“You Have to Listen to Me Because I’m in Charge”: Explicit Instruction Improves the Supervision Practices of Older Siblings

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Objectives  Sibling supervision increases young children’s risk of unintentional injury. Both noncompliance by the supervisee and insufficient supervision contribute to this risk. The current study examined whether explicitly instructing older siblings to supervise their younger siblings and prevent specific risky behaviors improves their supervision practices. Methods  Supervisees and older siblings were placed together in a playroom. One group of older siblings were given explicit instructions not to allow the supervisee to engage in specific risk behaviors, whereas a second group was not. Results  Informing older siblings that they were “in charge” resulted in a higher frequency of proactive supervision strategies, more forceful reactions to stop supervisee risk taking, and a trend toward improved watchfulness. Supervisees in the no instruction condition also engaged in more hazard interactions compared with those in the instruction condition. Conclusions  Explicitly informing older children to supervise younger siblings may reduce younger children’s risk of injury when siblings are supervising.

Key words  child injury; instruction; siblings; supervision.

Childhood injury is a significant health problem. In most developed nations, it is the leading cause of death and a common reason for hospitalizations among children aged 1 year and older (Borse et al., 2008; Canadian Institute of Child Health, 2002; World Health Organization, 2005). The personal and economic costs of this health issue are substantial. In the year 2000, for example, injuries to children and adolescents in the United States cost an estimated $24 billion in lifetime medical costs and an additional $82 billion in present and future work losses for both the individuals and their caregivers (Miller, Finkelstein, Zaloshnja, & Hendrie, 2006). Understanding the factors that contribute to the occurrence of childhood injuries is an essential first step for prevention planning (Gielen, Sleet, & DiClemente, 2006).

Many injuries to young children occur at home when they are presumably under the care of another individual (Shannon, Brashaw, Lewis, & Feldman, 1992). Past research has revealed important ways parental supervisory practices influence young children’s risk of injury (Morrongiello, Corbett, & Brison, 2009; Morrongiello, Corbett, McCourt, & Johnston, 2006a, b; Morrongiello, Ondejko, & Littlejohn, 2004a, b). Recent recognition that sibling supervision is common in most families (Morrongiello, MacIsaac, & Klemencic, 2007) has led to increasing interest in studying the nature of sibling supervision and how this impacts younger children’s injury risk.

Sibling supervision is common in many cultures and tends to be defined broadly, including everything from independent full time care to simply “keeping an eye out” for younger siblings (Weisman & Gallimore, 1977). Having an older sibling supervise a younger child in the family has been found to occur during 11% of the time that Canadian children are at home together and awake (Morrongiello et al., 2007) and 8% of the time after school in the United States (Berman, Winkleby, Chesterman, & Boyce, 1992). Research suggests that siblings significantly influence children’s risk of unintentional injury. For example,
the presence of a sibling in the home has been found to result in a 1.4-fold increase in the risk of injury for young children (Nathens, Neff, Goss, Maier, & Rivara, 2000), and 35% of bathtub drownings involving bathing seats occurred when infants were left alone in the bath with an older sibling (Rauchschwalbe, Brenner, & Smith, 1997). Further, when drowning was considered by individual location during a follow-up study, between 22 and 58% of these involved a child aged <2 years in a shared bathing situation with an older sibling aged between 19 and 48 months (Byard, de Koning, Blackbourne, Nadeau, & Krous, 2001). Thus, injury and death to young children often occurs in the presence of an older sibling.

Direct investigations of sibling supervision provide additional support for this conclusion. Morrongiello et al. (2007) found that more frequent supervision by an older sibling (M = 5.77 years, SD = 2.04 years) was related to more injuries to the young supervisee (M = 2.20 years, SD = 0.49 years). Interestingly, many mothers believed that these injuries occurred because the supervisee was noncompliant with the older sibling, rather than due to sibling supervision being inadequate. Consistent with this, supervisee compliance ratings were a better predictor of frequency of injury than was frequency of sibling supervision (Morrongiello et al., 2007).

