Ensuring the Physical Safety of the Client

This section will include literature on factors related to exploration in children and risk taking in children.

2009

Figner, Bernd; Mackinlay, Rachael J.; Wilkening, Friedrich; Weber, Elke U. (2009). Affective and deliberative processes in risky choice: Age differences in risk taking in the Columbia Card Task. Journal of Experimental Psychology: Learning, Memory, and Cognition. 35(3), 709-730.

The authors investigated risk taking and underlying information use in 13- to 16- and 17- to 19-year-old adolescents and in adults in 4 experiments, using a novel dynamic risk-taking task, the Columbia Card Task (CCT). The authors investigated risk taking under differential involvement of affective versus deliberative processes with 2 versions of the CCT, constituting the most direct test of a dual-system explanation of adolescent risk taking in the literature so far. The “hot” CCT was designed to trigger more affective decision making, whereas the “cold” CCT was designed to trigger more deliberative decision making. Differential involvement of affective versus deliberative processes in the 2 CCT versions was established by self-reports and assessment of electrodermal activity. Increased adolescent risk taking, coupled with simplified information use, was found in the hot but not the cold condition. Need-for-arousal predicted risk taking only in the hot condition, whereas executive functions predicted information use in the cold condition. Results are consistent with recent dual-system explanations of risk taking as the result of competition between affective processes and deliberative cognitive-control processes, with adolescents’ affective system tending to override the deliberative system in states of heightened emotional arousal. (PsycINFO Database Record (c) 2009 APA, all rights reserved)

Prior to 2009

Christensen P, Mikkelsen MR. (2008). Jumping off and being careful: children's strategies of risk management in everyday life. Sociol Health Illn. 2008 Jan;30(1):112-30.

This article addresses the complexity of children's risk landscapes through an ethnography of 10- to 12-year-old Danish children. The data revealed how children individually and collectively engaged with risk in their everyday activities. The children assessed risks in relation to their perceptions of their health as strength and control, negotiated the conditions of playing, and attuned their responses to situations of potential social and physical conflict. In the paper this risk engagement is illustrated in a variety of contexts: children's decisions to wear or not to wear a bicycle helmet; playing and games and routine pushing and shoving at school. In looking after themselves, children negotiate rules of participation and they safeguard personal and collective interests. Gender differences in these processes are addressed and discussed. The article argues that risk engagement is an important resource through which children also learn from their own mistakes. This is a necessary learning process when children engage with their personal health and safety. The article critically discusses different sociological frameworks and shows the significance of the study for the growing literature on understanding the meaning of risk in childhood.

Morrongiello BA, Lasenby-Lessard J. (2007). Psychological determinants of risk taking by children: an integrative model and implications for interventions. Inj Prev. 13(1):20-5.

OBJECTIVES: To draw on empirical findings of the psychological factors that cause elementary-school children to engage in risky play behaviors that can lead to injury, with the aim of developing an integrative model that can support intervention-program planning. METHODS: An extensive review of literature on this topic was conducted, determinants of risk taking for which there was empirical support were identified, and results were synthesized to create an integrative model of children's risk taking. RESULTS: Research on risk taking in children is limited, but the findings support the importance of examining child, family and socio-environmental factors to understand children's risk-taking behaviors. CONCLUSIONS: Development of a model outlining the determinants of risk behaviors can provide a foundation for initiatives that aim to reduce such behaviors and prevent childhood injuries.

Morrongiello BA, Lasenby-Lessard J, Matheis S. (2007). Understanding children's injury-risk behaviors: the independent contributions of cognitions and emotions. J Pediatr Psychol. 2007 Sep;32(8):926-37. Epub 2007 May 23.

OBJECTIVE: Unintentional injuries are a leading threat to the health of elementary-school children, with many injuries happening when children are left to make their own decisions about risk taking during play. The present study sought to identify determinants of children's physical taking. METHODS: An ecologically valid task that posed some threat of injury was used (i.e., highest height of a balance beam they would walk across). Ratings of cognitions (extent of danger, perceived vulnerability for personal injury, potential severity of injury) and emotional reactions (fear, excitement) were taken when on the beam, just before the children walked across. RESULTS: Regression analysis, controlling for age and sex, revealed that risk taking was predicted from ratings of danger, fear, and excitement. CONCLUSIONS: Both cognitive and emotional factors independently contribute to predict children's physical risk taking. Theoretical and practical implications of these findings are discussed.

