Child Development, July/August 2000, Volume 71, Number 4, Pages 1072–1085

Parental Monitoring: A Reinterpretation

Håkan Stattin and Margaret Kerr

Monitoring (tracking and surveillance) of children's behavior is considered an essential parenting skill. Numerous studies show that well-monitored youths are less involved in delinquency and other normbreaking behaviors, and scholars conclude that parents should track their children more carefully. This study questions that conclusion. We point out that monitoring measures typically assess parents' knowledge but not its source, and parents could get knowledge from their children's free disclosure of information as well as their own active surveillance efforts. In our study of 703 14-year-olds in central Sweden and their parents, parental knowledge came mainly from child disclosure, and child disclosure was the source of knowledge that was most closely linked to broad and narrow measures of delinquency (normbreaking and police contact). These results held for both children's and parents' reports, for both sexes, and were independent of whether the children were exhibiting problem behavior or not. We conclude that tracking and surveillance is not the best prescription for parental behavior and that a new prescription must rest on an understanding of the factors that determine child disclosure.

INTRODUCTION

Parents often comment on the temptations that teenagers today face, and they want to know what they can do to minimize the chances that their child will fall prey to bad influences. What advice can developmental psychology offer them? One clear answer seems to be that they can keep a close eye on what their children are doing, where they are going, and whom they are with—they can monitor their children's behavior.

Parental monitoring is conceptualized as "a set of correlated parenting behaviors involving attention to and tracking of the child's whereabouts, activities, and adaptations" (Dishion & McMahon, 1998, p. 61). This definition of monitoring as parental *action* is similar to the dictionary definition, in which the verb "to monitor" means "to keep watch over or check as a means of control" (Read et al., 1995, p. 822). Parental monitoring figures prominently in theoretical models of the development of antisocial behavior. Theoretical models make parenting practices, including inadequate monitoring, recurring links in a causal chain that starts with disruptive behavior, leads to hanging out with deviant peers, and results in antisocial behavior (Reid & Patterson, 1989; Snyder & Patterson, 1987). Indeed, cross-sectional and longitudinal studies show that poorly monitored adolescents tend to be antisocial, delinquent, or criminal (for a review of early work, see Patterson & Stouthamer-Loeber, 1984; for empirical examples, see Cernkovich & Giordano, 1987; Crouter, MacDermid, McHale, & Perry-Jenkins, 1990; McCord, 1986, Sampson & Laub, 1994; Weintraub & Gold, 1991). Poorly monitored youths also tend to use illegal substances (Flannery, Vazsonyi, Torquati, & Fridrich, 1994) and associate with peers who approve of drug use (Chassin, Pillow, Curran, Molina, & Barrera, 1993). They are more likely to begin using tobacco (Biglan, Duncan, Ary, & Smolkowski, 1995) and to increase their drug use over time (Fletcher, Darling, & Steinberg, 1995), and the poor monitoring displayed by alcoholic parents seems to explain their children's use of illegal substances (Chassin et al., 1993). Poorly monitored youths do worse in school (Crouter et al., 1990; White & Kaufman, 1997) and engage in more risky sexual activity (Metzler, Noell, Biglan, Ary, & Smolkowski, 1994; Romer et al., 1994). Evidence also suggests that poorly monitored youths have deviant friends (Dishion, Capaldi, Spracklen, & Li, 1995) and that they may become delinquent because of peer pressure (Fridrich & Flannery, 1995). Furthermore, longitudinal evidence suggests that children's delinquency and drug use are related to poor parental monitoring later on, and that poor monitoring is related to later delinquency (Aseltine, 1995; Barber, 1996).

The obvious prescription for parental behavior is better monitoring—active surveillance or tracking of children's behavior. Snyder and Patterson (1987) suggest that parents must give children a set of rules about where they may go, with whom they may associate, and when they must be home and then "'check up' or track compliance with those rules, and take effective disciplinary action when the rules are violated" (p. 226). Joint monitoring has been suggested as a final strategy for reducing risky sexual behavior: ". . . encourage parents of children's friends to join together to monitor the behavior of their children" (Romer et al., 1994, p. 985). Monitoring has also been

suggested for preventing drug use: "The overall lesson of this study appears to be that parental monitoring *is* an appropriate strategy for parents attempting to deter adolescents from engaging in substance use. Strong parental monitoring helps to deter adolescents from using alcohol and drugs themselves and, as a consequence, prevents nonusing adolescents from associating with drug-using peers. Since it is these drug-using peers who are likely to pressure teenagers to initiate or elevate substance use, strongly monitored adolescents are, in essence, doubly protected from substance use involvement . . ." (Fletcher et al., 1995, pp. 269–270). Clearly, the prescription is for parents to use a firm hand and actively control their children's behavior and associations.

Recommending active control and surveillance might be reasonable, on the basis of a cursory reading of the findings just reviewed, but it might be wrong. Why? Because parents who score high on monitoring might not be exercising control or practicing surveillance at all. The most often-used monitoring measures ask about parents' knowledge of their children's activities, but they seldom ask about active tracking and checking (the definition of monitoring). For example, items such as the following ask adolescents to rate their parents' knowledge: "How much do your parents REALLY know . . . Who your friends are? Where you go at night? How you spend your money? What you do with your free time? Where you are most afternoons after school?" (Fletcher et al., 1995, p. 262); "Do your parents know where you are when you are away from home? Do your parents know who you are with when you are away from home?" (Weintraub & Gold, 1991, p. 272); and "In my free time away from home, my parents know who I'm with and where I am." (Cernkovich & Giordano, 1987, p. 303). These measures do not ask *how* parents came to know these things. Other measures assess knowledge by asking parents and their children the same set of questions about the child's activities and then assessing agreement between the two sets of answers (Crouter, Manke, & McHale, 1995; Crouter et al., 1990; Patterson & Stouthamer-Loeber, 1984). But again, there is no telling *how* the information was gained. Even though the term monitoring implies that the measures represent parents' tracking and surveillance efforts, they actually represent an end product: parents' knowledge. [Hereafter, we use quotation marks to distinguish parental knowledge measures ("monitoring") from the construct (monitoring)].

In fact, parents could get knowledge of their children's activities in at least three conceivable ways. First, the children could tell them spontaneously, without any prompting (child disclosure). Second, parents could ask their children and their children's friends for the information (parental solicitation). Third, parents could impose rules and restrictions on their children's activities and associations, thereby controlling the amount of freedom children have to do things without telling them (parental control).