In an effort to directly compare the strategies mothers and older siblings used during supervision, mothers and older siblings (M = 7.0 years, SD = 1.7 years) watched videos of a 2-year-old toddler engaging in risk taking, rule violations, and no risk behaviors at home. Viewers were asked to imagine that they were supervising and to stop the video and say out loud anything they would say to the child (Morrongiello, Schmidt, & Schell, 2010). Results indicated that sibling supervisors were less attentive than mothers, responding to only about a third of injury risk behaviors. In addition, older siblings failed to respond to risk-taking behaviors that their mothers expected them to stop. Sibling supervisors also used prohibitions as a primary strategy, whereas mothers focused on teaching more and balancing prohibitions with explanations about risks and discussion of safety rules. Thus, results indicated that sibling supervisors are less vigilant and respond to supervisees using fewer and less effective supervisory strategies compared with mothers.

To examine the contribution of supervisee behaviors to injury risk and compare actual supervision practices, a recent study unobtrusively measured both mothers’ and older siblings’ (M = 6.78 years, SD = 1.80 years) supervision of a young (M = 3.53 years, SD = 0.62 years) child family member (Morrongiello, Schell, & Schmidt, 2010). Mothers and sibling supervisors were each left alone with supervisees in different rooms that contained “contrived hazards” (i.e., items that appeared hazardous but that had been modified to pose no real risk of injury; e.g., scissors glued shut). Results revealed that supervisees engaged in more risk taking when supervised by older siblings and showed more noncompliance when requests to stop risk taking came from an older sibling than their mother. Sibling supervisors used fewer proactive safety strategies than mothers (e.g., checking hazards to see whether they were dangerous) and were less vigilant, allowing supervisees to interact with hazards. Sibling supervisors used the same strategies as mothers to stop supervisee risk taking, but they modeled risk taking more often, which was associated with supervisees subsequently interacting with those same hazards. The pattern of findings, therefore, suggests that both the behavior of the supervisor and that of the supervisee contribute to elevate injury risk for supervisees when these children are supervised by an older sibling.

To summarize the existing state of the literature, sibling supervision is associated with more frequent injuries to supervisees. Based on maternal report and direct observation, this risk seems to arise from both supervisee and supervisor behaviors. Supervisees engage in more risk taking and show greater noncompliance when supervised by an older sibling than their mother. Sibling supervisors are less vigilant, more often model risky interactions with hazards, and use fewer and less effective supervisory strategies when compared with maternal supervisors. What remains to be determined, however, is whether explicitly instructing the older sibling to supervise their younger sibling and prevent risk behaviors would yield improved patterns of supervision practices. We reasoned that explicitly telling them that they are responsible for supervising their younger sibling and need to keep the child from engaging in particular risk behaviors might well increase their motivation to be vigilant and invoke more effective supervisory behaviors.

The present study addressed this question by placing a young supervisee and an older sibling supervisor in a playroom and presenting one group of sibling supervisors with explicit instructions not to allow the supervisee to engage in specific risk behaviors while providing a second group with no instructions. With the exception of the Berman et al. (1992) study, all of the studies discussed focused on supervision when the parent is out of the room. Hence, the present study was designed to approximate a scenario that seems to be fairly commonplace (i.e., the parent leaves the room, leaving the older sibling to briefly supervise the younger one). Video and audio was recorded unobtrusively and later coded to examine both supervisor and supervisee behaviors.
Method
Participants
The sample comprised 66 pairs of school-aged siblings, half of whom were randomized to either the “instruction” or “no instruction” condition. In the instruction condition, supervisors included 14 males and 19 females, aged between 5 and 12 years (M = 7.06 years, SD = 1.74 years). The sibling supervisors in the no instruction condition included 15 males and 18 females aged between 5 and 11 years (M = 7.08 years, SD = 1.34 years). Younger siblings in the instruction condition included 14 males and 19 females aged between 2.5 and 4.5 years (M = 3.47 years, SD = 0.64 years), and the no instruction condition comprised 19 males and 14 females aged between 2.5 and 5 years (M = 3.84 years, SD = 0.77 years). The age ranges included in this study were consistent with the age ranges used in previous studies directly examining sibling supervision (Morrongiello et al., 2007; Morrongiello, Schell, et al., 2010; Morrongiello, Schmidt, et al., 2010). All mothers indicated that they allowed their older child to supervise the younger one with the parent not in the room at times. All participants were randomly selected from the Child Development Research Unit Database, which includes 13,000 families interested in participating in research on child development.