Morrongiello BA, Walpole B, & Lasenby J. (2007). Understanding children's injury-risk behavior: wearing safety gear can lead to increased risk taking. *Accid Anal Prev*. *39*, 618-23.

The present study examined whether school-age children show risk compensation and engage in greater risk taking when wearing safety gear compared to when not doing so when running an obstacle course containing hazards that could lead to physical injury. Because sensation seeking has been shown to influence risk taking, this child attribute was also assessed and related to risk compensation. Children 7-12 years of age were videotaped navigating the obstacle course twice, once wearing safety gear and once without safety gear, with reverse directions used to minimize possible practice effects. The time it took the child to run through the course and the number of reckless behaviors (e.g., falls, trips, bumping into things) that the child made while running the course were compared for the gear and no-gear conditions. Results indicated that children went more quickly and behaved more recklessly when

wearing safety gear than when not wearing gear, providing evidence of risk compensation. Moreover, those high in sensation seeking showed greater risk compensation compared with other children. Implications for childhood injury prevention are discussed.

Morrongiello, B.A. & Matheis, S. (2007). Addressing the Issue of Falls off Playground Equipment: An Empirically-Based Intervention to Reduce Fall-Risk Behaviors on Playgrounds *Journal of Pediatric psychology*, *32*, 819-830.

Objective: The present study evaluated the impact of an intervention to reduce fall-risk behaviors on playgrounds among children 6–11 years of age.
Methods Children completed posters indicating risky playground behaviors they would and would not do. In the intervention group, video and audio presentations were used to expose children to injury occurrences so that injury vulnerability was communicated in a fear-evoking way. In the control group, children only completed the pre- and post-intervention measures.
Results Significant decreases in intentions to risk-take were obtained in the intervention, but not the control group. Effectiveness did not vary with children's age or sex, but was greater for those scoring high in sensation-seeking.
Conclusions A fear-appeals approach proved successful to reduce intended fall-risk behaviors, particularly for children high in sensation-seeking whose risk-taking is motivated by affect arousal.

Morrongiello, B.A. & Major, K. (2002). Influence of safety gear on parental perceptions of injury risk and tolerance for children's risk taking *Inj Prev*, 8, 27-31

Objectives: Risk compensation theory has been shown to relate to how individuals behave in areas such as traffic safety and consumer product safety. The present study examines whether risk compensation theory applies to parents' judgments about school age children's permissible risk taking under non-safety gear and safety gear conditions for seven common play situations. The extent of the child's experience with the activity and parental beliefs about safety gear efficacy were examined as possible moderators of extent of children's risk taking allowed by parents. Method: A telephone interview was used to obtain each parent's ratings of permissible risk taking by their child (for example, speed at which child is allowed to cycle, height allowed to climb to on a climber)

under safety gear and no gear conditions, and ratings of child experience and gear efficacy. Results: Results confirmed risk compensation operated under all seven play situations, resulting in parents reporting they would allow significantly greater risk taking by their children under safety gear than non-safety gear conditions. Children with more experience with the activities were to be allowed greater risk taking, even when not wearing safety gear. Parents who believed more strongly in the efficacy of the safety gear to prevent injuries showed greater risk compensation. No sex differences emerged in any analyses. Conclusion: Results highlight the need to communicate to parents that safety gear moderates injury risk but does not necessarily guarantee the prevention of injury, particularly if children are allowed greater risk taking when wearing safety gear.

DiLillo D, & Tremblay G. (2001). Maternal and child reports of behavioral compensation in response to safety equipment usage. *J Pediatr Psychol.26*, 175-84.

OBJECTIVE: To assess maternal and child risk compensation behaviors in response to several commonly used safety measures. METHODS: We administered a previously validated self-report measure of risk tolerance to a total of 151 mothers and their children in grades 3-7. Mothers indicated the level of risk they would permit their child to assume; children were questioned regarding the degree of physical risk they would typically assume while unsupervised by an adult. Participating families were randomly assigned to conditions in which safety equipment either was or was not present during assessments of risk tolerance. RESULTS: Mothers who viewed the stimulus materials depicting the use of safety precautions reported significantly higher levels of tolerance for risky behavior on the part of their children than did mothers who viewed identical materials without the safety precautions. No significant differences in estimated risk taking emerged between children in the two experimental conditions. CONCLUSIONS: These data may reveal a compensatory mechanism by which parents escalate their threshold for acceptable risk behavior in the presence of safety precautions for their children. Such tendencies have the potential to offset some of the protection provided by the use of safety equipment.

