

“Snooping” as a Distinct Parental Monitoring Strategy: Comparisons With Overt Solicitation and Control

Skyler T. Hawk

The Chinese University of Hong Kong

Andrik Becht and Susan Branje

Utrecht University

Parents can use *solicitation* (asking questions) and *control* (disclosure rules) to obtain information about adolescents, but only if youths comply. *Snooping* might uncover additional information, but also strongly violates privacy expectations. Three studies of parents and adolescents examined distinctions between snooping, solicitation, and control. Differences existed in terms of factor structure and frequency (Studies 1–2), links to perceived invasion (Study 1), correlations with problematic communication, behavior, and relationships (Study 2), and parent–adolescent (dis)agreement about acceptability (Study 3). Snooping is a relatively infrequent monitoring behavior, compared to solicitation and control, but appears to be a stronger indicator of problems in adolescent and family functioning. We discuss implications regarding the necessity and appropriateness of particular parental monitoring behaviors.

The last two decades of research on parental monitoring strongly suggest that adolescents are the “gatekeepers” of parents’ knowledge about their free-time activities and associations (e.g., Keijsers, Branje, VanderValk, & Meeus, 2010; Marshall, Tilton-Weaver, & Bosdet, 2005). Further, active parental strategies such as *solicitation* (asking about youths’ behavior) and *control* (explicit rules for permission seeking and disclosure) might not hold direct links with either their knowledge about children nor with adolescents’ delinquent behaviors (Keijsers et al., 2010; Kerr, Stattin, & Burk, 2010). Importantly, the vast majority of research has focused exclusively on overt monitoring strategies conducted with adolescents’ full awareness. However, parents might also resort to covert monitoring, or “snooping,” such as searching through belongings and reading e-mails without permission. When parents suspect adolescent dishonesty and problem behavior, or sense a rift in the relationship, they may not be content to rely on youths’ voluntary disclosures (McKinney, 1998; Tang & Dong, 2006; see also Lavy, Mikulincer, & Shaver, 2010; Vinkers, Finkenauer, & Hawk, 2011). Qualitative evidence suggests that parents wrestle

with the appropriateness of such actions (McKinney, 1998). Thus, considering covert monitoring and its distinction from solicitation and control represents an important contribution to literature on information management in families.

Prior research has examined snooping as part of general, undifferentiated measures of intrusive behavior (Buyukcan-Tetik, Finkenauer, Kuppens, & Vohs, 2013; Vinkers et al., 2011), or in contrast to more overt privacy violations (e.g., entering rooms without knocking, giving unwanted advice; Ledbetter et al., 2010; Ledbetter & Vik, 2012; Petronio, 1994). Thus, while snooping has been considered within a broader constellation of disrespectful actions (cf. Barber, Xia, Olsen, McNeely, & Bose, 2012), more focused comparisons with strategies specifically aimed at acquiring information are largely absent. Further, while snooping has been examined in both college samples (Ledbetter et al., 2010; Ledbetter & Vik, 2012; Petronio, 1994) and spouses (Buyukcan-Tetik et al., 2013; Vinkers et al., 2011), younger adolescents and their parents are rarely considered. To date, the only study to do so (Cottrell et al., 2007) found snooping to be a distinct but relatively infrequent monitoring dimension linked to lower parental knowledge and problematic family communication. This research, however, contrasted snooping with an undifferentiated “direct monitoring” dimension conflating solicitation and control. As these latter strategies have also been shown to differ both in youths’ per-

The authors wish to thank Dr. Lauree Tilton-Weaver of Örebro University and Dr. Sheila Marshall of the University of British Columbia for providing the data utilized in Study 2 of this article. Data collection was funded by Örebro University, the Swedish National Institute of Public Health, and the Social Sciences and Humanities Council of Canada.

Requests for reprints should be sent to Skyler T. Hawk, Department of Educational Psychology, The Chinese University of Hong Kong, Ho Tim Building #409, Sha Tin NT, Hong Kong. E-mail: s.t.hawk@cuhk.edu.hk

ceptions of their acceptability and in their links with various aspects of relationships with parents (e.g., Hawk, Hale, Raaijmakers, & Meeus, 2008; Kerr & Stattin, 2000), research is still needed that contrasts all three of these behaviors with one another.

Parents' access to youths' personal spaces (e.g., bedrooms), property (e.g., school bags), and communications (e.g., mobile phones, personal computers) might distinguish snooping from overt monitoring in terms of frequency and justifiability. In addition, family attempts to strike a balance between individuation and continued closeness in adolescence might also produce differential associations between particular monitoring behaviors and youths' adjustment (Cottrell et al., 2007) or information management (e.g., disclosure, secrecy; Laird & Marrero, 2010; Tilton-Weaver & Marshall, 2008). To date, these links have not been addressed in prior research. In short, although there is reason to believe that parental snooping comprises a monitoring strategy that is distinct from solicitation and control, related evidence is scarce with regard to factor structure, distinct links with adolescent adjustment and information management, and family members' views on when such actions are justified.

Various monitoring behaviors appear to differ in the extent to which they violate youths' privacy expectations. Prior research reported direct longitudinal links from earlier solicitation to later perceived invasion (Hawk et al., 2008). Compared to parental control, however, solicitation also holds stronger links with youths' disclosure (Keijsers, Frijns, Branje, & Meeus, 2009), less antisocial behavior (Laird, Marrero, & Sentse, 2009), and more positive family relationships (Kerr & Stattin, 2000). Notably, links from earlier parental control to later invasion perceptions existed only for youths reporting higher quality relationships with parents (Hawk et al., 2008). These results suggest that monitoring is increasingly viewed as intrusive when it more explicitly violates existing expectations about trust and the ability to selectively disclose. With this in mind, the unpredictability and restriction of information management options that characterize snooping (Petronio, 1994) suggest that adolescents could perceive it as highly invasive of privacy.

Youths might restore violated privacy boundaries through evasion and disengagement (Petronio, 1994, 2000). Indeed, perceived invasion holds cross-sectional and longitudinal links with a range of negative outcomes, including more problem behavior (Laird, Marrero, Melching, & Kuhn, 2013a), adolescent-parent conflict (Hawk, Keijsers,

Hale, & Meeus, 2009; Laird et al., 2013a), concealment from parents (Hawk et al., 2013; Laird et al., 2013a), and reduced parental knowledge (Hawk et al., 2013). Regardless of whether these are precursors or consequences of invasive actions, the implication is that invasive monitoring is correlated with indices of poorer adjustment. To date, however, studies have focused more strongly on general invasion perceptions instead of specific behaviors, and a narrower range of monitoring strategies that has rarely included snooping. In the present research, we explicitly investigated differential patterns of correlations that snooping, solicitation, and control hold with indicators of adolescents' adjustment and relations with parents.

In summary, the present research aimed to shed additional light on parental snooping, which has received substantially less attention than parental solicitation and control. Using three independent samples of adolescents and/or their parents, we aimed to examine differences and similarities between snooping and overt monitoring strategies. In Study 1, we examined youth reports of snooping, solicitation, and control in terms of factor structure, frequency, and links to perceived privacy invasion. In Study 2, we considered convergent and divergent associations between each parent-reported monitoring strategy and correlates including youths' disclosure, secrecy, lying, and problem behavior, as well as parents' own concerns about their children and their perceptions of self-efficacy. In Study 3, we compared adolescent and parental views of when each strategy could be a justifiable method of obtaining parental knowledge. These initial comparisons can provide valuable information for adolescents, parents, practitioners, and researchers aiming to establish guidelines for acceptable and beneficial information sharing between family members.

STUDY 1

Study 1 compared snooping, solicitation, and control in terms of factor structure and links with perceptions of privacy invasion. We expected to find a three-dimensional structure, representing each respective parental monitoring behavior. While we expected that all three behaviors might be linked to perceived privacy invasion (Hawk et al., 2008; Petronio, 1994), we also predicted that snooping would hold the strongest association. Finally, we explored potential gender differences in each monitoring behavior with regard to factor structure, links to perceived invasion, and reported frequency.

Method

Participants. Participants were 574 Dutch adolescents (48% male) between the ages of 13 and 16 ($M = 14.56$, $SD = 0.95$), recruited from nine different high schools in the Netherlands. The vast majority of youths (95%) were born in the Netherlands. They followed different educational programs, with the majority (84%) receiving either higher vocational training or preparing for university. The majority of youths reported both mothers (85%) and fathers (85%) being of Dutch ancestry. Other backgrounds included Moroccan, Turkish, Surinamese, and Indonesian.