Children were predominantly Caucasian (97%) and fell within the mid- to high-socioeconomic status range, with 63.64% earning ≥$80,000, 22.73% earning between $60,000 and $80,000, 10.61% earning between $40,000 and $60,000, and 3.03% earning <$40,000 per year. All procedures were approved by the Research Ethics Board at the university, and all parents granted written consent before the session began.

Materials
The sibling sessions took place in an indoor playroom that contained video cameras unobtrusively located in the ceiling. The playroom was a large room that contained a number of toys and activities for young children, including a small trampoline that could be used to jump into a ball pit; these two objects were designated as “hazards” that the supervisee should not play with to the older sibling supervisor.

Measures
Questionnaire
Mothers completed a demographic sheet designed to gather information about their ethnicity, highest level of education, and family income.

Video Record Data
The video records of the sibling pairs in both the contrived hazard rooms and the playroom were coded to examine both supervisor and supervisee behaviors. A detailed description of the coding used is presented in Table I. Code categories included: (1) Proactive Safety Behaviors; (2) Supervisee Reactions to Hazards, including (a) calling attention and (b) interacting with a hazard; (3) Supervisor Surveillance of Risk Taking, including (a) never watched and (b) watched; (4) Supervisor Reactions to Risk Taking by Supervisee, including (a) encouragement, (b) no reaction, and (c) forceful reaction; (5) Supervisee Compliance, including (a) noncompliance and (b) compliance; and (6) Early Termination, including (a) experimenter initiated and (b) supervisor initiated.

All videos were coded by the same person. Because older siblings sometimes made comments that indicated group assignment (e.g., telling the younger sibling that they were in charge and the supervisee needed to listen to them), the coder was not blind to condition. However, 25% of the videos (randomly selected) were independently coded by a second person. Inter-rater reliability was excellent, reaching 95% agreement, with the range of scores falling between 86 and 100% across coding categories.

Procedure
Participants were invited by phone to participate in a study about interactions between siblings. When families arrived at the laboratory, the sibling pairs were randomly assigned to one of the two conditions (instruction or no instruction) and asked to wait in the playroom while their mother completed an unrelated study with the research assistant in another room. Sibling supervisors in the instruction condition were told that they were the supervisor in charge while in the playroom, and that it was very important that they not allow their sibling to play with or use the trampoline or the ball pit in the room because these were dangerous. These instructions were developed based on pilot testing with parents and children to ensure they were worded in a way that was developmentally appropriate (i.e., “While you’re in the playroom with [younger sibling’s name] you are going to be in charge. It’s important that you don’t let them play on the trampoline or ball pit while you’re in there, because those things are not safe. Does that sound okay to you?”); virtually none of the children asked questions or sought clarification of their role. Supervisees were not given any instructions and did not hear the instructions given to the older sibling. Sibling supervisors in the no instruction condition were not given any instructions. The sibling pairs were then left to play in the playroom for 5 min, or until an experimenter-initiated or child-initiated termination.
occurred owing to negative sibling interactions. The period of 5 min was chosen to approximate a parent stepping out of a room briefly. In addition, the time frame was kept relatively short because this was the first time specific instructions to an older sibling to intervene and stop a behavior of a younger sibling was given, and, therefore, we were uncertain whether conflict might occur if a longer period was used. The intention was that this length of time would allow adequate opportunity for children to interact with items in the room without escalation of negative interactions between the sibling pair. Children were unaware that their interactions were being video and audio recorded.