Which source of information is really behind the parental knowledge measures that have been called monitoring? Some preexisting findings suggest that it might be child disclosure. When several aspects of parenting are examined together, the findings often suggest that parent–child communication is more beneficial than surveillance and control. One study tested the idea that attachment to parents lowers the likelihood of delinquency (Cernkovich & Giordano, 1987). The researchers used several indirect measures of attachment, some of which dealt with parent–child communication and the closeness of the relationship. The results suggested that delinquents had poor communication with their parents. They were lower than nondelinquents on caring and trust (intimacy in the parent–child relationship), identity support (parents' respect, acceptance, and support), and instrumental communication (discussion of future plans). Many of the measures that were related to delinquency, then, dealt directly with parent–child communication. Furthermore, although delinquents were lower on "control and supervision," the measure included knowledge of the child's activities rather than active control or supervision efforts, so it might actually have been a measure of child disclosure. This study, then, suggests that communication is at least as important as control. Others suggest that it is much more important. In one study of parental involvement and school performance, parent–child agreement and parent–child discussion predicted higher grade-point averages and achievement test scores, but measures of surveillance did not (Otto & Atkinson, 1997). In fact, parental monitoring of school work predicted lower, not higher, grades and test scores. In other words, communication was linked to good performance; surveillance was linked to bad performance. Further, in an intervention study that attempted to reduce adolescents' substance use, parents were trained and encouraged to exert more active efforts to control their children's associations with drug- and alcohol-using peers and their access to alcohol (Cohen & Rice, 1995). The intervention had no effect on adolescents' substance use. Nonetheless, parental knowledge of the child's whereabouts, good parent–child rapport, and a respectful parent–child relationship were all associated with less substance use. Again, parent–child communication was beneficial; surveillance and control were not.

The present study addresses two major questions about parental monitoring. The first concerns whether

parents' knowledge of their children's whereabouts and activities ("monitoring") actually comes from their own active efforts, as the term monitoring implies. We look at three potential sources of information—child disclosure, parental solicitation, and parental control—and ask which of these explains the largest portion of the variance in "monitoring" (parents' knowledge). The second question concerns the negative association between monitoring and normbreaking behavior that so many studies have reported. These studies most often conclude that parents' control and surveillance efforts prevent adolescents from getting into trouble. But is this a valid conclusion? We answer this by looking at which of the three potential sources of parents' knowledge is most strongly related to normbreaking behavior. For each of these questions, we test for possible moderating effects of gender and the child's misbehavior to determine whether our findings are generalizable or apply only to children with certain characteristics.

METHOD

Participants

Participants were 14-year-old youths from seven mid-Sweden communities, and their parents. The registered crime rate for youngsters in these communities is higher than the national average but somewhat lower than for the metropolitan areas in Sweden. The participants represent the whole range of socioeconomic backgrounds in the communities. As is the case for the whole country, 91% of the fathers and 80% of the mothers had at least part time employment (6% of the fathers and 7% of the mothers were unemployed). Seventy-six percent of the youngsters lived with both biological parents.

Students in all 32 8th-grade classes in these communities were asked to join the study ($N = 763$). They took part in the study unless their parents returned a form stating that they did not want their child to participate (10 parents returned this form). Neither parents nor children were paid for their participation. Of 763 students, 703 (92%) were present on the day of the data collection and answered the questionnaires.

Another questionnaire was sent home to each child's biological parent or legal guardian in the home where the child lived during the school week. Parents were asked to return the completed questionnaire by mail, and 76% did so. In 71.4% of cases, mothers filled out the questionnaire alone, in 14.4% of cases fathers filled it out alone, in 12.9% of cases, mothers and fathers worked together, and in 1.3% of cases, a guardian other than a parent filled out the questionnaire. Recent studies suggest that mothers and fathers can have different levels of knowledge under certain conditions (e.g., Crouter, Helms-Erikson, Updegraff, & McHale, 1999). This is an important issue, but we cannot address it in this study because we cannot compare mothers and fathers in the same families. In our study, according to both parents' and children's reports, parental knowledge did not depend upon the sex of the parent who responded.

In one of these communities, 14-year-olds from a different cohort ($N = 36$) served as a pilot sample for a subsequent study. They answered the questions that were used in this study on two occasions, 2 months apart, and their responses were used to calculate the test–retest reliabilities that we report for these measures.

Even though the response rate among parents was high, those who responded might have been a biased sample. To examine a possible selection effect, we compared the children whose parents returned the questionnaire ($n = 539$) with those whose parents did not ($n = 164$) on all child-reported parental "monitoring" measures and measures of normbreaking and police contact (see following description). The children whose parents returned the questionnaire did not differ from the other children on normbreaking, police contact, parental solicitation, or child disclosure. They did, however, report somewhat lower parental "monitoring," $p < .05$, and parental control, $p < .01$.

Measures

Parental "monitoring." In keeping with the monitoring literature, we have operationalized "monitoring" as parents' knowledge of the child's whereabouts, activities, and associations. Using 5-point Likert scales, children answered nine questions about their parents' knowledge. The questions were, "Do your parents: know what you do during your free time? know who you have as friends during your free time? usually know what type of homework you have? know what you spend your money on? usually know when you have an exam or paper due at school? know how you do in different subjects at school? know where you go when you are out with friends at night? normally know where you go and what you do after school?" and "In the last month, have your parents ever had no idea of where you were at night?" Parents answered the same questions, with only minor changes in wording where necessary (e.g., "Do you: know what your child does during his or her free time? know who your child has as friends during his or her free time? . . ."). Means were calculated for the child-report items (α reliability = .86) and parent-report items (α reliability = .89). The test–retest reli-

ability for child-reported "monitoring" was substantial, $r(36) = .83$.

Child disclosure. Our child disclosure measure comprised five items. The children's questions were, "Do you spontaneously tell your parents about your friends (which friends you hang out with and how they think and feel about various things)?" "How often do you usually want to tell your parents about school (how each subject is going; your relationships with teachers)?" "Do you keep a lot of secrets from your parents about what you do during your free time?" "Do you hide a lot from your parents about what you do during nights and weekends?" and "Do you like to tell your parents about what you did and where you went during the evening?" Parents answered the same questions, with only minor changes in wording where necessary. The α reliabilities were .84 for parents' reports and .81 for children's reports. Child-reported disclosure was highly reliable, according to the 2-month test–retest correlation, $r(34) = .87$.

Parental solicitation. Five items were averaged to form the parental solicitation measure. The children's items were, "How often do your parents talk with your friends when they come over to your house?" "How often do your parents ask you about what happened during your free time?" "During the past month, how often have your parents initiated a conversation with you about your free time?" "When did your parents last have extra time to sit down and listen to you when you talk about what happened during your free time?" and "How often do your parents ask you to sit and tell them what happened at school on a regular school day?" Parents answered the same questions, with slight changes in wording where necessary. The α reliabilities were .77 and .75 for youth-reported and parent-reported solicitation, respectively. Child-reported solicitation was highly reliable, according to the 2-month test–retest correlation, $r(35) = .82$.

Parental control. Our parental control measure comprised six items. Youths answered: "Must you have your parents' permission before you go out during the weeknights?" "If you go out on a Saturday evening, must you inform your parents beforehand about who will be along as well as where you will be going?" "If you have been out past curfew, do your parents require that you explain why and tell who you were with?" "Do your parents demand that they know where you are in the evenings, who you are going to be with, and what you are going to do?" "Must you ask your parents before you can make plans with friends about what you will do on a Saturday night?" and "Do your parents require that you tell them how you spend your money?" Parents answered the same questions, with minor changes in wording. The α reliabilities were .82 and .77 for youths' reports and parents' reports, respectively. The 2-month test–retest reliability for child-reported parental control was high, $r(33) = .86$.