Procedure. Permission was obtained from participating schools and parents. Questionnaires were administered to youths during common education (nonelective) courses. All participants were informed of their right to withdraw from the study and were guaranteed confidentiality.

Measures. *Snooping.* Adolescents reported on parental snooping using four items on a 5-point Likert scale (1 = *never*, 5 = *very often*). The items were the following: "How often do your parents... Try to secretly listen in on your telephone or computer conversations?"; "Read your diary without your permission?"; "Try to secretly read your e-mail or text messages?"; and "Look through your personal things without your permission?" This measure had good reliability ($\alpha = .80$).

Parental control. Dutch translations of four items by Kerr and Stattin (2000) were used to measure parental control, consisting of a 5-point Likert scale (1 = *never*, 5 = *very often*). This questionnaire asks adolescents about the extent to which they have to ask permission and/or tell parents about their free-time activities and peer associations. Based on prior factor analyses conducted with similar Dutch samples (Hawk et al., 2008), a fifth item from the original scale ("Do you need your parents' permission to come home late on a weekday night?") was omitted. Internal consistency for the remaining four items was good ($\alpha = .78$) and paralleled scores found in earlier studies on Dutch youths (Hawk et al., 2008).

Parental solicitation. Adolescents responded to three Dutch-translated items from Kerr and Stattin's (2000) five-item parental solicitation measure, arranged on a 5-point Likert scale (1 = *never*, 5 = *very often*). Questions concern how often parents initiated direct conversations with children about their activities. As previous research with

similar samples (Hawk et al., 2008) showed problematic factor loadings for two of the original items (both concerning parent's talking to children's friends), these items were eliminated in the present study. Reliability of this three-item scale was sufficient ($\alpha = .65$) and comparable to previous research (Hawk et al., 2008; Kerr & Stattin, 2000).

Perceived privacy invasion. A Dutch translation of the Level of Expressed Emotion (LEE) questionnaire (Hale, Raaijmakers, Gerlsma, & Meeus, 2007) assessed adolescents' perceptions of privacy invasion. A recent study (Laird, Marrero, Melching, & Kuhn, 2013b) recommended omitting three items of the original seven-item measure to avoid conflating perceived invasion with perceived monitoring. Adolescents responded to four items on a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*). The items included: "My parents... Are always interfering"; "Are always nosing into my business"; "Have to know everything about me"; and "Intrude into my private matters." The scale showed good reliability ($\alpha = .85$) that was comparable to prior studies (Hawk et al., 2008).

Statistical analyses. There were no missing data for this study. As this is the first study to explicitly examine differences between snooping and both solicitation and control, we report the observed mean scores of each monitoring variable to facilitate easy comparisons with prior and future research. We conducted an exploratory factor analysis on items related to snooping, solicitation, and control, using Oblimin rotation to account for correlations between dimensions. The threshold for acceptable factor loadings was set at $\geq .40$. We further included these three constructs in a latent variable structural equation model (SEM) (Mplus v.7; Muthén & Muthén, 1998–2011) using maximum-likelihood estimation. We used a series of Wald tests to compare the relative strengths of the paths leading from each monitoring behavior to adolescents' perceived privacy invasion. Adolescents' age was regressed onto all four latent variables, to control for potential age differences. Acceptable fit in SEM was set at comparative fit index (CFI) $\geq .90$, and root mean square error of approximation (RMSEA) and standardized root mean square residual (SRMR) $\leq .08$ (Kline, 2011).

Results

Mean scores of monitoring frequency. Youths reported the lowest frequency for snooping ($M = 1.30$, $SD = 0.57$), followed by solicitation

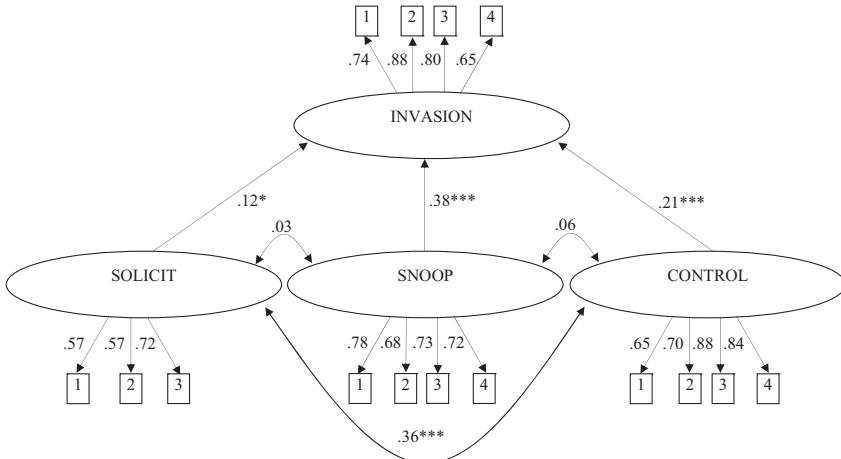


FIGURE 1 Latent variable structural equation model examining relations between monitoring behaviors and perceived privacy invasion. All latent variables were controlled for adolescent age and gender. $\chi^2(106) = 278.29^{***}$; comparative fit index (CFI) = .95; root mean square error of approximation (RMSEA) = .05; standardized root mean square residual (SRMR) = .05; * $p \leq .05$; *** $p \leq .001$.

($M = 3.11$, $SD = 0.88$), and control ($M = 3.40$, $SD = 1.03$). In total, 62.50% of youths reported that snooping “never” occurred.

Exploratory factor analysis (EFA). A principal components factor analysis with Oblimin rotation resulted in a three-factor solution (eigenvalues >1) that explained 50.29% variance. Examination of the scree plot also confirmed a drop-off after three dimensions. As expected, items showed principal loadings on only one of the three dimensions, which corresponded to the three types of monitoring behavior: snooping (loadings .70–.77; 19.53% variance), solicitation (loadings .56–.72; 8.22% variance), and control (loadings .46–.92; 22.54% variance). Further, no items showed substantial cross-loadings on other dimensions (all cross-loadings $\leq .13$). Thus, as predicted, this initial factor analysis showed snooping to be a dimension of parental monitoring behavior distinct from solicitation and control.

Confirmatory factor analysis and links with perceived privacy invasion. The latent variable model examining links between the three monitoring behaviors and adolescents' perceptions of parental privacy invasion, controlled for age, showed an acceptable fit according to rules of thumb provided by Kline (2011), $\chi^2(95) = 257.16$, $p < .001$; CFI = .95, RMSEA = .06, 90% confidence interval (CI) = .04–.06, SRMR = .05. We then tested whether adolescent gender moderated this model by adding subsequent constraints upon factor loadings, intercorrelations between dimensions, and links with perceived invasion. As none of these

constraints resulted in fit changes $>.01$, the model could be treated as equivalent between genders (Chen, 2007). Following these tests, we then added gender as a predictive variable to the model to examine potential differences between boys and girls in frequency of monitoring strategies or perceptions of privacy invasion.

This final latent variable model (Figure 1), including both age and gender, showed an acceptable fit, $\chi^2(106) = 278.29$, $p < .001$; CFI = .95, RMSEA = .05, 90% CI = .05–.06, SRMR = .05. All monitoring indicators showed acceptable loadings on their respective latent variables (loadings .57–.88), as did the indicators for perceived privacy invasion (loadings .65–.88). While solicitation and control showed a significant correlation with one another, neither of these dimensions was significantly correlated with snooping.

As expected, all three monitoring behaviors showed associations with perceived privacy invasion; whereas these links were modest for solicitation and control ($\beta = .12$, $p = .05$ and $\beta = .21$, $p < .001$, respectively), the link between snooping and perceived invasion was more substantial ($\beta = .38$, $p < .001$). Three Wald tests showed that although the strength of links with invasion did not differ between solicitation and control (Wald (1) = .50, $p = .48$), both of these links were significantly smaller than the association between snooping and perceived invasion (Wald (1) = 15.86, $p < .001$ and Wald (1) = 13.06, $p < .001$, respectively).

Regarding gender differences, we found that girls reported more solicitation and control compared to boys (both β s = .25, $p = <.001$). Boys and

girls did not differ on frequencies of parental snooping and perceptions of parental privacy invasion ($\beta = -0.04$, $p = .39$ and $\beta = 0.01$, $p = .85$, respectively). Age was negatively correlated with parental control ($r = -.12$, $p = .01$), suggesting less frequent control among older youths. Snooping showed a modest positive correlation with age ($r = .11$, $p = .01$). Reports of solicitation ($r = .09$, $p = .07$) and privacy invasion were not correlated with age ($r = .04$, $p = .38$).