At the end of the session, mothers were fully debriefed about the study purpose and measures and asked to provide consent to include the video/audio data from their children in the study; all agreed. Families received a gift card as a token of appreciation for participating in the study.

### Results

#### Were Children in the Two Conditions Similar to One Another?

Independent t-tests revealed that children in the two conditions were similar in terms of the ages of the older sibling supervisors. There also was no significant difference in magnitude of the age interval between the siblings within pairs in each group. Supervisees in the no instruction condition, however, were ~2 months older compared with those in the instruction condition ($M = 43.16$ vs. 41.69 months, $SD = 9.26$ vs. 10.91, respectively), $t(64) = 2.12, p < .05$.

With respect to time in the playroom, children in the instruction condition stayed in the playroom for significantly fewer minutes than those in the no instruction group ($M$ difference = 1.79 min, $SD = 0.96), t(64) = 6.36, p < .001$. In fact, no one in the no instruction condition terminated early, but ~55% in the instruction condition did so (18% by 2 min, another 18% by 4 min, and the remainder thereafter), mostly owing to noncompliance by the younger sibling leading to negative sibling interactions (see Did Supervisor Noncompliance and Supervisor Subsequent Reactions Vary With Instruction Condition? for further discussion). Because children in the instruction condition spent less time in the playroom than those in the no instruction condition, it was important to consider whether risk taking by younger siblings varied with time in the playroom. About 57% of all risk taking occurred during the first 3 min in the playroom, and 68% within the first 4 min. Therefore, even with shorter time in the playroom, children in the instruction condition had ample time to interact with hazards. Nonetheless, all analyses on risk taking were conducted using proportion scores, rather than frequency scores, to correct for any differences in the amount of time spent in the room by children in each condition.

#### Did Supervisor Supervision Vary With Instruction Condition?

If older siblings behave differently when instructed to supervise their younger sibling, then one might see...
differences in the nature of supervisory practices as a function of instruction condition. This question was addressed by considering proactive supervision and vigilance in watching supervisee behavior.

Proactive supervision is one approach supervisors can take to improve safety for supervisees (i.e., alerting young siblings to injury risks and instructing them to not touch hazards before they even show any interest in these, or moving hazards out of reach as soon as one enters the room). Chi-square analysis of the frequency of supervisors who used proactive strategies revealed the frequency of proactive commands was higher than chance in the instruction, but not the no instruction condition (occurring at frequencies of 16 and 0, respectively), $\chi^2(1) = 21.12, p < .001$.

Watching closely is another way that supervisors can improve safety for supervisees. If supervisors were being vigilant and watching closely, then one would expect that they would be observing the supervisee often and, therefore, would be likely to see the young child engage in a risky behavior. To address this question, a split-plot analysis of variance (ANOVA) was conducted on the percentage of risky behaviors (i.e., supervisee approached and immediately interacted with hazards), with condition (2: instruction, no instruction) as the between-participant factor and watching behavior (2: yes, no) as the within-participant factor. The interaction between condition and watching behavior showed a trend in the expected direction (i.e., observation of more hazard interactions in the instruction than no instruction group was higher than chance in the instruction, but not the no instruction condition (occurring at frequencies of 16 and 0, respectively), $\chi^2(1) = 21.12, p < .001$.

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In summary, informing older siblings that they were in charge of supervising promoted more proactive supervision, and there was a trend toward greater vigilance of watching supervisee behavior, both of which would be expected to improve safety by reducing hazard interactions by the supervisee.

