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Parent Supervision to Prevent Injuries to Young Children

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Introduction

Caregivers must assume responsibility for the safety of infants, toddlers and preschoolers because children at these developmental stages have a limited capacity to appraise risk and differentiate unsafe from safe situations. Historically, research on child safety has focused on determining what safety practices caregivers adopt, why they do so, and how to motivate them to enact better safety practices.[1-6] More recently research has shifted to examine caregiver supervision practices, how these influence young children's risk of injury, and what messaging approaches are best to motivate caregivers to improve their supervision practices. These issues are addressed in this article.

Subject

For young children (< 6 years) researchers have defined supervision in terms of specific behaviours that indicate attending to the child (watching, listening).[7] Proximity is particularly important for the safety of younger children under 6 years of age because they often do unpredictable things, and quickly, which increases exposure to and interactions with injury hazards.[8]

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Problems

Epidemiology studies reveal that young children are frequently injured when in their homes,[9,10] which is surprising given an adult caregiver should be present and responsible for children at these young ages. Two essential questions are: how are caregivers typically supervising and what constitutes ‘adequate supervision’ for ensuring a child’s safety? Examining how patterns of supervision differentially influence children’s risk of injury is an essential first step for determining what constitutes adequate supervision.

Research context

Historically, progress in exploring links between supervision and injury risk had been hampered by the difficulty of measuring supervision in scientifically rigorous ways. Asking parents to report on how they might supervise in different circumstances may or may not accurately reflect how they will do so in real life circumstances.[11,12] Studies that have used direct observations (e.g., parents with children in public places like parks) and self-monitoring techniques (i.e., parents record their own supervisory practices at home throughout the day) have substantially advanced our understanding of factors that influence supervisory practices and how these practices impact children’s risk of injury.[13-15] Another popular testing approach to study supervision involves the use of ‘contrived hazards’ – hazards that appear real but that have been modified to pose no real risk of injury in laboratory settings.[16,17] With this approach one creates a ‘simulated’ risk situation, and supervisors’ reactions can be unobtrusively videotaped, providing a more accurate index of ‘typical’ supervision practices. These observation-based methods are time- and labour-intensive but have yielded substantial insights regarding links between supervision and child injury risk.

Key Research Questions

1. How often are children routinely ‘out of view’ of supervisors when at home? Are there parent and/or child attributes that influence children’s supervision needs?
2. What patterns of supervision do caregivers show when at home with young children? Are some patterns more effective than others to prevent children from being injured?
3. Are siblings effective supervisors? What factors influence their effectiveness?

Research Findings

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In research on how caregivers routinely supervise it was found that when young children (< 6 years) are at home with mothers they are supervised (in view, attended to) more than unsupervised (i.e., parent does not know where child is or what the child is doing – for at least 5 minutes). Nonetheless, young children are completely out of view of supervisors about 20% of their awake time, and the extent of supervision is poorer when they are out of view (e.g., intermittently listening in but not watching).[18,19] Thus, in the course of their daily lives, parents routinely supervise in ways that can elevate children's risk of injury by allowing them to be out of view. Time children spend out of view of supervisors generally increases with children's age because parents assume older children know and will follow safety rules better than younger children.[20] When sex differences emerge, girls are more closely supervised than boys during the preschool years, which may partly explain why boys routinely experience more injuries than girls.[21,22]

Mothers who score higher in conscientiousness and those with children having behavioural attributes that are likely to increase risk behaviours (i.e., impulsivity, sensation seeking), keep their children in view more of the time.[14] Thus, parents adjust their level of supervision based on both parent and child attributes. Importantly, research has shown that children who scored high in behavioural intensity (i.e., show high activity and intense reactions to new situations and events) had a history of more medically-attended injuries when parents reported reduced supervision but not when parents reported high levels of supervision (see Figure 1).[23] Thus, close supervision can counteract the elevated risk of injury typically found for temperamentally-difficult children.[24,25] On the other hand, the child attribute of inhibitory control (e.g., child can exercise self-control and resist doing things prohibited by a caregiver) serves a protective function and scoring high in this trait predicts a history of fewer medically-attended injuries even under conditions of reduced supervision, whereas for children low in inhibitory control higher levels of supervision are needed to prevent injuries (see Figure 1).[23] Hence, whether lower levels of supervision lead to increased risk of injury depends, in part, on the child's behavioural attributes. Risk of injury to children, therefore, reflects an interaction of many factors, including child characteristics x supervision practices x level of environmental risk.[26]