Study 1 Discussion

This initial study examining adolescent reports of snooping largely supported our hypotheses. Survey items related to snooping frequency emerged as a behavioral dimension distinct from parental solicitation and control in both exploratory and confirmatory factor analyses. Snooping held the strongest links with perceptions of parental privacy invasion. The invasiveness of snooping was also reflected in the finding that more than half of youths reported this activity to never occur. Solicitation and control were also modestly associated with perceived invasion, with effect sizes that paralleled a prior longitudinal study of these links (Hawk et al., 2008). Others have suggested that, although youths might find overt demands for information to be intrusive, they can potentially mitigate this association through a combination of disclosures, omissions, and outright refusals (Hawk et al., 2008, 2009; Marshall et al., 2005; Petronio, 1994). In contrast, the unpredictability and covert nature of snooping negates youths' agency in choosing responses that best suit their privacy needs (Ledbetter et al., 2010; Ledbetter & Vik, 2012; Petronio, 1994, 2010).

The higher levels of solicitation and control for girls, compared to boys, are consistent with prior studies on Dutch adolescents (Hawk et al., 2008; Keijsers et al., 2009). The negative link between age and control, and a trend toward a positive link between age and solicitation, is also in line with longitudinal evidence that parents decrease control over time (Hawk et al., 2008; Keijsers et al., 2009) and instead rely more strongly on youths' own willingness to share information (Keijsers et al., 2010; Kerr et al., 2010) or disclose in the context of an open dialogue (Smetana, Metzger, Gettman, & Campione-Barr, 2006). Notably, there was also a positive correlation between age and snooping. This could reflect a tendency for parents to resort to such behavior in the face of growing expectations that they reduce their overt authority (Hawk et al., 2013), even if their desire to stay knowledgeable

remains strong. Alternatively, youths' expanding privacy claims might mean that older adolescents are especially aware or suspicious of such behavior occurring (cf. Petronio, 1994).

In either respect, parents' likely desire to avoid invading youths' privacy except when concerns over dishonesty or problem behavior are more severe (McKinney, 1998; Tang & Dong, 2006; see also Buyukcan-Tetik et al., 2013; Vinkers et al., 2011), and when information is unlikely to be discovered through voluntary compliance with disclosure requests. It is further interesting to question whether parental suspicions and/or actual youth behavior problems hold stronger links with snooping. Examining parents' own reports of the frequency with which they engage in snooping, relative to other monitoring behaviors, could shed additional light on these issues. Investigating possible correlates of snooping could also reveal distinct parental mindsets and (suspected) adolescent behaviors linked to these intrusive actions. These issues were investigated further in Study 2.

STUDY 2

In Study 2, parents reported on the extent to which they used snooping, solicitation, and control with their adolescents. We again expected a three-dimensional structure. We also again expected snooping to be relatively infrequent, compared to solicitation and control. We collected both parent and adolescent reports of youths' voluntary disclosure, secrecy, lying, and antisocial behavior. We also assessed parents' worries regarding the potential for their children to get into trouble, their concerns about parent-child relationship deterioration, and perceptions of their parenting efficacy. We expected parents' reports of snooping to hold stronger positive links with youth secrecy, lying, problem behavior, and parental worry—and stronger negative links with parenting efficacy perceptions—than solicitation or control. Relying on parents' reports of snooping allowed us to ascertain a more complete understanding of the extent to which this behavior occurs, as compared to youth perceptions that might involve either under- or over-reporting due to lack of awareness or unfounded suspicion. By gathering reports on information management and problem behavior from both parents and children, we could explore whether parental suspicions and/or actual youth behavior problems held stronger links with snooping, compared to solicitation and control.

Method

Participants. The sample came from six schools in a small city in southern Sweden, as part of a larger study of 645 adolescents. From this larger sample, a total of 200 families (31% of those approached) agreed to participate, each consisting of an adolescent between 13 and 16 years and at least one parent. The majority of adolescents reported themselves (71%), mothers (66%) and fathers (68%) being of Swedish origin, and from a two-parent household (62%). Data on place of birth and family makeup were not reported by 25% of adolescents. When both parents agreed to participate, one was selected at random. Of these families, seven parents did not return complete snooping, solicitation, and control data and thus could not be considered further. As a result of a clerical error, gender for a large portion of the parents (48%) was not recorded. Parental gender could thus not be considered further. Cases in which parental gender was recorded consisted of 66 mothers and 31 fathers. Of the 193 families with intact parental monitoring responses, 138 adolescents ($M_{age} = 14.75$, $SD = 0.83$; 53% girls) completed the scales related to information management and problem behavior.

Procedure. As part of the larger study, teams of research assistants collected data during classroom hours (2 per classroom). No teachers or classroom assistants remained in the classrooms. Students were told about the purpose of the study, the types of questions being asked, and about their rights to refuse answering any or all questions without fear of repercussions. Questionnaires were handed out, and students were given 2 hr to complete them, with a 30-min break after the first hour. During this break, they were provided with refreshments. After data collection from the adolescents, they were each given movie passes worth 100 Swedish kronor (approximately \$15 USD, the price of one movie). Parents were sent questionnaires to the students' address of record and instructed to complete them at their convenience, returning them in postage-paid envelopes. Parents who participated were sent the same set of movie passes (worth 100 SEK).

Measures. *Parental snooping.* Parents reported their snooping using the same four items used in Study 1, on a 4-point scale (1 = *never*, 2 = *once or twice*, 3 = *quite a lot*, and 4 = *all the time*).

The measure had adequate reliability (Cronbach's $\alpha = .78$).

Parental solicitation. Parents reported on their solicitation using six items inspired by Stattin and Kerr's (2000; Kerr & Stattin, 2000) original measure ("How often do you ask your child... What he/she does in his/her free time?; What he/she does when he/she are on his/her own?; Who his/her friends are and what they are like?; Where he/she goes or what he/she does in the evenings?; Where he/she is or what he/she is doing after school before he/she gets home?; and Where he/she goes or what he/she does on the weekends when he/she is away from home?"). Items were scored on a 4-point scale (1 = *almost never*; 2 = *sometimes*; 3 = *almost every time*; and 4 = *every time*). The measure had good reliability (Cronbach's $\alpha = .86$).

Parental control. Parents reported on how often they required their children to disclose information or proactively seek permission, using four items inspired by Stattin and Kerr's (2000; Kerr & Stattin, 2000) original parental control measure ("If he/she has been out very late one night, do you require that he/she explain what he/she did and whom he/she was with?; Before he/she goes out on a Saturday night, does he/she have to tell you where he/she is going and with whom?; Does he/she have to tell you where he/she is at night, who he/she is with, and what they do together?; and If he/she goes out on a Saturday night, does he/she have to inform you in advance about who he/she will be with and what he/she will be doing?"). Items were scored on a 5-point Likert scale (1 = *never*; 2 = *seldom*; 3 = *sometimes*; 4 = *most of the time*; and 5 = *always*). Reliability was good (Cronbach's $\alpha = .82$).

Information management. Both adolescents and parents reported on three adolescent information management behaviors related to their free-time activities and peer associations, namely *voluntary disclosure* (five items, e.g., "Do you talk to your parents, without being asked, about things you do when you're out with your friends?"), *secrecy* (four items, e.g., "Do you have a lot of secrets from your parents about what you do in your free time?"), and *lying* (three items, e.g., "Do you lie to your parents about what you do with friends?") (all modified from Kerr & Stattin, 2000; Tilton-Weaver, 2014). Items were scored on a 5-point scale (1 = *never*, 5 = *very often*). The three measures all demonstrated good reliability for both parents (Cronbach's $\alpha_s = .90$, $.83$, and $.90$, respectively) and adolescents (Cronbach's $\alpha_s = .85$, $.80$, and $.76$, respectively).

Antisocial behavior. Adolescents and parents both reported on a variety of (perceived)

adolescent problem behaviors using 20 items from Magnusson, Dunér, and Zetterblom's (1975) youth delinquency scale. Items included assessments of theft (e.g., taken things from a store, stand, or shop without paying), vandalism (e.g., taken part in painting graffiti), substance use (e.g., used marijuana or other drugs), and violent behavior (e.g., participated in a street fight in town). These items were scored on a 5-point Likert scale (0 = *never happened*, 4 = *happened more than 10 times*). Aggregate scores across all 20 items were computed for both parents (Cronbach's $\alpha = .80$) and adolescents (Cronbach's $\alpha = .78$).