**Did Supervisees Behave Differently With Respect to Hazards in the Different Instruction Conditions?**

Supervisee reactions to hazards were coded (call attention, interact), and the percentage scores were then analyzed with a split-plot ANOVA, with condition (2: instruction, no instruction) as the between-participants variable and supervisee behavior (2: call attention, interact with hazard) as the within-participant factor. There was a significant interaction between condition and supervisee behavior, $F(1, 60) = 5.90, p < .05$. Follow-up simple main effect analyses showed that there was a significant effect of condition within each category of supervisee behavior, $F(1, 60) = 5.90, p < .05$. With regard to interactions with hazards, this supervisee behavior was more common among the no instruction condition ($M = 96.09\%, SD = 11.20$) than the instruction condition ($M = 82.30\%, SD = 29.99$), although the majority of children in each condition interacted with at least one hazard. Calling attention to hazards was more common among children in the instruction condition ($M = 17.70\%, SD = 29.99$) than the no instruction condition ($M = 3.91\%, SD = 11.20$).

**When Supervisors Were Watching Risk Behaviors, Did Their Reactions Differ With Instruction Condition?**

To determine whether reactions by supervisors when supervisees expressed interest in hazards varied with instruction condition a split-plot ANOVA was conducted on the percentage of reactions of each type with condition (2: instruction, no instruction) as the between-participants variable and type of reaction (3: encourage, no reaction, forceful reaction) as the within-participant factor. There was a significant interaction between condition and reaction, $F(2, 114) = 63.52, p < .001$, $\eta^2_p = .53$. Follow-up simple effects analyses revealed significant group differences in encouragement [$F(1, 113) = 12.28, p < .001$], no reaction [$F(1, 113) = 56.63, p < .001$], and forceful reactions, $F(1, 113) = 121.65, p < .001$. Specifically, encouragement was more common among children in the no instruction condition ($M = 33.77\%, SD = 32.47$) than the instruction condition ($M = 8.40\%, SD = 22.07$), as were no reactions ($M = 65.79\%, SD = 32.69$ vs. $M = 11.29\%, SD = 25.31$). In contrast, forceful reactions to stop or prevent risk taking by supervisees were more common among siblings in the instruction than the no instruction condition ($M = 80.32$ and $0.45\%, SD = 37.21$ and 2.53, respectively). Thus, supervisors who did not receive instructions were most likely to respond by ignoring supervisee risk taking or encouraging this, whereas those who received instruction were most likely to respond with forceful reactions aimed at stopping or preventing risk behaviors.

**Did Supervisee Noncompliance and Supervisor Subsequent Reactions Vary With Instruction Condition?**

Whether the supervisee was compliant with the supervisor’s attempts to stop their interacting with hazards using forceful means was coded. The plan had been to analyze this percentage compliance score, including assessing for group differences. However, because the no instruction group mostly ignored or encouraged supervisee risk
taking, they had only one occurrence of a forceful reaction to risk taking for which compliance from the younger child could be coded. Hence, no analyses could be conducted. The reason for early termination occurrences, however, provided some information about supervisee noncompliance. Specifically, as noted earlier in the text, for children in the no instruction condition, there was never any need to terminate a session early, whereas for those in the instruction condition, 54.55% (18/33) of sessions were terminated early. Of these, 6.10% (2/18) were terminated early by the experimenter owing to children getting physical in response to supervisors trying to intervene and stop risky behaviors by supervisees who were noncompliant, 9.1% (3/18) ended early by the older sibling seeking help from the parent because the supervisee was noncompliant, 33.30% (11/18) were terminated by the younger sibling seeking help from the parent owing to negative older sibling reactions to supervisee noncompliance, and 6.10% (2/18) were terminated owing to other reasons. Chi-square analysis of the frequency of the various reasons for early termination revealed that the frequency of sessions terminated owing to the younger sibling initiating this was higher than expected (n = 11), whereas the other reasons for termination were lower than expected $\chi^2(3) = 16.89, p < .01$. Thus, early terminations were relatively common among children in the instruction condition, and these were most often initiated by the younger sibling when they were noncompliant and this led to negative interactions with their older supervising sibling.

