

Psychology can help prevent deadly childhood accidents

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Injuries have overtaken infectious disease as the leading cause of death for children worldwide, and psychologists have the research needed to help predict and prevent deadly childhood mishaps, according to a presentation at the annual convention of the American Psychological Association.

"Many different factors contribute to unintentional injuries, so if we are able to stop just one of these [risk factors](#), the [injury](#) could be prevented," said David C. Schwebel, Ph.D., of the University of Alabama Birmingham, who presented at the meeting. "By using novel behavioral strategies, we can possibly prevent injuries that have previously been seen as unavoidable accidents."

Injuries were responsible for the deaths of over 11,000 and emergency room visits by more than 6.7 million American [children](#) in 2017, according to the Centers for Disease Control and Prevention. The Global Burden of Disease project estimates that more than 2 million children under age 19 worldwide died as a result of injuries in 2017. While these numbers represent all injuries, the

presentation focused on only unintentional injuries (i.e., accidents) instead of intentional injuries such as suicide, homicide and abuse.

Schwebel outlined a model that psychologists could use to reduce accidental injuries in children. The model groups risk factors in three categories: environment-based, caregiver-based and child-based factors. Each category contributes in some form to almost every incident, according to Schwebel, and preventing just one risk factor could stop an injury from occurring.

Environment-based factors can include many different aspects of the environment with which children interact. For example, children could choke on toys if they are not designed well or be harmed in a [car accident](#) due to an incorrectly installed car seat.

Schwebel described one case where he and his colleagues reduced an environmental risk by comparing the look and shape of bottles containing either juice or torch fuel. Children were shown many bottles, some with torch fuel and others with juice, and were asked if they would drink them or not. Children tended to identify liquids in clear plastic bottles as drinks and those in opaque containers as not drinks. After the findings were published, there were evident changes in the torch fuel industry as fuel began to be sold in dark opaque bottles.

Caregiver-based factors can involve anyone who is supervising a child, including parents, teachers, babysitters or even lifeguards. According to Schwebel, preschool teachers can often be underpaid and fatigued from the intense work of supervising children all day and sometimes use outdoor playground time as a break for themselves, allowing children to run free, even though the majority of injuries at preschools occur on playgrounds.

"To solve this problem, we developed the Stamp in Safety Program where children wear a nametag, and teachers have stamps to reward the children on their nametags for engaging in safe behavior," he said. "While on the surface this seems to focus on rewarding children for safe behavior, its primary goal is to get teachers engaged and paying attention."

Child-based factors include [motor skills](#), how children perceive their environment and how they interact with others. These skills vary greatly by age, so different approaches are needed when confronting risks. For example, 7-year-olds struggle more with the cognitive demands of crossing the street than 14-year-olds. Interventions for child-based factors can include reinforcing common parenting practices such as teaching children how to cross the street safely or showing them how to interact with stray dogs.

How the specific situations targeted for interventions are chosen can be a mixed bag, said Schwebel. For example, the idea for a program on drowning prevention came after Schwebel observed lifeguards while his own kids were playing at a pool. Other intervention ideas are drawn from the personal experiences and ideas brought to him by his students, such as the Stamp in Safety program.

And while psychological researchers are essential, this work will require collaboration across a variety of disciplines, said Schwebel. Throughout his research, Schwebel has worked with computer scientists, visual artists, electrical engineers, biostatisticians, physicians, epidemiologists and others.

"Globally, we are amid an unprecedented decrease in health burden from communicable and [infectious diseases](#). As the world develops, health risks change," said Schwebel. "Psychologists have the expertise, the needed behavioral theory, and the needed methodologies to understand and take steps to prevent the significant health burden of unintentional injuries."

Provided by American Psychological Association

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