Parenting efficacy. Parents' self-efficacy was measured with nine items, including several from Freedman-Doan, Arbreton, Harold, and Eccles (1993) and Tilton-Weaver and Galambos (2003), as well as new items created for the larger study (Tilton-Weaver, 2014). These items tapped into parent's beliefs regarding their ability to positively influence their children's social development and behavior (e.g., "How much can you do now to help [your] child select friends that are good for him/her?"). Items were scored on a 5-point Likert scale (1 = *not much*, 5 = *a great deal*). The scale had good reliability (Cronbach's $\alpha = .93$).

Parental worry. Parents' worries about beliefs in two domains, namely *problem behavior* (e.g., "I am worried that my child will get into more trouble this coming year than the last") and *relationship deterioration* (e.g., "I worry that my child will stop loving and respecting me"), were measured with five and three items, respectively. The antisocial items were derived from prior studies (Freedman-Doan et al., 1993; Tilton-Weaver & Galambos, 2003), while the relationship deterioration items were created for the larger study (Tilton-Weaver, 2014). Both scales had good reliability (Cronbach's $\alpha = .87$ and $.84$, respectively).

Strategy of analysis. We again report the observed means of each parent-reported monitoring strategy, to facilitate easy comparison with prior research. We performed a confirmatory factor analysis in Mplus v.7 on parents' reports of snooping, solicitation, and control, to verify these monitoring strategies again comprised three separate dimensions. Each latent monitoring factor was allowed to correlate with the other two to account for overlap between the constructs. In line with suggestions from Mplus modification indices, we allowed three sets of errors for the solicitation items to correlate. We then added the various adolescent- and parent-reported correlates of interest

to this basic model, to ascertain the unique relationships between each monitoring behavior and the variables of interest by controlling each strategy for the other two. We made two choices in analytical strategy, for the sake of consistency across these models. First, due to the relatively large number of parameters that would be involved in fully latent models for some of these correlates (e.g., parent and adolescent reports of problem behavior would each involve 20 indicators) compared to the relatively small sample size, we used mixed models involving latent variables for the monitoring behaviors and observed scores for the correlates of interest. Second, due to the aforementioned disparity in parent versus adolescent sample sizes, and the fact that adolescents did not report on all of the correlates reported by parents, we ran separate models for parent and adolescent reports (a total of 11 models involving the correlates of interest).

Handling of missing data. With regard to parent models, missing values ranged from 1% to 5% across all items. A series of Little's (1988) missing completely at random (MCAR) tests on the variables in each model were not significant (ranging from $\chi^2(137) = 131.95$, $p = .61$ for the basic model, to $\chi^2(366) = 402.50$, $p = .09$), nor was the overall MCAR with all variables included ($\chi^2(4218) = 3281.352$, $p = 1.00$). This indicated a good fit in sample scores with and without imputation. Regarding adolescent models, the MCAR tests for disclosure and secrecy were significant ($\chi^2(298) = 338.61$, $p = .05$, and $\chi^2(262) = 323.61$, $p = .006$, respectively). Even though the results of this conservative test were significant, the relatively low chi-square/degree of freedom (df) ratios (1.14 and 1.24, respectively) still indicated a good fit between scores with and without imputation (Bollen, 1989). We therefore used full information maximum-likelihood (FIML) estimation in all models to account for missing data.

Results

Mean scores of monitoring frequency. As in Study 1, snooping was reported as a less frequent behavior in comparison with solicitation or control, and solicitation also occurred less frequently than control (see Table 1). From the total sample, 60.10% of parents reported "never" engaging in snooping.

Confirmatory factor analysis. The confirmatory factor analysis (CFA) conducted on parents' reports of snooping, solicitation, and control yielded an

acceptable model fit ($\chi^2(71) = 118.53, p < .001$, CFI = .96, RMSEA = .06, 90% CI = .04–.08, SRMR = .06) (Kline, 2011). Standardized factor loadings for each dimension were acceptable (loadings for snooping .58–.80, loadings for solicitation .67–.81, and loadings for control .55–.86). Solicitation was significantly correlated with both snooping ($\beta = .18, p = .03$) and control ($\beta = .36, p < .001$), but control and snooping were not correlated ($\beta = -.11, p = .18$). Adding age and gender did not produce any associations with snooping, solicitation, or control (all $p > .21$) and worsened the fit of the model when included (e.g., $\Delta\text{CFI} = -.03$, $\Delta\text{RMSEA} = .01$). Therefore, they were not retained as predictors.

Partial correlations. We then added observed scores of the parent- and adolescent-reported variables of interest to this basic model. Means and standard deviations of these scores can be seen in Table 1, as can the SEM correlations between each monitoring strategy and the variable of interest. Each of the models had an adequate fit ($\chi^2(82)$ from 120.06 to 138.57, all $ps < .001$; CFIs from .93 to .97; RMSEAs from .05 to .07; 90% CI (lower) from .03 to .05; 90% CI (upper) from .07 to .08; all SRMRs = .06).

Controlling for parent-reported solicitation and control, parent-reported snooping held significant positive correlations with perceived adolescent

lying ($\beta = .44, p < .001$) and adolescent-reported lying ($\beta = .28, p = .003$), adolescent-reported secrecy ($\beta = .27, p = .002$), parent-reported perceptions of adolescent antisocial behavior ($\beta = .26, p < .001$), worries about problem behavior ($\beta = .21, p = .007$), and worries about relationship deterioration ($\beta = .24, p = .002$). Additionally, parent-reported snooping was negatively correlated with their perceptions of parenting efficacy ($\beta = -.29, p < .001$). Snooping was not linked with adolescent- or parent-reported disclosure, parents' perceptions of adolescent secrecy, or with adolescent-reported antisocial behavior.

Controlling for parent-reported snooping and control, parent-reported solicitation showed significant positive correlations with perceptions of parenting efficacy ($\beta = .21, p = .004$), adolescent-reported secrecy ($\beta = .24, p = .004$), and adolescent lying ($\beta = .17, p = .05$). No other correlations were significant. Controlling for parent-reported snooping and solicitation, parent-reported control showed only one significant correlation in these models, namely a positive relationship with parent-reported efficacy ($\beta = .20, p = .007$).

To compare the correlation strengths within each model, we then conducted a series of post hoc Wald tests. In comparison with solicitation or control, parent-reported snooping was more strongly correlated with parent reports of adolescent lying (Wald (1) = 16.72, $p < .001$ and Wald (1) = 18.41,

TABLE 1
Means, Standard Deviations, and Partial Correlations With Parent-Reported Monitoring Behaviors (Study 2)

	<i>M (SD)</i>	<i>Partial Correlations (df)</i>					
		<i>Snoop (P)</i>		<i>Solicit (P)</i>		<i>Control (P)</i>	
		<i>β</i>	<i>SE</i>	<i>β</i>	<i>SE</i>	<i>β</i>	<i>SE</i>
Snoop (P)	1.21 (0.39)	—	—	—	—	—	—
Solicit (P)	2.56 (0.57)	—	—	—	—	—	—
Control (P)	4.49 (0.64)	—	—	—	—	—	—
Voluntary disclosure (P)	3.67 (0.83)	.13 ^a	.08	.04 ^a	.09	.07 ^a	.09
Secrecy (P)	1.61 (0.62)	-.07 ^a	.09	.15 ^a	.09	.01 ^a	.09
Lying (P)	1.33 (0.54)	.44*** ^a	.07	-.04 ^b	.08	-.14 ^b	.08
Antisocial behavior (P)	.03 (0.11)	.26** ^a	.08	.01 ^b	.08	-.11 ^b	.08
Efficacy (P)	3.43 (0.79)	-.29*** ^a	.07	.21** ^b	.07	.20** ^b	.08
Worry (prob. behavior) (P)	2.24 (1.16)	-.21** ^a	.08	.04 ^a	.08	.03 ^a	.08
Worry (relationship) (P)	1.72 (1.10)	-.24** ^a	.08	-.04 ^b	.08	-.03 ^b	.08
Voluntary disclosure (A)	3.23 (0.89)	-.11 ^a	.08	-.00 ^a	.09	.06 ^a	.09
Secrecy (A)	2.03 (0.80)	.27** ^a	.09	.24** ^a	.08	.12 ^a	.09
Lying (A)	1.71 (0.69)	.28** ^a	.09	.17 ^a	.09	.02 ^a	.09
Antisocial behavior (A)	0.09 (0.16)	-.06 ^a	.10	-.05 ^a	.09	.05 ^a	.09

Note. P = Parent-reported variable; A = adolescent-reported variable. Alphabetical superscripts denote significant differences between monitoring behaviors at $p < .05$. All correlations are controlled for the other two monitoring behaviors.