Discussion

Although sibling supervision is commonplace and has been associated with increased risk of injury to young supervisees (Byard et al., 2001; Morrongiello et al., 2007; Nathens et al., 2000; Rauchschwalbe et al., 1997), only recently has research begun to inform our understanding of the factors that contribute to this risk. Research indicates that both the behavior of the supervisee and that of the supervisor are relevant risk factors (Morrongiello et al., 2007; Morrongiello, Schell, et al., 2010; Morrongiello, Schmidt, et al., 2010). In all of this research, however, older siblings were not clearly designated the supervisor. Rather, parents assumed that the older sibling would know to watch out for the well-being of the younger sibling (Morrongiello et al., 2007), and laboratory studies of sibling supervision assumed similarly (Morrongiello, Schell, et al., 2010; Morrongiello, Schmidt, et al., 2010). By studying sibling supervisory practices under two different instruction conditions, however, the present study provides important insights into how the supervisory practices of child supervisors differ depending on whether they are clearly assigned responsibility for supervising their younger sibling.

Importantly, the findings indicate that several aspects of supervision are improved when older siblings are informed that they are the designated supervisor of their younger sibling. First, instructions increased the frequency of proactive supervisor responses to prevent supervisee access to hazards, compared with the no instruction group. Second, supervisors who were explicitly told they were in charge reacted to supervisee risk taking more often with forceful reactions, whereas those in the no instruction condition ignored this risk taking or responded to it with encouragement. Finally, supervisors in the instruction condition showed a trend toward more watchful behavior in comparison with the no instruction group. One important consequence of these improvements in supervision practices was that supervisees showed fewer interactions with hazards in the instruction than in the no instruction condition. Hence, improvements in supervisor behaviors seemed to moderate risky behaviors among younger children. This is an important finding because past research has found that supervisees show greater risk taking with sibling than maternal supervisors (Morrongiello, Schell, et al., 2010). Hence, identifying ways to reduce hazard interactions and, therefore, injury risk for supervisees is essential when siblings are supervising.

Practical Implications

The current findings suggest that it would be best for parents to make explicit the expectations they have about supervision when an older and younger child are left together in a room at home, instead of assuming older siblings know to supervise younger ones (Morrongiello et al., 2007). Of course, this is not to say that older siblings will necessarily have the level of risk awareness that a parent supervisor will. For example, research has shown that older siblings are better at recognizing rule violation behaviors than risk behaviors by young children (Morrongiello, Schmidt, et al., 2010). Hence, despite any improvements in supervisory practices that may occur when older children are informed they are to supervise their younger siblings, unless older siblings are trained in hazard identification, the level of safety for supervisees is still likely to be less when siblings, and not parents, are supervising. The large majority of younger siblings in both groups interacted with one or both of the hazards in the room. It may be, therefore, that instruction to stop hazard interactions is not sufficient to reduce hazard interactions adequately to prevent injuries. A more
comprehensive approach that provides older children formal training in hazard identification, knowledge of young children’s development and how this can impact their behavior, and strategies for effective supervision (e.g., watching, proximity; Gitanjali et al., 2004; Morrongiello, 2005) may be essential for fully preparing older siblings to keep younger children safe when they are in their charge.