Normbreaking. Our normbreaking measure comprised nine items. Youths answered these questions about their behavior over the past year: "Have you drunk beer, liquor, or wine to the point of feeling drunk?" "Have you tried hashish, cannabis or marijuana?" "Have you pilfered from school?" "Have you purposely vandalized or taken part in vandalizing something that did not belong to you such as a window display, car, telephone booth, bank, or garden?" "Have you taken items from a mall, store, or newsstand without paying?" "Have you taken money from home?" "Have you bullied someone or together with others mobbed or bullied other students (e.g., ignored, made fun of, or teased)?" "Have you been a part of a physical fight?" "Have you been caught by the police?" Also, parents reported whether they thought their child had done any of these things. The α reliabilities for normbreaking were .79 and .62 for youths' and parents' reports, respectively. For some of the analyses, the single item asking whether they had been caught by the police over the past year was used as a narrower measure of normbreaking.

Parent–child relationships. Children answered eight questions about the quality of their relationships with their mothers: "How often do you feel disappointed with your mother?" "How well do you and your mother understand each other?" "Do you wish that your mother was different?" "Do you and your mother quarrel and fight with each other?" "How often do you feel proud of your mother?" "Do you accept your mother the way she is?" "How often do you feel angry or irritated by your mother?" and "Does your mother support and encourage you?" They answered the same questions about their fathers. The scales were reflected, when necessary, so that higher scores indicated more positive relationships. The variables were aggregated by parent first and then a total parent–child relationship variable was formed by taking the mean of the mother–child and father–child relationship variables. For children of single parents, the variable for the one parent was used. The α reliability calculated on mother- and father-relations items, combined, was .89. The test–retest correlation was moderately high, $r(33) = .75$.

Family closeness. Parents completed the Swedish Family Climate Scale (Hanson, 1989). They were presented with 85 adjectives, which they marked as either appropriate or inappropriate for describing their own family climate. We used the "closeness" scale, which consists of 18 adjectives: happy, warm, stable,

easy, harmonious, gentle, loving, natural, safe, kind, meaningful, secure, considerate, pleasant, friendly, calm, praising, humble. The psychometric properties of this measure have been reported previously (Hanson, 1989).

Skewness of some measures. Note that the distributions of parent-reported "monitoring" and child-reported normbreaking were somewhat skewed, skewness = −2.31 and 2.02 for monitoring and normbreaking, respectively. Our analyses involving these measures have been done with the basic, untransformed data. However, we have also transformed these variables by taking the natural logarithms. Analyses using the transformed variables yielded results that were almost identical to the original analyses. (Small differences appeared only on the third decimal place.) This result was probably due to the large sample size.

Table 1 Mean Scores as a Function of Gender For All Variables Used in the Study

	Girls	Boys	*t*
Children's reports			
Parental monitoring	.04 (.70)	−.04 (.67)	1.62
Child disclosure	.10 (.76)	−.10 (.72)	3.60***
Parental solicitation	.15 (.71)	−.15 (.71)	5.45***
Parental control	.08 (.74)	−.08 (.70)	3.00**
Parent–child relationship	−.09 (.68)	.10 (.54)	−3.92***
Normbreaking	−.03 (.62)	.03 (.67)	−1.31
Police contact	1.09 (.35)	1.12 (.38)	−.76
Parent's reports			
Parental monitoring	.01 (.79)	−.01 (.67)	.25
Child disclosure	.13 (.75)	−.11 (.78)	3.74***
Parental solicitation	.03 (.69)	−.02 (.72)	.73
Parental control	−.04 (.67)	.08 (.67)	−2.11*
Normbreaking	−.02 (.49)	.01 (.54)	−.73

Note: Standardized scores, except for police contact, which ranged from 1–4. Standard deviations are given in parentheses.
* $p < .05$; ** $p < .01$; *** $p < .001$.

Procedure

The children filled out the questionnaires during regular school hours, and they were assured of the confidentiality of their answers. They were informed that their parents would answer similar questions. Research assistants administered the questionnaires at the schools. Teachers were not present. Parents responded by filling out and mailing in a questionnaire. They were informed that their children had answered similar questions at school.

RESULTS

Gender Differences

Mean level differences between boys and girls on some of the variables appear in Table 1 along with *t*-tests of the differences. As shown in the table, there are no gender differences in parental "monitoring" as reported by either children or parents. According to both children's and parents' reports, however, girls freely disclose more than boys to their parents. Parents solicit more information from girls than boys, according to children but not parents, and although girls report being controlled more than boys, parents report controlling boys more than girls. But the actual differences in control are small. Boys report having better relationships than girls do with their parents. Finally, boys and girls are similar on normbreaking and police contact, but gender differences did appear on some of the individual normbreaking items. Girls were higher than boys on some and boys were higher than girls on others. This probably accounts for the gender similarity on the scale as a whole. In particular, girls were more likely than boys to report taking money from home, $t(673.06) = 2.1$, $p = .04$, and they were marginally more likely to report drinking alcohol, $t(686) = 1.7$, $p = .08$. Boys, on the other hand, were more likely to report vandalizing property, $t(520.47) = -5.1$, $p < .001$, and fighting, $t(596.77) = -4.0$, $p < .001$.

For this study, however, the pertinent question is not whether parents monitor, control, or solicit information from girls more than boys, or whether girls disclose more than boys. Rather, the question is whether gender moderates the relations *among* these variables such that our reinterpretation of monitoring would apply to one sex more than the other. Therefore, for each of our major findings, we include tests for gender interactions to determine whether the findings apply to one sex more than the other.

What Does "Monitoring" Represent?

To discover what "monitoring" really represents, we first examined the correlations linking child-reported and parent-reported "monitoring" (parental knowledge) with the three hypothesized sources of information: child disclosure, parental solicitation, and parental control. These relations are reported in Table 2 along with the intercorrelations among the sources of information. According to children's reports, each of the three sources correlated significantly with "monitoring," $r(692) = .66$, $p < .001$, $r(688) = .42$, $p < .001$, and $r(684) = .41$, $p < .001$ for child disclosure, parental solicitation, and parental control, respectively, but the correlation between child disclosure and

Table 2 Intercorrelations Among "Monitoring" (Parents' Knowledge) and Three Hypothesized Sources of Knowledge

	Child Disclosure	Parental Solicitation	Parental Control	Parental Monitoring
Child disclosure	[.45***] (537)	.55*** (685)	.36*** (681)	.66*** (692)
Parental solicitation	.46*** (571)	[.33***] (526)	.43*** (682)	.42*** (688)
Parental control	.12** (588)	.20*** (560)	[.30***] (508)	.41*** (684)
Parental monitoring	.63*** (574)	.43*** (575)	.28*** (561)	[.38***] (537)

Note: Degrees of freedom are in parentheses. Children's reports are above and parent's reports below the diagonal. Correlations between parents' and children's reports are on the diagonal in brackets.
** $p < .01$; *** $p < .001$.