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

$p < .001$, respectively), parent's perceptions of anti-social behavior (Wald (1) = 5.06, $p = .03$ and Wald (1) = 9.00, $p = .003$, respectively), negative perceptions of their efficacy (Wald (1) = 20.24, $p < .001$ and Wald (1) = 14.94, $p < .001$, respectively), and worries about relationship deterioration (Wald (1) = 6.06, $p = .01$ and Wald (1) = 4.16, $p = .04$, respectively). No additional Wald tests were significant.

Study 2 Discussion

The results of Study 2 supported the notion that parents' reports of monitoring strategies shared a structure similar to that of adolescents' reports in Study 1, with snooping, solicitation, and control comprising three separate dimensions of behavior. Interestingly, a similar proportion of parents (60.10%) in Study 2 reported never engaging in snooping, compared with adolescent reports from Study 1 (62.50%). These results thus replicate the relative infrequency of such behavior in comparison with active parental strategies that are performed with adolescents' full knowledge. Further underscoring the distinctiveness of snooping, the only significant tests of correlation strength differences were those that compared this covert strategy with solicitation and control. In contrast, solicitation or control never differed from one another. These results suggest that snooping is more strongly linked to a particular set of problematic antecedents and/or outcomes, compared to overt monitoring.

The results showed that snooping was more strongly tied to suspicions about youths' problem behavior than were solicitation or control. Only snooping was linked with perceptions of adolescents' antisocial behavior, as well as parents' worries about the relationship and concerns about youths' future misbehavior (although this latter correlation was not significantly stronger). Adolescent-reported antisocial behavior held no ties with snooping, and neither solicitation nor control correlated with any variables related to antisocial behavior. Earlier studies have shown parents' own monitoring reports to be poor predictors of adolescent-reported problem behavior (e.g., Bumpus, Crouter, & McHale, 2001). That parents' reports of overt monitoring were uncorrelated with their perceptions or worries could indicate that they regard such efforts as a duty, regardless of whether they are effective.

The results suggest that parents' suspicions and anxieties about their children, and not the actualities of youths' behaviors, might be the prime moti-

vator of snooping. Notably, the negative link between snooping and parents' perceived efficacy underscores the temptation to use such tactics when they lack confidence about their own skills or relationships. In contrast, the positive link that efficacy perceptions held with both control and solicitation suggests that more confident parents can make their desires for knowledge overtly known.

The results also revealed that snooping was positively associated with parent- and adolescent-reported lying, as well as with adolescent-reported secrecy. (Links with adolescent-reported variables did not differ significantly from the other strategies, however.) As these data were correlational, there are two plausible interpretations. First, parents might sense children's dishonesty and see snooping as a legitimate means of uncovering information (McKinney, 1998). Second, youths might respond to invasive monitoring with increased concealment and lying to fortify their privacy boundaries (Petronio, 1994, 2000). In fact, a recent longitudinal study suggests that both of these processes might occur (Hawk et al., 2013). Snooping might thus perpetuate a negative cycle of interaction that ultimately diminishes parents' knowledge about adolescents over time, which is precisely the opposite of its intended effect (see also Cottrell et al., 2007).

It is noteworthy that only youths'—and not parents'—reports of secrecy were directly linked to parents' snooping. Notably, all items assessing secrecy and lying pertained to adolescents' free-time activities and peer associations, which have traditionally been classified as personal issues that fall outside of parents' legitimate control (see Smetana, Crean, & Campione-Barr, 2005; Smetana et al., 2006 for recent examples). Parents might be relatively more accepting of secrecy surrounding such issues (Smetana et al., 2006), compared to situations in which their concerns are heightened by perceptions of youths' outright dishonesty. Adolescent-reported lying and secrecy were also linked to parent-reported solicitation, while parents' perceptions of these youth behaviors were not. One quality that snooping and solicitation might have in common is adolescents' relative inability to manage their occurrence. Just as adolescents might increase evasive behaviors when they retroactively discover that parents have snooped (Petronio, 1994), they might also use concealment and dishonesty to deflect direct (and perhaps unanticipated) questions from parents about issues they would rather not discuss, and might view such tactics as a more

effective means of avoiding the conversation than refusing to answer (see, e.g., Marshall et al., 2005).

Indeed, overt monitoring is likely only useful for obtaining information if adolescents think parents deserve to have certain knowledge (Darling, Cumsille, & Martínez, 2007; Keijsers & Laird, 2014; Laird, Pettit, Bates, & Dodge, 2003). Similarly, the results of Study 2 suggest that parents might reserve snooping for special situations involving domains that they see as still being under their legitimate control. As such, examining views of when snooping might be a justifiable behavior could further underscore its differences from solicitation and control. To our knowledge, no prior research has explored adolescent-parent perspectives on the justifiability of snooping. Our third and final study aimed to fill this gap in the literature.

STUDY 3

While Study 1 suggested that adolescents hold more negative views about snooping, as compared to solicitation or control, it is not yet clear whether they regard this as equally unacceptable across different domains of information. Similarly, while the pattern of correlations in Study 2 suggests that parental snooping might be especially likely in the context of suspicions about adolescents' antisocial or risky behavior, parents' actual attitudes toward covert monitoring remain an uninvestigated issue. In Study 3, we examined adolescent and parent views on whether snooping, solicitation, and control are acceptable for obtaining information about youths' moral, prudential, and personal behaviors.

Adolescents' and parents' views on parents' "rights" to certain knowledge appear to differ between information pertaining to moral transgressions (e.g., stealing), prudential (i.e., health risk) behaviors, or youths' personal lives (e.g., choice of friends, how pocket money is spent, types of media consumed) (Smetana et al., 2006). While parents and adolescents often agree about parents' authority in the moral domain (e.g., stealing), youths less often accept that parents have authority to regulate prudential behaviors (Smetana et al., 2005) and even more strongly resist parental attempts to regulate personal issues. Parents generally agree that adolescents' personal domain is less subject to their authority (e.g., Smetana et al., 2005, 2006), but parents also view youths as more obliged to share information across all of these domains than do adolescents. Based on these earlier findings, and the results of the first two studies, we expected that both parents and adolescents would generally view

snooping as less justifiable than solicitation and control. However, we also expected parents to view snooping as more justifiable than would adolescents. We further predicted that both sets of respondents might view moral and prudential information as particularly legitimate targets of snooping, compared to information in the personal domain.

Method

Participants. A total of 42 adolescent-parent dyads responded to our advertisements at two high schools in the province of Utrecht to participate in a study on parent-child relationships. Adolescent participants (57% girls) ranged in age from 15 to 18 years ($M = 16.29$, $SD = 0.89$). The modal age was 16 years (43%). There was not an even distribution of participants across the ages included (15-year-olds $n = 8$, 16-year-olds $n = 18$, 17-year-olds $n = 12$, 18-year-olds $n = 4$). To account for potential age differences while still examining subsamples of adequate size, we grouped 15- to 16-year-olds into a "mid-adolescent" category ($n = 26$) and 17- to 18-year-olds into a "late-adolescent" category ($n = 16$). Adolescents were mainly enrolled in educational tracks related to technical careers (38%), a higher professional degree (24%), or a university degree (38%). All adolescents were born in the Netherlands. A majority of the adolescents lived with both parents (93%), with the remaining youths living with their mothers. Of the participating parents (33 mothers and nine fathers), all but one was born in the Netherlands. Most parents (71%) held a higher professional or university degree.

Measures. *Domain-specific judgments of monitoring behaviors.* Adolescent and parent views of snooping, solicitation, and control for acquiring knowledge in the moral, prudential, and personal domains were measured using a series of scales created for this study. All scales consisted of the same stems describing the three kinds of monitoring, but addressed different domains of information (inspired by Smetana & Daddis, 2002). For each of these domains, adolescents and parents indicated whether using different monitoring methods was justifiable to find out related information. Solicitation was assessed by preceding each social domain item with "It is acceptable for parents to ask their children questions if they want to find out about..." Control was assessed by preceding each domain item with "It is acceptable for parents

to make rules that their children have to tell them about..." Snooping was assessed with three behaviors: "It is acceptable for parents to search through their children's room, backpack, or computer if they want to find out about.../It is acceptable for parents to read their children's text messages or emails if they want to find out about.../It is acceptable for parents to listen in on their children's telephone calls if they want to find out about..."

