., Stattin, H., & Trost, K. (1999). To know you is to trust you: Parents' trust is rooted in child disclosure of information. *Journal of Adolescence, 22*, 737–752.

Kiesner, J., Dishion, T. J., Poulin, F., & Pastore, M. (2009). Temporal dynamics linking aspects of parent monitoring with early adolescent antisocial behavior. *Social Development, 18*, 765–784.

Kilgore, K., Snyder, J., & Lentz, C. (2000). The contribution of parental discipline, parental monitoring, and school risk to early-onset conduct problems in African American boys and girls. *Developmental Psychology, 36*, 835–845.

Klein, K., Forehand, R., & Family Health Project Research Group. (2000). Family processes as resources for African American children exposed to a constellation of sociodemographic risk factors. *Journal of Clinical Child Psychology, 29*, 53–65.

Kline, R. B. (2005). *Principles and practice of structural equation modeling*. New York: Guilford Press.

Lahey, B. B., Piacentini, J. C., McBurnett, K., Stone, P., Hartdagen, S., & Hind, G. (1988). Psychopathology in parents of children with conduct disorder and hyperactivity. *Journal of the American Academy of Child and Adolescent Psychiatry, 27*, 163–170.

Lahey, B. B., Van Hulle, C. A., D'Onofrio, B. M., Rodgers, J. L., & Waldman, I. D. (2008). Is parental knowledge of their adolescent offspring's whereabouts and peer associations spuriously associated with offspring delinquency? *Journal of Abnormal Child Psychology, 36*, 807–823.

Laird, R. D., Criss, M. M., Pettit, G. S., Bates, J. E., & Dodge, K. A. (2009). Developmental trajectories and antecedents of distal parental supervision. *Journal of Early Adolescence, 29*, 258–284.

Laird, R. D., Criss, M. M., Pettit, G. S., Dodge, K. A., & Bates, J. E. (2008). Parents' monitoring knowledge attenuates the link between antisocial friends and adolescent delinquent behavior. *Journal of Abnormal Child Psychology, 36*, 299–310.

Laird, R. D., & Marrero, M. M. (2010). Information management and behavior problems: Is concealing misbehavior necessarily a sign of trouble? *Journal of Adolescence, 33*, 297–308.

Laird, R. D., & Marrero, M. M. (2011). Mothers' knowledge of early adolescents' activities following the middle school transition and pubertal maturation. *Journal of Early Adolescence, 31*, 209–233.

Laird, R. D., Marrero, M. M., & Sentse, M. (2010a). Revisiting parental monitoring: Evidence that parental solicitation can be effective when needed most. *Journal of Youth and Adolescence, 39*, 1431–1441.

Laird, R. D., Marrero, M. M., & Sherwood, J. K. (2010b). Developmental and interactional antecedents of monitoring in early adolescence. In V. Guilamo-Ramos, J. Jaccard, & P. Dittos (Eds.), *Parental monitoring of adolescents: Current perspectives for researchers and practitioners* (pp. 39–66). New York: Columbia University Press.

Laird, R. D., Pettit, G. S., Bates, J. E., & Dodge, K. A. (2003a). Parents' monitoring-relevant knowledge and adolescents' delinquent behavior: Evidence of correlated developmental changes and reciprocal influences. *Child Development, 74*, 752–768.

Laird, R. D., Pettit, G. S., Dodge, K. A., & Bates, J. E. (2003b). Changes in parents' monitoring knowledge: Links with parenting, relationship quality, adolescent beliefs, and antisocial behavior. *Social Development, 12*, 401–419.

Larson, R. W., Richards, M. H., Moneta, G., Holmbeck, G., & Duckett, E. (1996). Changes in adolescents' daily interactions with their families from ages 10 to 18: Disengagement and transformation. *Developmental Psychology, 32*, 744–754.

Li, X., Stanton, B., Galbraith, J., Burns, J., Cottrell, L., & Pack, R. (2002). Parental monitoring intervention: Practice makes perfect. *Journal of the National Medical Association, 94*, 364–370.

Liddle, H. A. (2002). Multidimensional family therapy for adolescent cannabis users. Cannabis Youth Treatment Series, Volume 5 (DHHS Publication No. (SMA) 02-3660. Rockville, MD: Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration.

Loeber, R. (1982). The stability of antisocial and delinquent child behavior: A review. *Child Development, 53*, 1431–1446.

Loeber, R., Burke, J. D., Lahey, B. B., Winters, A., & Zera, M. (2000). Oppositional defiant and conduct disorder: A review of the past 10 years, part 1. *Journal of the American Academy of Child and Adolescent Psychiatry, 39*, 1468–1484.

Loeber, R., & Dishion, T. (1983). Early predictors of male delinquency: A review. *Psychological Bulletin, 94*, 68–99.

Loeber, R., Farrington, D. P., Stouthamer-Loeber, M., & Van Kammen, W. B. (1998). *Antisocial behavior and mental health problems: Explanatory factors in childhood and adolescence*. Mahwah, NJ: Erlbaum.