"monitoring" was significantly stronger than the next largest correlation, $z = 6.4$, $p < .001$. Using parent-reported measures, the results were almost identical. Again, all of the correlations were statistically significant, $r(574) = .63$, $p < .001$, $r(575) = .43$, $p < .001$, and $r(561) = .28$, $p < .001$ for child disclosure, parental solicitation, and parental control, respectively, but the correlation between child disclosure and "monitoring" was significantly stronger than the next largest correlation, $z = 4.8$, $p < .001$. Note, further, that these differential links to monitoring are not due to differences in skewness. All measures of disclosure, solicitation, and control had distributions that were close to normal, skewness statistics = −.23, .18, and .20 for children's reports and −.89, −.59, and −.59 for parent's reports of disclosure, solicitation, and control, respectively.

As shown in Table 2, in addition to the fact that they are all related to "monitoring," the information sources are all significantly, positively intercorrelated. Within parents' and children's reports, child disclosure and parental solicitation were the most highly intercorrelated and child disclosure and parental control were the least. In addition, note that parents and adolescents agreed substantially about these aspects of their relationships. All correlations between parents' and adolescents' reports were significant at or below the .001 level, as shown on the diagonal in Table 2. Parents and adolescents agreed most on child disclosure, $r(537) = .45$, less on "monitoring," $r(537) = .38$, and parental solicitation, $r(526) = .33$, and least on parental control, $r(508) = .30$. Parents and children agree, then, that parents' information comes from spontaneous child disclosure and parents' active efforts but that more of it comes from child disclosure. However, because these sources of information are all intercorrelated, the question is what they each contribute independently.

To determine how much of parents' knowledge comes from each of these sources, independent of the others, we used a multiple regression approach. We entered the three potential information sources simultaneously in a regression model predicting "monitoring." Because we know from Table 1 that girls disclose more information than boys do to their parents, we also included sex in this regression model along with Sex × Disclosure, Sex × Solicitation, and Sex × Control interaction terms. The results appear in the upper portion of Table 3.

Which source of information is most predictive of parents' knowledge ("monitoring")? The answer is child disclosure. Using children's reports of all the variables, child disclosure and parental control both independently predict the amount of information parents have, but child disclosure is the more important of the two. With these variables controlled, parental solicitation is unrelated to "monitoring." Using parents' reports of all the variables, all three independently predict "monitoring"; however, as with the children's reports, child disclosure appears to be more important than the variables that measure parents' active efforts. Parents get most of their information about their children's activities from their children's willing disclosure, rather than from their active surveillance and control efforts. Additionally, as shown in the table, neither sex nor any of the interaction terms approach significance for children's or parents' reports. (We also performed these analyses by entering sex before entering all other variables. It was nonsignificant even when entered alone, as one would expect from the fact that there was no significant sex difference on "monitoring" in Table 1.) Despite the mean-level sex differences in child disclosure, solicitation, and control, the relations between these variables and "monitoring" are the same for boys and girls.

Table 3 Simultaneous and Heirarchical Regression Analyses Predicting "Monitoring" (Parental Knowledge) from Potential Information Sources and Child Sex

	Child Report		Parent Report	
	β	ΔR^2	β	ΔR^2
Simultaneous inclusion				
Disclosure	.64***		.59***	
Solicitation	.03		.15**	
Control	.22***		.19***	
Sex	.04		.05	
Disclosure × Sex	−.07		−.07	
Solicitation × Sex	−.01		.00	
Control × Sex	−.02	.49***	−.02	.44***
Stepwise inclusion				
Model 1				
Disclosure	.66***	.44***	.62***	.38***
Model 2				
Solicitation & Control added		.03***		.05***

** $p < .01$; *** $p < .001$.

Once children have freely disclosed information about their whereabouts and activities, how much additional information will parents get from their own active efforts? To answer this, we entered child disclosure first in a regression model predicting "monitoring" and then added parental solicitation and control to the model. The results appear in the lower portion of Table 3. By itself, child disclosure explains a substantial proportion of the variance in "monitoring" (44% from the children's points of view and 38% from the parents' points of view). Adding the other two sources to the model produces a statistically significant, but small, increase in the variance explained (3% for children's reports and 5% for parents' reports). These results suggest that children freely tell their parents a large proportion of what their parents know about their whereabouts and activities. Parents' efforts to gain information reliably produce more, but only a small amount more. In summary, then, when "monitoring" is recognized as knowledge and we ask where parents have gotten that knowledge, we find that tracking or surveillance efforts, which are implied by the term monitoring and its previous interpretations, are less important than children's spontaneous sharing of information.

This finding could, conceivably, appear because disclosure is highly important among children who have nothing to hide from their parents, even though it may not be among those who have a lot to hide. In other words, the child's behavior might interact with these sources to predict parent's knowledge ("monitoring"). Further analyses, however, suggest not. We tested for interactions between the information sources and dichotomized measures of children's problem behavior: (1) hanging out on the streets in the evening (seldom = once a month or less, $n = 518$; often = once a week or more, $n = 168$) and (2) normbreaking (low = lower than .5 SD on the normbreaking behavior scale, $n = 553$; high = .5 SD or higher on the normbreaking scale, $n = 143$). As shown in Table 4, each of these possible moderators are independently linked to parents' knowledge ("monitoring"). However, there is little evidence that they moderate the relations between child disclosure and "monitoring." Most of the interaction-term slopes are near zero and nonsignificant, and child disclosure is the strongest predictor in every model, which indicates that whether the child is misbehaving or not, parents get most of their knowledge from the child's free disclosure. There is one weakly significant interaction—the Disclosure × Hanging Out interaction for child-reported measures. We plotted the interaction by solving the regression equation for high and low child disclosure among those who were hanging out often and seldom. This plot revealed that for children who often hung out on the streets in the evening, low disclosure of information was linked to particularly low levels of parental knowledge ("monitoring"). But high disclosure was still linked to high levels of parental knowledge ("monitoring"). Thus, among children who often hang out on the streets, child disclosure is an even more important source of parental knowledge.

Monitoring and Normbreaking

"Monitoring" has been linked in the literature to lower incidences of delinquency, smoking, drug use, and other normbreaking behaviors, and it is in this study, as well, $r(693) = -.50$, $p < .001$ and $r(534) = -.34$, $p < .001$ for bivariate correlations linking child-reported normbreaking with child-reported and parent-reported "monitoring," respectively. Additionally, each of the child-reported sources of information correlated significantly with normbreaking, $r(688) = -.39$, $p < .001$, $r(685) = -.13$, $p < .001$, and $r(680) = -.24$, $p < .001$ for disclosure, solicitation, and control, respectively. Of the parent-reported sources, only child disclosure correlated significantly with normbreaking, $r(530) = -.27$, $p < .001$, $r(531) = -.01$, *ns*, and $r(517) = -.06$, *ns*, for disclosure, solicitation, and control, respectively.