Schwebel DC, & Bounds ML. (2003). The role of parents and temperament on children's estimation of physical ability: links to unintentional injury prevention. *J Pediatr Psychol*. *28*, 505-16.

OBJECTIVE: Unintentional injuries, the leading cause of pediatric mortality, are cause by a complex set of intrapersonal and environmental factors. The role of three critical variables--parental supervision, children's temperament, and estimation of children's physical abilities--was examined. METHODS: Sixty-four 6- and 8-year-old children completed a laboratory experiment with a parent. Both children and parents judged the child's ability to complete reaching, stepping, and crouching tasks. Parents also completed a parent-report measure of children's temperament. RESULTS: Both children and parents overestimated children's ability, although children did so more than parents. Parents of temperamentally impulsive and undercontrolled children judged that their children could complete tasks that were actually beyond the child's ability. Temperament also affected children's judgments while parents were known to be present or absent: Temperamentally impulsive and undercontrolled children were more accurate in their judgments when parents were standing next to them than when parents were hidden from view behind a one-way mirror. CONCLUSIONS: The mechanism by which parental supervision might protect children from injury appears to be at least twofold: (a) Parents overestimate children's ability less frequently than children themselves, suggesting supervising parents could intervene to prevent children from attempting dangerous activities; and (b) children judge their physical abilities more cautiously when parents are present. Implications for temperament theory and for injury prevention are discussed.

Heck A, Collins J, Peterson L. (2001). Decreasing children's risk taking on the playground. J Appl Behav Anal. 2001 Fall;34(3):349-52.

Playground mishaps are some of the most common sources of injury and are the leading killer of children. The present study used a multiple baseline design across three classrooms (N = 379 children). With minimal teaching and rewards, children decreased and maintained decreased risky playground behaviors on slides. Floor effects on climbers prevented the demonstration of similar effects. The decreases seen in risky slide behavior are discussed within the context of preventive safety training for playground injuries.

Hillier LM, & Morrongiello BA. (1998). Influence of safety gear on parental perceptions of injury risk and tolerance for children's risk taking. *J Pediatr Psychol*. *23*, 229-38.

OBJECTIVE: To examine age and gender differences in children's perception of injury risk and to evaluate cognitive factors that relate to their appraisal of risk. METHODS: The participants were 120 children (6 to 10 years of age), who used a series of photographs, which depicted play activities that varied from no to high risk, to appraise injury risk. RESULTS: Children were able to distinguish varying degrees of injury risk. Boys rated risk as lower than girls, and 6-year-old children identified fewer risk factors and did so more slowly than 10-year-old children. For girls, perceived vulnerability to injury was the best predictor of injury risk ratings, whereas for boys it was judged severity of potential injury. CONCLUSIONS: Children's appraisal of risk and age and gender differences in related factors highlight important components for injury prevention programs.

Morrongiello, B.A. & Rennie, H. (1998). Why Do Boys Engage in More **Risk Taking** Than Girls? The Role of Attributions, Beliefs, and **Risk** Appraisals. *Journal of Pediatric Psychology* 23, 33-43.

Objective: Assessed for age and sex differences in school-age children's reporting of injury-risk behaviors, ratings of injury-risk in various play situations, attributions for injuries (self, other, bad luck), and beliefs about their vulnerability to injury in comparison to their peers (more, less, comparable vulnerability). Methods: We used a structured interview and drawings that depicted children showing wary or confident facial expressions when engaged in injury-risk play activities. Results: Children's reported risk taking could be predicted from their risk appraisals, beliefs about the likelihood of injury, and attributions of injuries to bad luck, and these factors resulted in 80% correct assignment of cases by sex in a discriminant analysis. The wary affect display resulted in higher injury-risk ratings than the confident display, with this effect being greater for girls than boys. Conclusions: Cognitive-based factors differentiate boys from girls and contribute to sex differences in children's injury-risk behaviors.

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