For each monitoring dimension, three moral items included stealing from parents, hurting or stealing from classmates, and lying to parents. Three prudential items included alcohol and tobacco use, becoming sexually active, and school performance. Three personal domain items included youths' choice of friends, Web sites visited, and how they spent their free time. Participants responded to these items on a 5-point Likert scale (1 = *totally disagree*, 5 = *totally agree*). For adolescents and parents, respectively, reliability was acceptable for all scales: Solicitation-Moral $\alpha_s = .87$ and $.97$, Solicitation-Prudential $\alpha_s = .72$ and $.88$, Solicitation-Personal $\alpha_s = .91$ and $.90$, Control-Moral $\alpha_s = .90$ and $.99$, Control-Prudential $\alpha_s = .77$ and $.87$, Control-Personal issues $\alpha_s = .92$ and $.95$, Snooping-Moral $\alpha_s = .86$ and $.98$, Snooping-Prudential $\alpha_s = .83$ and $.95$, Snooping-Personal $\alpha_s = .90$ and $.97$.

Procedure. Adolescents were visited at their schools and were given an informative letter to give to parents. Subsequently, parents provided informed consent for their children to participate. Four to five days later, participants were visited in a computer room. The students were given an instruction form that reminded the students of the purpose of the survey, gave them opportunity to provide informed consent, and directed the students to the Web survey. Additionally, the form provided a code that the adolescents needed to enter the Web site. Adolescents completed the Web survey and took the instruction form home to one of their parents. The parent that participated used the same code as the adolescent, to match their responses.

Results

There were no missing data for this study. Means and standard deviations per monitoring strategy, domain, and respondent can be seen in Table 2. To determine differences between monitoring strategy, domains, age groups, and respondents, we conducted a 3 (strategy) \times 3 (domain) \times 2 (respondent) \times 2 (age group) \times 2 (adolescent gender) multivariate analysis of variance (MANOVA). Mul-

tivariate tests revealed a main effect for strategy, $F(2, 37) = 67.88, p < .001, \eta_p^2 = .79$. Post hoc tests showed that snooping was generally seen as least justifiable, followed by control, and then solicitation (all $p < .001$). We also found a main effect for domain, $F(2, 37) = 14.17, p < .001, \eta_p^2 = .43$. Post hoc tests showed that the personal domain was generally viewed as least legitimately subjected to monitoring, followed by the prudential domain, and the moral domain (all $p < .001$). No other main effects were significant.

These main effects were qualified by the presence of three significant two-way interactions. There was a significant interaction between age group and domain, $F(2, 37) = 5.55, p = .008, \eta_p^2 = .23$. Post hoc analyses showed that late adolescents viewed monitoring of the personal domain as less legitimate than did mid-adolescents ($p = .03$), but no age differences existed for the moral or prudential domains ($p = .18$ and $.49$, respectively).

We additionally found an interaction between strategy and domain, $F(4, 35) = 5.76, p = .001, \eta_p^2 = .40$. Post hoc tests showed that, across respondents, the same rank order of means was replicated within each domain; solicitation was always seen as the most legitimate strategy, followed by control, and then snooping (all $p \leq .001$). Within strategies, solicitation was viewed as equally justifiable for the moral and prudential domains, $p = .74$, but both of these scores were higher than for the personal domain, $p < .001$. Control was considered most justifiable with regard to the moral domain, compared to prudential and personal issues, $p < .001$, but the latter two domains did not differ ($p = .12$). Snooping was rated as most justifiable with regard to the moral domain, followed by the prudential domain and then the personal domain (all $p \leq .001$).

Finally, a two-way interaction existed between strategy and respondent $F(2, 37) = 3.86, p = .03, \eta_p^2 = .17$. Post hoc tests showed that, across domains, adolescents and parents generally agreed on the legitimacy of solicitation ($p = .25$) and control ($p = .78$). However, parents rated snooping as more justifiable, compared to adolescents ($p = .002$). No other two- or three-way interactions were significant.

Study 3 Discussion

In Study 3, we investigated adolescents' and parents' perceptions of whether parental snooping, solicitation, and control were acceptable for gaining information about adolescent behavior. As expected, both parents and adolescents saw snooping as

TABLE 2
Adolescent and Parent Ratings of Monitoring Legitimacy by Strategy and Domain of Information (Study 3)

Domain	<i>Snooping</i>		<i>Solicitation</i>		<i>Control</i>	
	Adolescents <i>M (SD</i>)	Parents <i>M (SD)</i>	Adolescents <i>M (SD)</i>	Parents <i>M (SD)</i>	Adolescents <i>M (SD)</i>	Parents <i>M (SD)</i>
Moral	2.26 (0.82)	2.66 (1.27)	3.91 (0.64)	3.88 (1.08)	2.94 (0.93)	2.81 (1.33)
Prudential	1.96 (0.68)	2.38 (1.00)	3.74 (0.67)	3.98 (0.83)	2.61 (0.84)	2.71 (1.02)
Personal	1.77 (0.67)	2.30 (1.02)	3.44 (0.79)	3.78 (0.89)	2.59 (0.97)	2.60 (1.07)

less justifiable than the other two strategies. Whereas youths and parents generally agreed on the legitimacy of solicitation and control, they were more sharply divided in their views about snooping. Parents tended to see snooping as a more legitimate monitoring strategy than did adolescents. The results also closely mirrored prior findings that youths and parents generally agree about parents' legitimacy to regulate the moral domain and that older youths were particularly protective of their personal information, compared to younger respondents. Personal issues are often points of contention between parents and children, as they attempt to navigate the road toward greater autonomy and reduced parental regulation (Galambos & Costigan, 2003).

Both parents and adolescents viewed snooping and control—the strategies that arguably represent the clearest expressions of parents' privileged status in the relationship—as most justifiable when moral issues were concerned. Solicitation was seen as similar in legitimacy with regard to both moral and prudential issues. Solicitation was also rated as the most acceptable means of acquiring knowledge, regardless of domain, followed by control and snooping. Parents always considered snooping to be more justifiable than adolescents did. Although they showed clear preferences toward the use of solicitation and control, they signaled that more intrusive strategies were not completely out of the question. From mid-adolescence to late adolescence, parents and adolescents have likely successfully negotiated the relaxing of parental authority over many issues. This is especially the case regarding the personal and (at least to some extent) prudential domains. However, serious moral transgressions remain more legitimately within the boundaries of parental intervention.

This pattern of results suggests shared parent and adolescent preferences for a "tiered" monitoring approach as they transition from mid-adolescence to late adolescence. Parents should first attempt to engage in open dialogue and question-

ing, move on to more rigid rules about what should be disclosed, and resort to snooping only if other efforts fail. The fact that solicitation was rated as equally justifiable for moral and prudential issues, but that control was equally justifiable for prudential and personal issues, is also indicative of such a pattern. In other words, our dyads might have considered it acceptable for parents to continue asking about prudential issues, but also recognized that behaviors in this domain are becoming matters of personal choice for which firm disclosure rules will be less effective.

This study expands prior research on beliefs about whether parents can legitimately make rules about the moral, prudential, and personal domains, by showing that similar processes are at play regarding how parents can legitimately acquire information. The fact that parent-adolescent disagreement over monitoring legitimacy was most pronounced for snooping is yet another finding supporting the notion that it is a monitoring strategy distinct from parental solicitation or control.

GENERAL DISCUSSION

Prior research on parental monitoring has primarily concentrated on strategies that are enacted with youths' full awareness, with most recent studies examining Stattin and Kerr's (2000) dimensions of parental solicitation and control. Parents might prefer that youths respond to their questions or respect their rules for disclosure and permission seeking. There might also be times that parents have less confidence that overt monitoring or adolescents' own willing disclosures will provide them with the information they want. In such cases, parents might subvert adolescents' resistance to parental demands by 'snooping' through belongings or personal communications. In what ways are snooping similar to, or different from, parental solicitation and control? And do these similarities and differences depend on whether adolescent or parent perspectives are considered? We addressed this

topic in three independent studies, examining issues related to factor structure and differential associations with perceived invasion (Study 1), adolescent information management and well-being, and parental worries and perceived self-efficacy (Study 2), and the justification of each monitoring behavior related to different kinds of desired information (Study 3).