Importantly, the current findings suggest, too, that noncompliance by the supervisee is another important factor to address to reduce injury risk when older siblings supervise. Although compliance of supervisees could not be thoroughly examined herein, past evidence indicates that oppositionality (Rowe, Maughan, & Goodman, 2004; Schwebel, Speltz, Jones, & Bardina, 2002) and noncompliance by supervisees are both risk factors for childhood injury (Morrongiello et al., 2007). Hence, identifying ways to improve supervisee compliance with directives to stop risk taking also is likely to enhance young children’s safety. Several studies have shown that children engage in less risk taking when identified supervisors are present (Barton & Schwebel, 2007; Harrell, 2003; Morrongiello & House, 2004; Morrongiello et al., 2004a; Schwebel & Bounds, 2003). It may be, therefore, that formalizing supervision expectations for both children will improve the young child’s safety by reducing the high level of noncompliance that is typically observed when older siblings make supervisory-based demands of younger ones (Morrongiello, Schell, et al., 2010; Perlman & Ross, 2005). If future research confirms these positive effects, then informing parents of this would be an important next step for further reducing children’s risk of injury when supervised by a sibling. In addition, it may prove beneficial to implement strategies that serve to improve sibling supervisors’ skills in communicating with the younger child and effectively managing difficult behavior by this child.

Another possible approach to enhance compliance by young supervisees would be to limit how old a sibling must be before they can be primary supervisor of a younger child. Several studies have raised questions about when children are developmentally prepared to supervise younger children (Kurdick & Fine, 1995; Nathens et al., 2000), and evidence that child supervisors do more scolding and use more force in comparison to parents (Bryant, 1989; Morrongiello et al., 2007) further support these concerns. Hence, although there is little agreement among professionals about what constitutes adequate supervision for young children (Peterson, Ewigman, & Kivlahan, 1993; Tomlinson & Sainsbury, 2004) and who is competent to provide such supervision (Kurdick & Fine, 1995), it seems likely that age of the sibling supervisor and/or age difference between the two children are considerations that might influence the supervisee’s risk of injury. It may be that older elementary-school children are more developmentally capable than younger elementary-school children of evoking compliance by preschool-aged siblings and, therefore, enhancing safety for the supervisee. Age of sibling supervisor and age difference between siblings are important considerations that merit attention in future research on sibling supervision.

Finally, the fact that more than half of the sessions in the instruction condition were terminated early has several implications. First, it may be that sustaining sibling supervision for longer than a 5-min period may not be possible owing to the high occurrence of conflict between siblings during this period. When older siblings are supervising in the home, therefore, it would seem important that an adult be close by and monitoring for signs of conflict. Possibly, to curtail conflict younger siblings also require instruction that makes it clear that their older sibling is in charge; however, this hypothesis warrants further research. The conflict between siblings during supervision also might result in some negative consequences for the older sibling (e.g., negative parental reactions) and this might, over time, make them reluctant to intervene to stop risk taking by the supervisee at all. Hence, improvements to sibling supervision following instruction by the parent may be short lived and decline over time. Longitudinal research is needed to examine relations between sibling conflict and parental reactions to this conflict over time, and to explore how parent responses subsequently impact older siblings’ reactions to risk taking by the supervisee.

**Limitations and Future Research**

Although the present research provides important insights into sibling supervision, there are some limitations that merit attention in future research. First, the sample was relatively homogenous (i.e., Caucasian, well-educated, middle-class families); therefore, the findings may not be broadly applicable to families from different ethnic and economic groups. For example, injury rates are lower among Hispanic and Asian American children (Hambridge, Davidson, Gonzales, & Steiner, 2002; Vaughan, Anderson, Agran, & Winn, 2004), and such differences could reflect differences in supervision norms or practices within families. Second, the sample size precluded examining whether supervision practices differed for male versus female sibling supervisors, or as a function of whether it was a same-sex or opposite-sex sibling pair. Some evidence suggests that sisters supervise younger siblings more often than do older brothers (Bryant, 1989; Garner, Jones, &
Miner, 1994), but whether older brothers and sisters differ in supervision practices when looking after younger siblings has not yet been considered. Finally, although we attempted to observe children under naturalistic conditions and without their awareness, behaviors observed in the laboratory setting may differ from those that occur in familiar settings such as the home. Direct study of sibling supervision in the home and other naturalistic contexts is an important next step in this research.

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