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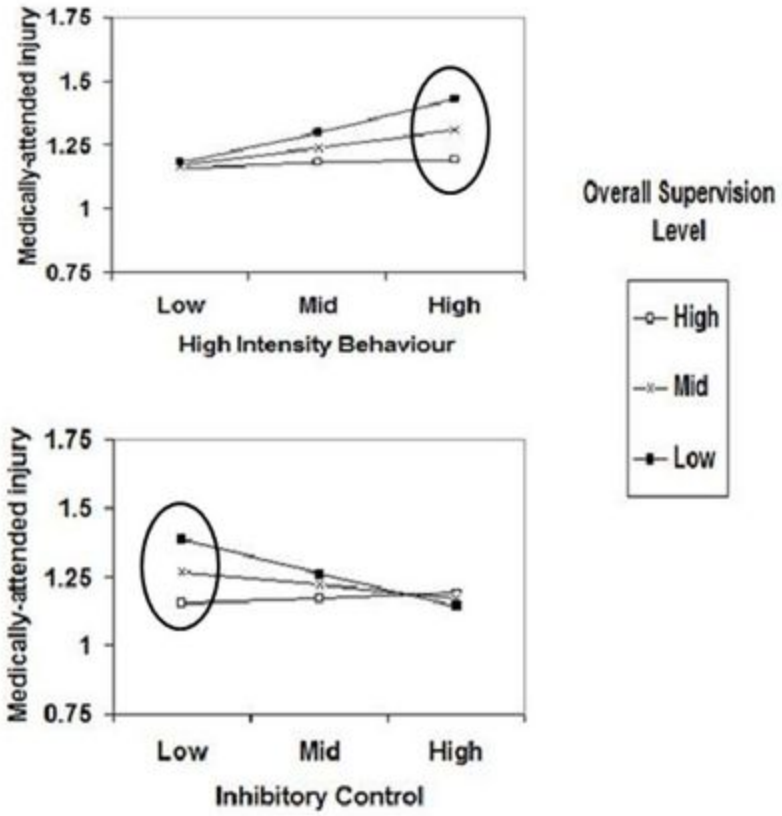


Figure 1. Supervision moderates the relation between child behaviour characteristics and injury. For High Intensity Behaviour, high scores predicted injury when parents showed low and moderate levels of supervision ($p < .05$) but not when they showed high levels of supervision. A similar pattern of significant differences was found for low scores in Inhibitory Control.

At time points when children acquire new developmental milestones (e.g., start to walk), which often occurs unexpectedly for parents, injury rates show temporary peaks.[27] Thus, when children behave unpredictably and parents have not had sufficient time to adjust the level of supervision those children need in order to ensure their safety, then children more frequently get injured, especially at younger ages and in high-hazard contexts like farms.[28]

Studies of young children have documented that lax supervision is associated with greater risk taking, more medically-attended injuries, and more severe injuries.[29] Moreover, particular patterns of supervision differentially relate to frequency of injury, highlighting the importance of closely supervising children, particularly boys.[14] As shown in Figure 2, injury rates for boys and girls differed significantly when mothers used the strategy of intermittently going to check on the child, with boys experiencing more injuries than girls. In fact, injury rates for boys when

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mothers intermittently listened in were as high as when mothers left their sons unsupervised, and rates for girls were as low as when mothers provided direct and close supervision; just the threat that a parent might appear to check on what the child was doing was sufficient to deter girls from taking risks, but not boys. Hence, anything less than constant watchful supervision was associated with high injury rates among boys. Generally, the research has shown that boys engage in more risk taking than girls and they are less compliant with parent requests to avoid hazards. Hence, boys require more frequent and effortful supervision practices than girls to ensure their safety.[14,16]