The question, however, is which source of information is most important in predicting normbreaking, independent of the others. As shown in Table 5, the answer, again, is child disclosure. Higher levels of child disclosure correspond to lower levels of norm-

Table 4 Simultaneous Regression Analyses Predicting Monitoring (Parental Knowledge) from Potential Information Sources and Children's Behavior

	Child Report		Parent Report	
	β	R^2	β	R^2
Hanging out on the streets in the evening[a]				
Disclosure	.49***		.45***	
Solicitation	.07		.16***	
Control	.19***		.13***	
Hanging out	−.14***		−.15***	
Disclosure × Hanging Out	.09*		.01	
Solicitation × Hanging Out	−.05		.06	
Control × Hanging Out	−.00	.49***	.08	.45***
Child's normbreaking[b]				
Disclosure	.50***		.43***	
Solicitation	.04		.19***	
Control	.15***		.15***	
Normbreaking	−.23***		−.17***	
Disclosure × Normbreaking	.00		.04	
Solicitation × Normbreaking	.02		.00	
Control × Normbreaking	.04	.53***	.06	.45***

[a] Seldom = once a month or less (n = 518); often = once a week or more (n = 168).
[b] Low = lower than .5 *SD* on the normbreaking scale (n = 553); high = .5 *SD* or higher on the normbreaking scale (n = 143).
*$p < .05$; **$p < .01$; ***$p < .001$.

Table 5 Simultaneous Regression Analyses Predicting Children's Self-Reported Normbreaking from Child's Sex and Sources of Parents' Information

	Child-Reported Sources		Parent-Reported Sources	
	β	R^2	β	R^2
Predictors of normbreaking				
Disclosure	−.42***		−.38***	
Solicitation	.18***		.19***	
Control	−.17***	.19***	−.01	.12***
Test of moderating effects of gender				
Disclosure	−.39***		−.43***	
Solicitation	.14*		.20**	
Control	−.19***		−.00	
Sex	.01		−.02	
Disclosure × Sex	−.05		.06	
Solicitation × Sex	.06		.00	
Control × Sex	.02	.19***	−.02	.13***

*$p < .05$; **$p < .01$; ***$p < .001$.

breaking, independent of parental solicitation and control. The standardized slopes for disclosure in both child- and parent-report models are more than twice as large as the next largest slopes. For control and solicitation, on the other hand, the independent connections to normbreaking are less clear and consistent. Independent of disclosure and solicitation, child-reported parental control is linked to lower normbreaking but parent-reported control is not. The findings concerning parental solicitation run counter to expectations. With child disclosure and parental control held constant, parental solicitation is linked to higher, not lower, normbreaking. The more parents ask their children about their activities, the more normbreaking their children tend to do. Note, further, that these results hold when parent-reported sources are used to predict parent-reported normbreaking, which is highly skewed because most parents report no normbreaking, β = −.37, $p < .001$, β = .18, $p < .01$, and β = .00, *ns* for disclosure, solicitation, and control, respectively. Because of a skewed distribution of parental reports of children's normbreaking, we dichotomized the measure of child normbreaking into two groups: one in which parents reported no norm violations or just minor ones (75.1%) and another in which parents reported several norm violations (24.9%). A logistic regression analysis revealed that child disclosure predicted negatively, $b = -.81$, Wald statistic = 31.45, $p < .001$, parental solicitation predicted positively, $b = .41$, Wald statistic = 5.85, $p < .05$, and parental control was nonsignificant, $b = -.15$, Wald statistic = 0.99, $p = ns$.

The lower portion of Table 5 reveals, further, that these findings apply to both boys and girls. Sex does not interact with any of the sources of parental information in predicting normbreaking.

Again, the child's behavior might moderate these relations. Perhaps child disclosure is not the most important link to lower normbreaking among children who are hanging out on the streets in the evening. Perhaps, for those children, solicitation or control becomes more important than child disclosure as predictors of lower normbreaking. To test this, we included the dichotomized variable for the child's hanging out on the streets in the evening and its interactions with the sources of information. These results appear in Table 6. As expected, hanging out on the streets in the evening is strongly linked to normbreaking. According to children's reports of disclosure, solicitation, and control, shown in the left-hand column of Table 6, child disclosure is strongly linked to lower normbreaking, and that link does not depend on whether the child is hanging out on the streets in the evening. In this model, there is also a weak Control × Hanging Out interaction. A plot of four points predicted by the regression equation (high and low control; hanging out often and seldom) revealed that low control was mainly associated with higher normbreaking among

Table 6 Regression Analyses Predicting Child-Reported Normbreaking from Sources of Parental Information and the Child's Behavior

	Child-Reported Sources		Parent-Reported Sources	
	β	Model R^2	β	Model R^2
Disclosure	−.31***		−.21***	
Solicitation	.11*		.08	
Control	−.07		−.03	
Hanging out[a]	.30***		.35***	
Disclosure × Hanging Out	−.03		−.16**	
Solicitation × Hanging Out	.06		.15**	
Control × Hanging Out	−.11*	.29***	.02	.26***

[a] Seldom = once a month or less (n = 518); often = once a week or more (n = 168).
*$p < .05$; **$p < .01$; ***$p < .001$.

children who often hung out on the streets in the evening. For those who seldom did, parental control was less linked to normbreaking. However, even though parental control is associated with lower normbreaking under some circumstances, the link between this control interaction and normbreaking is only a third as large as the main effect of child disclosure.

According to parents' reports, shown in the right-hand column of Table 6, child disclosure is the source of parental information that is most closely linked to normbreaking, but the interaction shows that the association is moderated by the child's behavior. A plot of the interaction revealed that child disclosure was even more strongly connected to normbreaking among children who often hung out on the streets in the evening than among those who seldom did. For children who hung out often, the less they disclosed to their parents, the more likely they were to be breaking norms, and their normbreaking was more extreme than that of those children who seldom hung out on the streets. In addition, according to parents' reports in Table 6, solicitation interacts with hanging out to predict normbreaking. A plot of this interaction revealed that higher levels of solicitation were linked to higher levels of normbreaking, but this was much more true when children often hung out on the streets in the evening. Among parents of those children, solicitation is probably a reaction to normbreaking rather than an antecedent (i.e., parents' attempts to get information about what their children are doing when they are often out in the evenings *and* getting into trouble).

These findings suggest that the link between "monitoring" and antisocial behavior exists not because surveillance reduces antisocial behavior as has often been claimed but rather because child disclosure is heavily represented in "monitoring," and children who talk openly with their parents tend to commit fewer antisocial acts. However, because studies that find links between "monitoring" and antisocial behavior often conclude that surveillance is the important parental activity, we asked, finally, whether parents' active efforts added anything substantial to the prediction of normbreaking, over and above child disclosure. To answer this, we regressed normbreaking on child disclosure first and then added parental solicitation and control to the model. The results suggested that parents' active efforts have a reliable but small effect. Child disclosure, by itself, significantly predicted less normbreaking, $R^2 = .15$, $p < .01$. Adding parental solicitation and control to the model produced a statistically significant but small increase in the variance explained, R^2 change = .03, $p < .01$.

Note that the three hypothesized sources of information together were approximately equal to "monitoring" as predictors of normbreaking. For parents' reports, "monitoring" accounted for 12% of the variance in normbreaking; the three sources accounted for 10%. The analogous figures for children's reports were 25% and 18%. The correlations within these pairs were not significantly different from each other, z = 0.88 and 1.72, respectively.