Prior research has compared covert monitoring to a general dimension of overt monitoring (Cottrell et al., 2007), as well as to parental behaviors that overtly disrespect college students' privacy boundaries but are not necessarily geared toward information seeking (i.e., entering bedrooms without knocking, giving unsolicited advice) (Ledbetter et al., 2010; Ledbetter & Vik, 2012; Petronio, 1994). However, the multiple differences observed in earlier studies between overt solicitation and control also raise questions of how they each compare to covert behavior. The results of our research highlighted several ways that snooping can be considered a unique and distinct monitoring strategy.

Including both adolescent and parent reports across the three studies allowed for deeper examination of similarities and differences in evaluations of snooping and its connections with other constructs. Compared to solicitation and control, both adolescents and parents reported snooping to be a relatively infrequent (cf. Cottrell et al., 2007) and less legitimate behavior. In line with these findings, snooping also showed significantly stronger ties with adolescents' general perceptions of parental invasion. Additionally, only snooping showed direct links with several indicators of parental concern, including lying, parents' worries about relationship deterioration and youths' problem behavior, and parents' lower perceived self-efficacy. These latter results, in particular, underscore a main distinction between snooping and overt monitoring behaviors: Parents appear to resort to snooping more often when they perceive disturbances in youths' adjustment, the parent-child relationship, and their ability positively influence adolescents' behavior.

One difference between adolescents and parents across the studies concerned correlations between snooping, solicitation, and control in the confirmatory factor analyses of Studies 1 and 2. Solicitation and control were connected for adolescents in Study 1, but not with snooping. This pattern might be explained in terms of the distinction between covert and overt monitoring in prior research (Cottrell et al., 2007; Petronio, 1994), which could result from inconsistencies in awareness of parents'

behavior. While parents' reports of solicitation and control were similarly correlated in Study 2, snooping also showed a correlation with solicitation. Thus, for parental reports, there appeared to be an information-seeking motive at play: Parents who more frequently solicited information were also somewhat more likely to try to gain that knowledge through covert tactics. As opposed to solicitation, information gleaned from snooping might not translate directly to increased control, considering that this could reveal parents' violations of adolescents' privacy boundaries (Petronio, 2010). Instead, the correlations found in Study 2 between parent-reported snooping and their worrying suggest that parents might use this strategy primarily as a means of "checking" whether their perceived knowledge is accurate. Considering the negative link with perceived self-efficacy, snooping for such purposes might be especially likely if parents feel insecure about their relationships, whereas parents with greater confidence reported asking youths more direct questions. Considering, however, that the adolescent reports in Study 1 and the parent reports in Study 2 were derived from two different (albeit quite similar) countries, further research should be conducted to ascertain whether the differential correlations between snooping, solicitation, and control are better explained by generational or cultural differences.

STRENGTHS AND LIMITATIONS

The present research held several strengths, including the collection of both parent and adolescent reports on measures that allowed, for the first time, several three-way comparisons between snooping, solicitation, and control. Additionally, the three independent samples from two different countries provided several highly consistent construct and content validations of the scale used to assess snooping. Nevertheless, future research should aim to expand upon our findings in several ways. Key among these is the correlational nature of all three studies, which prevents conclusions about causality and developmental order. For example, longitudinal research could examine whether the same bidirectional, over-time associations found between adolescent secrecy and general perceptions of parental invasion (Hawk et al., 2013) can be replicated when considering a more specific behavioral measure. Additionally, while we suggested that parents' lower efficacy perceptions might motivate nonconfrontational methods of information seeking, efficacy perceptions might be further

undermined by reliance on covert attempts. In other words, the more parents engage in such behavior, perhaps the less confidence they develop in using more direct strategies.

Additionally, the unfortunate loss of parental gender data in Study 2 leaves questions about differences between mothers' and fathers' frequency of snooping, and whether there are gender-specific patterns of associations between this monitoring strategy and variables related to adolescent behavior and parental concerns. Considering that mothers engage in more active monitoring of youths (Keijsers et al., 2010) and tend to have closer relationships with them (Steinberg & Silk, 2002), we might expect that such differences are present.

Finally, neither of the adolescent- and parent-reported versions of the snooping scale can delineate between "competent" and "incompetent" covert monitoring. Adolescents' reports might be based on incorrect suspicions or accurately detected snooping. Further, they might be completely unaware of snooping if parents are successful at covering up this behavior. While we aimed to measure parents' own actions in Study 2, the extent to which adolescents were (un)aware of parents' actual snooping remained unexamined. As such, the correlations presented in Studies 1 and 2 are potentially reliant on a combination of adolescents' accurate perceptions, potential misperceptions, and lack of awareness. However, it is not clear from our research or prior studies whether parents attempt to conceal snooping. Although some parents might use information derived from snooping to subtly steer youths' behavior, confronting children about what they discover might also require an admission of how they obtained the information. Examining dual reports of all three behaviors would be an important next step in understanding these issues, as would studies on how parents might deal with the dilemmas that arise from the discoveries resulting from snooping.

CONCLUSION

Taken together, these three studies provide the most comprehensive examination to date of similarities and differences between parental snooping and the commonly examined strategies of solicitation and control. Our findings revealed several ways in which snooping can be considered a distinct monitoring dimension, particularly in terms of lower frequency, greater perceptions of inappropriateness, and links to parents' concerns about dis-

honesty, problem behavior, and suboptimal relationships with children. While snooping appeared to occur relatively rarely or not at all in most families, these correlations underscore that even a few experiences of such behavior might be especially upsetting for adolescents (Petronio, 1994) and be an indicator of deeper problems in family functioning. The consistent links in prior research between privacy invasion and disruptions in adolescent-parent relationships (Cottrell et al., 2007; Hawk et al., 2009, 2013; Petronio, 1994) suggest that these covert behaviors are likely to backfire and increase the distance between parents and children. Further research examining snooping as a behavior-specific index of parental privacy invasion can provide professionals and families with advice regarding the necessity, appropriateness, and potential consequences of particular monitoring efforts.

REFERENCES

- Barber, B. K., Xia, M., Olsen, J. A., McNeely, C. A., & Bose, K. (2012). Feeling disrespected by parents: Refining the measurement and understanding of psychological control. *Journal of Adolescence*, 35, 273–287. doi:10.1016/j.adolescence.2011.10.010
- Bollen, K. A. (1989). *Structural equations with latent variables*. New York, NY: Wiley.
- Bumpus, M. F., Crouter, A. C., & McHale, S. M. (2001). Parental autonomy granting during adolescence: Exploring gender differences in context. *Developmental Psychology*, 37, 163–173. doi:10.1037/0012-1649.37.2.163
- Buyukcan-Tetik, A., Finkenauer, C., Kuppens, S., & Vohs, K. D. (2013). Both trust and self-control are necessary to prevent intrusive behaviors: Evidence from a longitudinal study of married couples. *Journal of Family Psychology*, 27, 671–676. doi:10.1037/a0033421
- Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling*, 14, 464–504. doi:10.1080/10705510701301834
- Cottrell, S. A., Branstetter, S., Cottrell, L., Harris, C. V., Rishel, C., & Stanton, B. F. (2007). Development and validation of a parental monitoring instrument: Measuring how parents monitor adolescents' activities and risk behaviors. *The Family Journal*, 15, 328–335. doi:10.1177/1066480707303748
- Darling, N., Cumsille, P., & Martínez, M. L. (2007). Adolescents as active agents in the socialization process: Legitimacy of parental authority and obligation to obey as predictors of obedience. *Journal of Adolescence*, 30, 297–311. doi:10.1016/j.adolescence.2006.03.003
- Freedman-Doan, C. R., Arbreton, A. J., Harold, R. D., & Eccles, J. S. (1993). Looking forward to adolescence: Mothers' and fathers' expectations for affective and