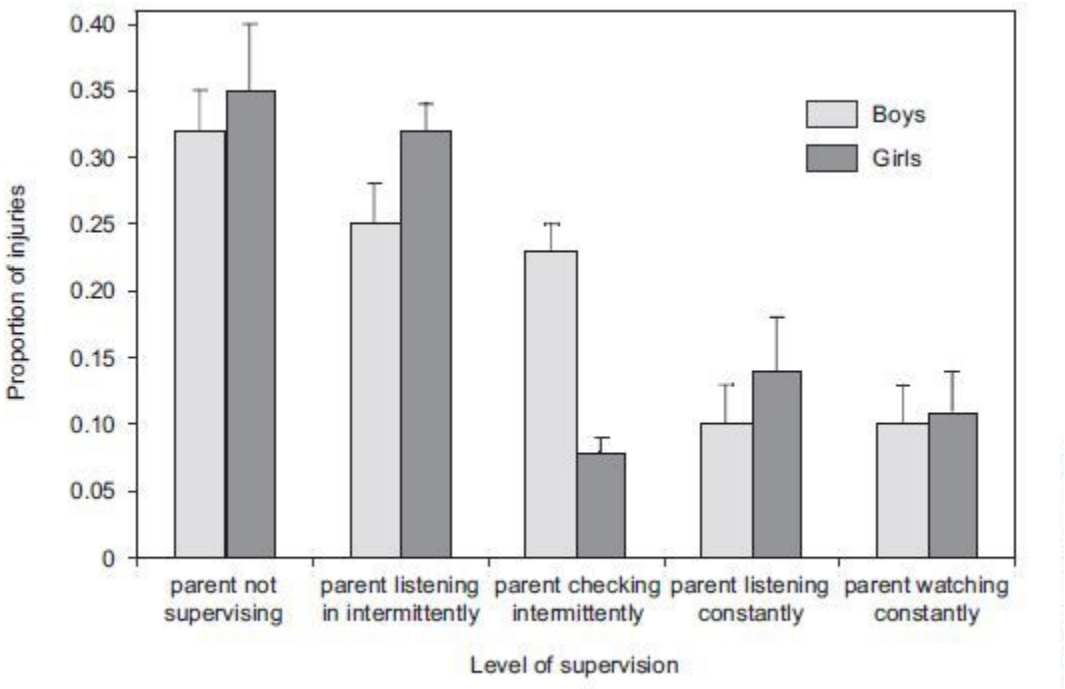


Figure 2. Proportion of injuries for boys (n = 428 total) and girls (n = 137 total) as a function of supervision pattern.

Sibling supervision in which an older child in the family (e.g., 5-12 years) looks after a younger one (e.g., < 5 years) occurs often when children are at home together.30 This supervision arrangement elevates risk of injury for young children compared to parent supervision.[31,32] Research examining the supervisory practices of older siblings compared with mothers revealed that supervisees were allowed to engage in more risk behaviours when supervised by older siblings than by mothers.[33] Moreover, the behaviours of both the sibling supervisors (i.e., less effective supervision) and young supervisees (i.e., non-compliant) contribute to increase risk of injury to the young child.[34,35] Importantly, a rigorous evaluation of an online training program

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(Safe Sibs) reveals that siblings can learn to be more effective supervisors when given the proper resources and practice experiences.[36]

Research Gaps

Most research examining supervision and its impact on injury risk has focused on mothers, but fathers also often supervise young children at home. A few studies have compared mothers' with fathers' beliefs about the need for supervision of their young children[37] and reactions to their toddler's risk taking behaviours[38] and found no differences, however, more extensive research is needed. It might be, for example, that differences in supervision between mothers and fathers vary depending on a child's developmental level or behavioural attributes.

Surprisingly, despite how often supervision is mentioned as a risk factor for injury in the pediatric literature, there is only one proven effective intervention program that addresses parent supervision. The Supervising for Home Safety program incorporates a number of messaging approaches that were shown to be effective to change parental beliefs about injuries and supervision.[39] The program has proven effective when delivered in a 1:1 format (e.g., home visiting programs) or a parenting group context.[40,41] Extending this program to meet the needs of high-risk parent populations is an important next step because in the child maltreatment area inadequate supervision is a cornerstone in defining neglectful parenting.[42,43] Hence, interventions that can improve supervision behaviours for parents showing supervisory neglect are sorely needed.

Conclusions

Developments in defining and measuring supervision have paved the way for research on caregiver supervision, including studying how this factor influences young children's risk of injury. Research has confirmed past speculation that poor supervision can elevate risk of injury to children, but the findings also highlight variation in this process depending on parent and child characteristics, as well as level of environmental risk. The evidence indicates that mothers and fathers are more similar than different in supervising young children and that sibling supervision is more lax than parent practices which contributes to elevated injury risk for young supervisees when supervised by older siblings.

Implications

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An important aspect of raising young children is preventing unintentional injuries. Supervision is a strategy that has been shown to achieve this goal. The supervision needs of children, however, are influenced by a multitude of factors, including child characteristics (age, sex, behavioural attributes), parent characteristics (conscientiousness, beliefs about injuries) and level of environmental risk. Such complexity suggests that it may not be realistic to aim to develop specific 'supervision guidelines' that can apply broadly. Developing interventions that target caregiver supervision beliefs and behaviours and can be broadly applied, therefore, is essential. The Supervising for Home Safety program meets this need and the focus now has to be on program dissemination to counteract parents' commonly held belief that childhood injuries are 'accidents' and to enhance their motivation for and self-efficacy beliefs that they can more closely supervise their children.[44] In addition, the Safe Sibs program can address the need to train children to be more effective supervisors of younger children. This is essential given that supervision by siblings is a common occurrence and without training these older siblings increase risk of injury to younger children.

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