Police contact. Until now, we have used a broad measure of normbreaking behavior that included norm violations at home, at school, and during leisure time. We look, now, at a narrower measure: having been in trouble with the police during the last year. According to the self-reports of the 14-year-old children, 8.8% had been caught by the police for some offense during the past year, and according to the parents and the children themselves, parents of these children knew less about their daily activities than the parents of the other children. Child-reported "monitoring" was lower among the children who said they had been caught by the police, $t(692) = 6.13$, $p < .001$. Mean z-scores on "monitoring" were −.50 (SD = .71) and .05 (SD = .67) for those who had been caught by the police and those who had not, respectively. Parent-reported "monitoring" was also lower for those who had had police contact, $t(533) = 2.83$, $p < .01$. Mean z-scores were −.27 (SD = .48) and .05 (SD = .73) for those who had been caught by the police and those who had not, respectively.

"Monitoring" (parents' knowledge) is related to police contact, but which source of parents' knowledge is most closely related? The answer is child disclosure, just as it was for the broader normbreaking measure. In a logistic regression analysis predicting police contact from the child's reported disclosure,

parental solicitation, and parental control, child disclosure was most important, $b = -.62$, Wald statistic = 8.25, $p < .01$. Parental control was also a significant predictor, $b = -.50$, Wald statistic = 4.82, $p < .05$, but parental solicitation was not, $b = .18$, Wald statistic = 0.57, *ns*.

According to parents' reports, 5.7 % of the children had been caught by the police during the past year, and again, the parents of these children knew less about their activities, according to both sources. Child-reported "monitoring" was lower among these children, $t(27.42) = 3.23$, $p < .01$. Mean *z*-scores on "monitoring" were −.51 (*SD* = .91) and .07 (*SD* = .65) for those who had been caught by the police and those who had not, respectively. Parent-reported "monitoring" was also lower, $t(573) = 2.40$, $p < .05$. Mean *z*-scores were −.30 (*SD* = .81) and .02 (*SD* = .72) for those who had been caught by the police and those who had not, respectively.

Furthermore, when the three sources of information were used to predict parent-reported police contact, child disclosure was the only significant predictor, $b = -.80$, Wald statistic = 11.77, $p < .01$. In short, independent of whether the outcome measure is broad (normbreaking) or narrow (police contact) or whether the children or the parents report on police contact, child disclosure emerges as the most important predictor.

Is child disclosure just a proxy for good parent–child relationships? One could argue that the link between child disclosure and normbreaking is primarily due to the fact that children who confide in their parents have close emotional bonds with their parents, and it is the emotional bonds that makes them unlikely to be involved in normbreaking. We used two different indicators of parent–child relationships: one from the children's perspectives (parent–child relationships) and one from the parents' perspectives (family closeness). The family closeness measure was taken on a subset of the sample ($n = 154$). These two measures were positively correlated, $r(154) = .22$, $p < .01$. In addition, children's reports of mother–child relationships were positively correlated with their reports of father-child relationships, $r(662) = .47$, $p < .001$, and the pattern of results was the same when mother– and father–child relationships were examined separately.

Beginning with parent–child relationships, we asked whether any of these variables would still appear as predictors of normbreaking after controlling for children's reports of the parent–child relationship. With normbreaking as the dependent variable in a regression model, we forced parent–child relationships in on the first step and then added child disclosure, parental solicitation, and parental control on the second step. Parent–child relationships was a significant predictor of normbreaking when entered alone, $\beta = -.25$, $p < .001$. However, each of the child-reported sources still significantly predicted normbreaking independent of our parent–child relationship measure, $\beta = -.35$, $p < .001$, $\beta = -.09$, $p < .05$, and $\beta = -.25$, $p < .001$, for child disclosure, parental solicitation, and parental control, respectively. Moreover, when all of the variables were entered simultaneously to test for their independent contributions, child disclosure explained around twice as much variance as solicitation, control, or parent–child relationships, $\beta = -.36$, $p < .001$, $\beta = .17$, $p < .001$, $\beta = -.19$, $p < .001$, and $\beta = -.13$, $p < .001$, for disclosure, solicitation, control, and parent–child relationships, respectively. We also tested for gender effects by including, simultaneously, parent–child relationships, the three information sources, sex, the interaction of parent–child relationships with sex, and interactions of the information sources with sex. Neither sex nor any of the interactions was significant in this model.

Similar results were found using the second measure—parents' judgments of family closeness, which were taken for a subset of the sample ($n = 154$). Family closeness was a significant predictor of normbreaking when entered alone, $\beta = -.23$, $p < .01$; however, child disclosure and parental control significantly predicted normbreaking, over and above the family closeness measure, $\beta = -.45$, $p < .001$, $\beta = -.34$, $p < .001$, for child disclosure and parental control, respectively. In this limited sample, parental solicitation was marginally significant, $\beta = -.15$, $p < .08$. Again, when all of the variables were entered simultaneously, child disclosure explained more than twice as much variance as solicitation, control, or family closeness, $\beta = -.47$, $p < .001$, $\beta = .21$, $p < .02$, $\beta = -.24$, $p < .01$, and $\beta = -.15$, $p < .05$, for disclosure, solicitation, control, and family closeness, respectively. We find no evidence, then, that child disclosure and normbreaking are related only because adolescents who are emotionally close to their parents will share their experiences and also refrain from normbreaking.

DISCUSSION

In this study we argued that parental "monitoring" is really knowledge that parents have about their children's activities outside the home and that this knowledge comes partly from the parents' own efforts to find out what their children are doing (solicitation and control) and partly from the child's spontaneous and willing divulgence of information (child disclosure). These three knowledge sources accounted for close to

half of the variance in our "monitoring" measure for both children's and parents' reports.

In contrast to the parenting skills or direct supervision interpretation of monitoring that dominates the literature (Dishion & McMahon, 1998; Snyder & Patterson, 1987), however, this study suggests that "monitoring" is not what the term implies: a parental activity. It is more a child's activity. Both children's and parents' reports of "monitoring" were best explained as children's voluntary descriptions of their free-time activities.

Parents want to prevent antisocial behavior in their children or to stop it if it has begun. In the criminological literature, parents of delinquents have been characterized as poor and inconsistent monitors of their children's activities (Patterson & Stouthamer-Loeber, 1984; Snyder & Patterson, 1987). In this study, as in previous studies, poor parental "monitoring" was linked to more normbreaking behavior. However, when we asked which of the three potential sources of information best explained the child's normbreaking behavior, we found that child disclosure was the strongest predictor. This was true both for children's and parents' reports and for the broad normbreaking measure as well as for police contact.

Parental monitoring, defined as direct control of the child's behavior, was rejected early on by criminologists as an effective proactive strategy for parents (see Wells & Rankin, 1988, for a review). The argument was that adolescents spend so much of their free time at places where parents are not present that parents cannot control their children's behavior directly (Nye, 1958). Thereafter, a sizable body of research on parental "monitoring" that challenged the early view emerged. Many studies showed that "monitoring" did play an important role in constraining antisocial behavior, and several review studies came to that conclusion (Loeber & Stouthamer-Loeber, 1986; Snyder & Patterson, 1987).