- behavioral change. *The Journal of Early Adolescence*, 13, 472–502. doi:10.1177/0272431693013004007
- Galambos, N., & Costigan, C. L. (2003). Emotional and personality development in adolescence. In I. B. Weiner (Series Ed.), R. M. Lerner, M. A. Easterbrooks, & J. Mistry (Vol. Eds.), *Handbook of psychology: Vol. 6. Developmental psychology* (pp. 211–240). New York, NY: Wiley.
- Hale, W. W., Raaijmakers, Q., Gerlsma, C., & Meeus, W. (2007). Psychometric properties of the level of expressed emotion (LEE) questionnaire for adolescents from the general population. *Journal of Social Psychiatry and Psychiatric Epidemiology*, 42, 215–220. doi:10.1007/s00127-006-0145-0
- Hawk, S. T., Hale, W. W., Raaijmakers, Q. A., & Meeus, W. (2008). Adolescents' perceptions of privacy invasion in reaction to parental solicitation and control. *The Journal of Early Adolescence*, 28, 583–608. doi:10.1177/0272431608317611
- Hawk, S. T., Keijsers, L., Frijns, T., Hale, W. W. III, Branje, S., & Meeus, W. (2013). "I still haven't found what I'm looking for": Parental privacy invasion predicts reduced parental knowledge. *Developmental psychology*, 49, 1286–1298. doi:10.1037/a0029484
- Hawk, S. T., Keijsers, L., Hale, W. W. III, & Meeus, W. (2009). Mind your own business! Longitudinal relations between perceived privacy invasion and adolescent-parent conflict. *Journal of Family Psychology*, 23, 511–520. doi:10.1037/a0015426
- Keijsers, L., Branje, S. J. T., VanderValk, I., & Meeus, W. (2010). Reciprocal effects between parental solicitation, parental control, adolescent disclosure and adolescent delinquency. *Journal of Research on Adolescence*, 20, 88–113. doi:10.1111/j.1532-7795.2009.00631.x
- Keijsers, L., Frijns, T., Branje, S. J., & Meeus, W. (2009). Developmental links of adolescent disclosure, parental solicitation, and control with delinquency: Moderation by parental support. *Developmental Psychology*, 45, 1314–1327. doi:10.1037/a0016693
- Keijsers, L., & Laird, R. D. (2014). Mother-adolescent monitoring dynamics and the legitimacy of parental authority. *Journal of Adolescence*, 37, 515–524. doi:10.1016/j.adolescence.2014.04.001
- Kerr, M., & Stattin, H. (2000). What parents know, how they know it, and several forms of adjustment: Further support for a reinterpretation of monitoring. *Developmental Psychology*, 36, 366–380. doi:10.1037/0012-1649.36.3.366
- Kerr, M., Stattin, H., & Burk, W. J. (2010). A reinterpretation of parental monitoring in longitudinal perspective. *Journal of Research on Adolescence*, 20, 39–64. doi:10.1111/j.1532-7795.2009.00623.x
- Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). New York, NY: The Guilford Press.
- Laird, R. D., & Marrero, M. D. (2010). Information management and behavior problems: Is concealing misbehavior necessarily a sign of trouble? *Journal of Adolescence*, 33, 297–308. doi:10.1016/j.adolescence.2009.05.018
- Laird, R. D., Marrero, M. D., Melching, J. A., & Kuhn, E. S. (2013a). Information management strategies in early adolescence: Developmental change in use and transactional associations with psychological adjustment. *Developmental Psychology*, 49, 928–937.. doi:10.1016/j.adolescence
- Laird, R. D., Marrero, M. D., Melching, J., & Kuhn, E. S. (2013b). Brief report: Improving the validity of assessments of adolescents' feelings of privacy invasion. *Journal of Adolescence*, 36, 227–231. doi:10.1016/j.adolescence.2012.10.011
- Laird, R. D., Marrero, M. D., & Sentse, M. (2009). Revisiting parental monitoring: Evidence that parental solicitation can be effective when needed most. *Journal of Youth and Adolescence*, 39, 1431–1441. doi:10.1007/s10964-009-9453-5
- Laird, R. D., Pettit, G. S., Bates, J. E., & Dodge, K. A. (2003). Parents' monitoring-relevant knowledge and adolescents' delinquent behavior: Evidence of correlated developmental changes and reciprocal influences. *Child Development*, 74, 752–768. doi:10.1111/1467-8624.00566
- Lavy, S., Mikulincer, M., & Shaver, P. R. (2010). Autonomy-proximity imbalance: An attachment theory perspective on intrusiveness in romantic relationships. *Personality and Individual Differences*, 48, 552–556. doi:10.1016/j.paid.2009.12.004
- Ledbetter, A. M., Heiss, S., Sibal, K., Lev, E., Battle-Fisher, M., & Shubert, N. (2010). Parental invasive and children's defensive behaviors at home and away at college: Mediated communication and privacy boundary management. *Communication Studies*, 61, 184–204. doi:10.1080/10510971003603960
- Ledbetter, A. M., & Vik, T. A. (2012). Parental invasive behaviors and emerging adults' privacy defenses: Instrument development and validation. *Journal of Family Communication*, 12, 227–247. doi:10.1080/15267431.2012.686943
- Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association*, 83, 1198–1202. doi:10.1080/01621459.1988.10478722
- Magnusson, D., Dunér, A., & Zetterblom, G. (1975). *Adjustment: A longitudinal study*. New York, NY: Wiley.
- Marshall, S. K., Tilton-Weaver, L. C., & Bosdet, L. (2005). Information management: Considering adolescents' regulation of parental knowledge. *Journal of Adolescence*, 28, 633–647. doi:10.1016/j.adolescence.2005.08.008
- McKinney, K. D. (1998). Space, body, and mind: Parents' perceptions of children's privacy needs. *Journal of Family Issues*, 19, 75–100. doi:10.1177/019251398019001006
- Muthén, L. K., & Muthén, B. O. (1998–2011). *Mplus user's guide* (6th ed.). Los Angeles, CA: Muthén & Muthén.
- Petronio, S. (1994). Privacy binds in family interactions: The case of parental privacy invasion. In W. R. E. Cupach & B. H. E. Spitzberg (Eds.), *The dark side of*

- interpersonal communication* (pp. 241–257). Hillsdale, NJ: Lawrence Erlbaum.
- Petronio, S. (2000). The boundaries of privacy: Praxis of everyday life. In S. Petronio (Ed.), *Balancing the secrets of private disclosures* (pp. 37–49). Mahwah, NJ: Lawrence Erlbaum.
- Petronio, S. (2010). Communication privacy management theory: What do we know about family privacy regulation? *Journal of Family Theory and Review*, 2, 175–196. doi:10.1111/j.1756-2589.2010.00052.x
- Smetana, J., Crean, H. F., & Campione-Barr, N. (2005). Adolescents' and parents' changing conceptions of parental authority. *New Directions for Child and Adolescent Development*, 108, 31–46. doi:10.1002/cd.126
- 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. doi:10.1111/1467-8624.00424
- Smetana, J. G., Metzger, A., Gettman, D. C., & Campione-Barr, N. (2006). Disclosure and secrecy in adolescent-parent relationships. *Child Development*, 77, 201–217. doi:10.1111/j.1467-8624.2006.00865.x
- Stattin, H., & Kerr, M. (2000). Parental monitoring: A reinterpretation. *Child Development*, 71, 1072–1085. doi:10.1111/1467-8624.00210
- Steinberg, L., & Silk, J. S. (2002). Parenting adolescents. In M. H. Bornstein (Ed.), *Handbook of parenting: Vol. 1. Children and parenting* (pp. 103–133). Mahwah, NJ: Lawrence Erlbaum.
- Tang, S., & Dong, X. (2006). Parent's and children's perceptions of privacy rights in China: A cohort comparison. *Journal of Family Issues*, 27, 285–300. doi:10.1177/0192513X05283095
- Tilton-Weaver, L. C. (2014, September) Same game, different name? Examining latent class profiles of parent's psychological control and privacy invasions. Symposium paper presented at the biennial meeting of the Association for Research on Adolescence, Izmir, Turkey.
- Tilton-Weaver, L. C., & Galambos, N. L. (2003). Adolescents' characteristics and parents' beliefs as predictors of parentsapos: Peer management behaviors. *Journal of Research on Adolescence*, 13, 269–300. doi:10.1111/1532-7795.1303002
- Tilton-Weaver, L. C., & Marshall, S. K. (2008). Adolescents' agency in information management. In M. Kerr, H. Stattin, & R. M. E. Engels (Eds.), *What can parents do? New insights into the role of parents in adolescent problem behaviour* (pp. 11–41). Chichester, UK: John Wiley.
- Vinkers, C. D., Finkenauer, C., & Hawk, S. T. (2011). Why do close partners snoop? Predictors of intrusive behavior in newlywed couples. *Personal Relationships*, 18, 110–124. doi:10.1111/j.1475-6811.2010.01314.x