Loeber, R., & Stouthamer-Loeber, M. (1986). Family factors as correlates and predictors of juvenile conduct problems and delinquency. In M. Tonry & N. Morris (Eds.), *Crime and justice* (Vol. 17, pp. 29–149). Chicago: University of Chicago Press.

Loeber, R., & Stouthamer-Loeber, M. (1987). Prediction. In H. C. Quay (Ed.), *Handbook of juvenile delinquency* (pp. 325–382). New York: Wiley.

Lytton, H. (1990). Child and parent effects in boys' conduct disorder: A reinterpretation. *Developmental Psychology, 26*, 683–697.

Masche, J. G. (2010). Explanation of normative declines in parents' knowledge about their adolescent children. *Journal of Adolescence, 33*, 271–284.

McCord, J. (1979). Some child-rearing antecedents of criminal behavior in adult men. *Journal of Personality and Social Psychology, 37*, 1477–1486.

Menaghan, E. G. (2003). On the brink: Stability and change in parent–child relations in adolescence. In A. C. Crouter & A. Booth (Eds.), *Children's influence on family dynamics* (pp. 153–162). Mahwah, NJ: Erlbaum.

Meredith, W. (1993). Measurement invariance, factor analysis and factorial invariance. *Psychometrika, 58*, 525–543.

Miller, T. R. (2004). The social costs of adolescent problem behavior. In A. Biglan, P. A. Brennan, S. L. Foster, & H. D. Holder (Eds.), *Helping adolescents at risk: Prevention of multiple problem behaviors* (pp. 31–56). New York: Guilford Press.

Neumann, A., Barker, E. D., Koot, H. M., & Maughan, B. (2010). The role of contextual risk, impulsivity, and parental knowledge in the development of adolescent antisocial behavior. *Journal of Abnormal Psychology, 119*, 534–545.

Pardini, D. A. (2008). Novel insights into longstanding theories of bidirectional parent–child influences: Introduction to the special section. *Journal of Abnormal Child Psychology, 36*, 627–631.

Pardini, D. A., Fite, P. J., & Burke, J. D. (2008). Bidirectional associations between parenting practices and conduct problems in boys from childhood to adolescence: The moderating effect of age and African-American ethnicity. *Journal of Abnormal Child Psychology, 36*, 647–662.

Patrick, M. R., Snyder, J., Schrepferman, L. M., & Snyder, J. (2005). The joint contribution of early parental warmth, communication and tracking, and early child conduct problems on monitoring in late childhood. *Child Development, 76*, 999–1014.

Patterson, G. R. (1982). *Coercive family process*. Eugene, OR: Castalia.

Patterson, G. R. (2005). The next generation of PMTO models. *Behavior Therapist, 35*, 27–33.

Patterson, G. R., & Dishion, T. J. (1985). Contributions of families and peers to delinquency. *Criminology, 23*, 63–79.

Patterson, G. R., Forgatch, M. S., & DeGarmo, D. S. (2010). Cascading effects following intervention. *Development and Psychopathology, 22*, 949–970.

Patterson, G. R., & Stouthamer-Loeber, M. (1984). The correlation of family management practices and delinquency. *Child Development, 55*, 1299–1307.

Pettit, G. S., & Arsiwalla, D. D. (2008). Commentary on special section on "bidirectional parent-child relationships": The continuing evolution of dynamic, transactional models of parenting and youth behavior problems. *Journal of Abnormal Child Psychology, 36*, 711–718.

Pettit, G. S., Keiley, M. S., Laird, R. D., Bates, J. E., & Dodge, K. A. (2007). Predicting the developmental course of mother-reported monitoring across childhood and adolescence from early proactive parenting, child temperament, and parents' worries. *Journal of Family Psychology, 21*, 206–217.

Pettit, G. S., & Laird, R. D. (2002). Psychological control and monitoring in early adolescence: The role of parental involvement and earlier child adjustment. In B. K. Barber (Ed.), *Intrusive parenting: How psychological control affects children and adolescents* (pp. 97–123). Washington, DC: American Psychological Association.

Pettit, G. S., Laird, R. D., Dodge, K. A., Bates, J. E., & Criss, M. M. (2001). Antecedents and behavior-problem outcomes of parental monitoring and psychological control in early adolescence. *Child Development, 72*, 583–598.

Pinderhughes, E. E., Hurley, S., & the Conduct Problems Prevention Research Group. (2008). Disentangling ethnic and contextual influences among parents raising youth in high-risk communities. *Applied Developmental Science, 12*, 211–219.

Richards, M. H., Miller, B. V., O'Donnell, P. C., Wasserman, M. S., & Colder, C. (2004). Parental monitoring mediates the effects of age and sex on problem behaviors among African American urban young adolescents. *Journal of Youth and Adolescence, 33*, 221–233.

Sameroff, A. J. (1975). Early influences on development: Fact or fancy? *Merrill-Palmer Quarterly, 21*, 267–294.