Today, the idea that monitoring measures reflect parents' efforts to control and manage their children is widespread (see Dishion & McMahon, 1998; Snyder & Patterson, 1987). Authors argue that more and stronger surveillance by parents could reduce antisocial behavior in children (Fletcher et al., 1995; Patterson & Stouthamer-Loeber, 1984; Romer et al., 1994; Snyder & Patterson, 1987; Weintraub & Gold, 1991). Patterson and Stouthamer-Loeber (1984) suggested that juvenile delinquents' parents are "indifferent trackers of their sons' whereabouts" (p. 1305). Fletcher et al. (1995) concluded that strong parental "monitoring" could both deter adolescents from engaging in drug use in the first place and reduce the risks of further use, and Romer et al. (1994) suggested that parents of friendship groups should join together to monitor their children's free-time activities to prevent risky sexual behavior. However, these conclusions are not supported by the present study. They were based on an inferential leap: that parental knowledge must have come from surveillance and direct control. The present study suggests otherwise. Researchers, therefore, have likely drawn premature conclusions from monitoring findings.

Researchers have also used "monitoring" measures such as Patterson and Stouthamer-Loeber's (1984) five-item questionnaire to build models to explain how parents influence their children's antisocial behavior. For example, Barber (1996) recently distinguished theoretically between psychological and behavioral control. He argued that they would be differently related to internalizing and externalizing behavior; psychological control should create internalizing problems and behavioral control should prevent externalizing problems, and, indeed, he found that behavioral control was negatively related to delinquency. As a measure of behavioral control, however, he used a 5-item "monitoring" scale that measured parental knowledge, the rationale being that "monitoring . . . appears to be a particularly reliable and powerful index of family management and regulation" (p. 3301). In reality, although the "monitoring" scale taps parents' awareness of their children's whereabouts, it cannot be assumed to represent parents' behavioral attempts to control the child. The alternative interpretation—that children with externalizing problems hide their normbreaking behavior from their parents more than other children, which results in their parents knowing less—is more likely in light of our findings.

At least two plausible theoretical explanations could account for our main finding: that high disclosers were lower on normbreaking. One is a temperament explanation. Perhaps some children are just temperamentally prone to be agreeable, conventional people who have nothing to hide from their parents and who communicate willingly and openly. In this formulation, temperament would be a third variable that causes good behavior and also causes children to confide in their parents, but there might be no causal link between disclosure and good behavior at all. However, if this was all that was going on in our data, child disclosure should not have been important among children who hung out on the streets in the evening, but it was. Clearly, a richer explanation is needed.

Another explanation is that parents have done something to build up the kinds of relationships that facilitate communication, and those relationships are what prevent bad behavior. This explanation is conceptually linked to early formulations of control theory that take the child's attachment to the parents as the crucial aspect of behavioral control (Hirschi, 1969).

The basic idea is that the child's emotional bond to the parents prevents the child from doing anything that might compromise the relationship—anything of which parents might disapprove or that might embarrass them. Consistent with this, attachment measures have been shown to be important predictors of delinquency (e.g., Benda & Whiteside, 1995; Sokol-Katz, Dunham, & Zimmerman, 1997). Attachment might be a third variable that causes children to want to tell their parents all about their lives and also keeps them from getting into trouble, thus explaining both disclosure itself and the link between disclosure and antisocial behavior. Our data are not supportive of this idea, however. Child disclosure remains the strongest predictor of normbreaking, even after controlling for parent- and child-rated indicators of parent–child relationships.

A limitation of both of these views is that they postulate directional effects that are probably too simplistic. Socialization is not a unidirectional process (Maccoby & Martin, 1983; Magnusson & Stattin, 1998). Developmental psychology has moved from a "top-down" view of parenting to a more interactive view of parent–child processes that recognizes the necessity of reciprocity, cooperation, coordination, and coregulation. A good parent–child relationship, which should operate preventively, should be a two-way process, including both the parents' solicitation of knowledge and control of their children's behavior and the children's willingness to make their parents part of their lives. A parent–child relationship that protects children from antisocial behavior is unlikely to be built on the parents' or the children's actions alone. For instance, parents' attempts to solicit information from an unwilling child might have a limited effect on the child's behavior. In fact, some youngsters might view parental solicitation as an intrusion into their privacy and a means for parents to control their behavior. Parents' well-meaning attempts to find out about their children's activities have to be matched by the children's willingness to reveal what they are doing, where they are going, and whom they are with. A few times, this has been expressed in the monitoring literature (Crouter, et al., 1990; Weintraub & Gold, 1991). Crouter et al. (1990) defined monitoring as similar to Pulkkinen's (1982, p. 656) child-center guidance and emphasized the dual nature of the concept: "Parents who are good monitors have made the effort to establish channels of communication with their child, and as a result of their relationship with the child, they are knowledgeable about the child's daily experiences. In order to be an effective monitor, however, parental interest is not enough: A child must be willing to share his or her experiences and activities with the parent. Seen in this light, parental monitoring is a relationship property." This discussion of child disclosure and how the parent–child relationship might facilitate it is rare in the monitoring literature (for another exception, see Crouter et al., 1999). Typically, the parent–child relationship is discussed as a factor that determines what *parents* will *do* to monitor their children (e.g., Dishion & McMahon, 1998) and the child's active role is ignored.

This study leaves certain questions to be answered by future research. The cross-sectional design of the study precludes any detailed insights into causal connections. Only longitudinal studies will enable us to identify the origins of child disclosure or to say anything definitive about whether parents' knowledge actually *prevents* problems. Future studies should also include comparisons of mothers and fathers within the same families because recent evidence suggests that their knowledge may differ under certain circumstances (Crouter et al., 1999). This particular area of research would be especially interesting for future Swedish studies because Swedish law encourages and facilitates fathers' involvement more than in the United States, where differences in parental knowledge have been found.

The present study has a number of strengths, however. One is the large sample size and the high response rates from both children and parents. Another is that the study deals with both parents' and children's reports, which do not overlap precisely but which nonetheless reveal the same overall picture about parents' knowledge, where it comes from, and how these factors are connected to normbreaking. This study challenges the common assumption of what parental monitoring is; it reveals that parents' direct control over children's behavior is not as important as the youngsters' own voluntary disclosure of information about their lives. Thus, this study suggests that a bidirectional model of parent–child interactions is needed.

Our findings carry implications for future monitoring research and for parenting. In the future, researchers should not use the term monitoring to refer to measures of parental knowledge. Monitoring should be reserved for measures that actually tap parents' active efforts. If parental knowledge is measured, it should be labeled parental knowledge. We should recognize that parental knowledge is extremely important, for reasons which are as yet unknown. In future criminological investigations, more effort should go toward identifying aspects of parent–child relationships that are associated with the child's disclosure of information. A focus on the adolescent's point of view is also needed. For example, one issue that has received little attention in the monitoring literature is adolescents' trust in their parents—whether they feel that their parents are willing to listen to them, are

responsive, and would not ridicule or punish if they confided in them. Another issue is whether adolescents and their friends develop common attitudes and norms about how much they should confide in their parents about their daily activities and experiences. These and other possible influences on child disclosure should be investigated.

Concerning implications for parenting, general advice to parents should be given cautiously. Parents normally use different socializing strategies simultaneously and try to find a balance between them. Parents' awareness of their children's activities is certainly important for preventing negative behavior. However, our results suggest that in addition to controlling the child's whereabouts, parents should try to optimize conditions for the child to disclose information about his or her everyday experiences. Parental characteristics that have been associated with juvenile delinquency, such as aggression; hostility; cruel, neglecting attitudes toward the child; negativism; and permissiveness of aggression (see Snyder & Patterson, 1987, for a review) are all behaviors that would discourage child disclosure. A more child-centered approach, which would result in a two-way dialogue, might encourage children to share their mental lives with their parents. Parents must be aware of how adolescents feel and think as they formulate their upbringing strategies. Hirschi (1969) suggested that the parents' "psychological presence" in the child would keep the child from behaving badly, but that may not be achievable if the child's point of view and possible reactions are not psychologically present in the parents as they interact with their child.

ACKNOWLEDGMENTS

This research was supported by grants from the Swedish Council for Planning and Coordination of Research and the Swedish Council for Research in the Humanities and Social Sciences. During the preparation of this manuscript, Margaret Kerr was supported by a grant from the Wenner-Grenska Samfundet.

AUTHOR ADDRESSES AND AFFILIATIONS

Corresponding author: Håkan Stattin, Department of Psychology, University of Örebro, 701 82 Örebro, Sweden; e-mail: hs@psychmax.psychology.su.se. Margaret Kerr is also at the University of Örebro.

REFERENCES

Aseltine, R. H. (1995). A reconsideration of parental and peer influences on adolescent deviance. *Journal of Health and Social Behavior, 36*, 103–121.

Barber, B. K. (1996). Parental psychological control: Revisiting a neglected construct. *Child Development, 67*, 3296–3319.

Benda, B. B., & Whiteside, L. (1995). Testing an integrated model of delinquency using LISREL. *Journal of Social Science Research, 21*, 1–32.

Biglan, A., Duncan, T. E., Ary, D. B., & Smolkowski, K. (1995). Peer and parental influences on adolescent tobacco use. *Journal of Behavioral Medicine, 18*, 315–330.

Cernkovich, S. A., & Giordano, P. C. (1987). Family relationships and delinquency. *Criminology, 24*, 295–321.

Chassin, L., Pillow, D. R., Curran, P. J., Molina, B. S. G., & Barrera, M., Jr. (1993). Relation of parental alcoholism to early adolescent substance use: A test of three mediating mechanisms. *Journal of Abnormal Psychology, 102*, 3–19.

Cohen, D. A., & Rice, J. C. (1995). A parent-targeted intervention for adolescent substance use prevention: Lessons learned. *Evaluation Review, 19*, 159–180.

Crouter, A. C., Helms-Erikson, H., Updegraff, K., & McHale, S. M. (1999). Conditions underlying parents' knowledge about children's daily lives in middle childhood: Between- and within-family comparisons. *Child Development 70*, 246–259.

Crouter, A. C., MacDermid, S. M., McHale, S. M., & Perry-Jenkins, M. (1990). Parental monitoring and perceptions of children's school performance and conduct in dual- and single-earner families. *Developmental Psychology, 26*, 649–657.

Crouter, A. C., Manke, B. A., & McHale, S. M. (1995). The family context of gender intensification in early adolescence. *Child Development, 66*, 317–329.

Dishion, T. J., Capaldi, D., Spracklen, K. M., & Li, F. (1995). Peer ecology of male adolescent drug use: Developmental processes in peer relations and psychopathology [Special issue]. *Development and Psychopathology, 7*, 803–824.

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.

Flannery, D. J., Vazsonyi, A. T., Torquati, J., & Fridrich, A. (1994). Ethnic and gender differences in risk for early adolescent substance use. *Journal of Youth and Adolescence, 23*, 195–213.

Fletcher, A. C., Darling, N., & Steinberg, L. (1995). Parental monitoring and peer influences on adolescent substance use. In J. McCord (Ed.), *Coercion and Punishment in Long-Term Perspectives* (pp. 259–271). Cambridge, MA: Cambridge University Press.

Fridrich, A. H., & Flannery, D. J. (1995). The effects of ethnicity and acculturation on early adolescent delinquency. *Journal of Child and Family Studies, 4*, 69–87.

Hanson, K. (1989). Family climate: An adjective checklist for family diagnosis [Familjeklimat. En adjektivlista for familjediagnostik] (Report number 1). Lund, Sweden: Department of Applied Psychology, Lund University.

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

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: An annual review of research. (Vol. 7). Chicago: University of Chicago Press.

Maccoby, E. E., & Martin, J. A. (1983). Socialization in the context of the family: Parent-child interaction. In E. M. Hetherington (Ed.), P. H. Mussen (Series Ed.), *Handbook of child psychology: Vol. 4. Socialization, personality, and social development.* (pp. 1–101). New York: Wiley.

Magnusson, D., & Stattin, H. (1998). Person-context interaction theories. In R. M. Lerner (Ed.), W. Damon (Series Ed.) *Handbook of child psychology: Vol. 1. Theoretical models of human development* (pp. 685–759). New York: Wiley.

McCord, J. (1986). Instigation and insulation: How families affect antisocial aggression. In J. Block, D. Olweus, & M. R. Yarrow (Eds.) *Development of Antisocial and Prosocial Behavior* (pp. 343–357). New York: Academic Press.

Metzler, C. W., Noell, J., Biglan, A., Ary, D., & Smolkowski, K. (1994). The social context for risky sexual behavior among adolescents. *Journal of Behavioral Medicine, 17*, 419–438.

Nye, F. I. (1958). *Family relationships and delinquent behavior.* New York: Wiley.

Otto, L. B., & Atkinson, M. P. (1997). Parental involvement and adolescent development. *Journal of Adolescent Research, 12*, 68–89.

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

Pulkkinen, L. (1982). Self-control and continuity from childhood to adolescence. In P. B. Baltes & O. G. Brim (Eds.), *Life span development and behavior* (Vol. 4, pp. 63–105). New York: Academic Press.

Read, A. W., et al. (Eds.) (1995). *The New International Webster's Comprehensive Dictionary of the English Language* (encyclopedic edition). Chicago: Trident Press International.

Reid, J. B., & Patterson, G. R. (1989). The development of antisocial behavior patterns in childhood and adolescence: Personality and aggression [Special issue]. *European Journal of Personality, 3*, 107–119.

Romer, D., Black, M., Ricardo, I., Feigelman, S., Kaljee, L., Galbraith, J., Nesbit, R., Hornik, R. C., & Stanton, B. (1994). Social influences on the sexual behavior of youth at risk for HIV exposure. *American Journal of Public Health, 84*, 977–985.

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: Children and poverty [Special issue]. *Child Development, 65*, 523–540.

Snyder, J., & Patterson, G. (1987). Family interaction and delinquent behavior. In H. C. Quay (Ed.), *Handbook of Juvenile Delinquency.* New York: Wiley.

Sokol-Katz, J., Dunham, R., & Zimmerman, R. (1997). Family structure versus attachment in controlling adolescent deviant behavior: A social control model. *Adolescence, 32*, 199–215.

Well, L. E., & Rankin, J. H. (1988). Direct parental controls and delinquency. *Criminology, 26*, 263–285.

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

White, M. J., & Kaufman, G. (1997). Language usage, social capital, and school completion among immigrants and native-born ethnic groups. *Social Science Quarterly, 78*, 385–398.