Sampson, R. J., & Laub, J. H. (1994). Urban poverty and the family context of delinquency: A new look at structure and process in a classic study. *Child Development, 65*, 523–540.

Sanders, M. R. (1999). Triple P-Positive Parenting Program: Towards an empirically validated multilevel parenting and family support strategy for the prevention of behavior and emotional problems in children. *Clinical Child and Family Psychology Review, 2*, 71–90.

Sanders, M. R., Markie-Dadds, C., & Turner, K. M. T. (2003). Theoretical, scientific and clinical foundations of the Triple P-Positive Parenting Program: A population approach to the promotion of parenting competence. *Parenting Research and Practice Monograph, 1*, 1–21.

Smetana, J. G. (1988). Adolescents' and parents' conceptions of parental authority. *Child Development, 59*, 321–335.

Smetana, J. G. (2008). "It's 10 o'clock: Do you know where your children are?" Recent advances in understanding parental monitoring and adolescents' information management. *Child Development Perspectives, 2*, 19–25.

Smetana, J. G., Crean, H. F., & Daddis, C. (2002). Family processes and problem behaviors in middle-class African American adolescents. *Journal of Research on Adolescence, 12*, 275–304.

Smetana, J. G., & Daddis, C. (2002). Domain-specific antecedents of parental psychological control and monitoring: The role of parenting beliefs and practices. *Child Development, 73*, 563–580.

Smetana, J. G., & Metzger, A. (2008). Don't ask, don't tell (your mom and dad): Disclosure and nondisclosure in adolescent–parent relationships. In M. Kerr, H. Stattin, & R. C. M. E. Engels (Eds.), *What can parents do? New insights into the role of parents in adolescent problem behavior* (pp. 65–87). West Sussex, England: Wiley.

Smetana, J. G., Metzger, A., Gettman, D. C., & Campione-Barr, N. (2006). Disclosure and secrecy in adolescent–parent relationships. *Child Development, 77*, 201–217.

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

Stanton, B. F., Li, X., Galbraith, J., Cornice, G., Feigelman, S., Kaljee, L., et al. (2000). Parental underestimates of adolescent risk behavior: A randomized, controlled trial of a parental monitoring intervention. *Journal of Adolescent Health, 26*, 18–26.

Stattin, H., & Kerr, M. (2000). Parental monitoring: A reinterpretation. *Child Development, 71*, 1072–1085.

Stattin, H., Kerr, M., & Tilton-Weaver, L. (2010). Parental monitoring: A critical examination of the research. In V. Guilamo-Ramos, J. Jacquard, & P. Dittos (Eds.), *Parental monitoring of adolescents: Current perspectives for researchers and practitioners* (pp. 3–38). New York: Columbia University Press.

Stormshak, E. A., Bierman, K. L., McMahon, R. J., Lengua, L. J., & the Conduct Problems Prevention Research Group. (2000). Parenting practices and child disruptive behavior problems in early elementary school. *Journal of Clinical Child Psychology, 29*, 17–29.

Tilton-Weaver, L., Kerr, M., Pakalniskeine, V., Tokic, A., Salihovic, S., & Stattin, H. (2010). Open up or close down: How do parental reactions affect youth information management? *Journal of Adolescence, 33*, 333–346.

Tilton-Weaver, L. C., & Marshall, S. K. (2008). Adolescents' agency in information management. In M. Kerr, H. Stattin, & R. C. M. E. Engels (Eds.), *What can parents do? New insights into the role of parents in adolescent problem behavior* (pp. 11–41). West Sussex, England: Wiley.

Vieno, A., Nation, M., Pastore, M., & Santinello, M. (2009). Parenting and antisocial behavior: A model of the relationship between adolescent self-disclosure, parental closeness, parental control, and adolescent antisocial behavior. *Developmental Psychology, 45*, 1509–1519.

Waizenhofer, R. N., Buchanan, C. M., & Jackson-Newsom, J. (2004). Mothers' and fathers' knowledge of adolescents' daily activities: Its sources and its links with adolescent adjustment. *Journal of Family Psychology, 18*, 348–360.

Weintraub, K. J., & Gold, M. (1991). Monitoring and delinquency. *Criminal Behaviour and Mental Health, 1*, 268–281.

Weisskirch, R. S. (2009). Parenting by cell phone: Parental monitoring of adolescents and family relations. *Journal of Youth and Adolescence, 38*, 1123–1139.

Willoughby, T., & Hamza, C. A. (2011). A longitudinal examination of the bidirectional associations among perceived parenting behaviors, adolescent disclosure and problem behavior across the high school years. *Journal of Youth and Adolescence, 4*, 463–478.

Wilson, H. (1980). Parental supervision: A neglected aspect of delinquency. *British Journal of Criminology, 20*, 203–235.

Wootton, J. M., Frick, P. J., Shelton, K. K., & Silverthorn, P. (1997). Ineffective parenting and childhood conduct problems: The moderating role of callous-unemotional traits. *Journal of Consulting and Clinical Psychology, 65*, 301–308.