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Research *in* Action

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Preventing Youth Violence Through Digital Animation

Watch clips for ways to stay safe, build resilience

Different Teens, Different Beliefs About Driving Safety

New CHOP research suggests need for targeted messaging

Helping Young Victims of Assault

What Emergency Departments need to know to prevent further violence

CIRP Researcher Receives NIH Career Development Award

Working to help kids recover from the trauma of injury, illness

CIRP Kicks Off Second Year of Training Future Scientists

Students begin Research Experiences for Undergraduates Program

View Our Recent Publications and Presentations

Read About Us In the News

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Preventing Youth Violence Through Digital Animation



In a [new study](#) conducted by researchers with the [Philadelphia Collaborative Violence Prevention Center \(PCVPC\)](#) at CHOP, digital animation was used as a method to share research findings with youth and adults living in West and Southwest Philadelphia neighborhoods. The research, published in the *American Journal of Community Psychology*, stresses the importance of engaging youths and adults in developing strategies and tools for sharing research results to improve the meaning, acceptance, and translation of research findings into community programs and action. In 2008, PCVPC members interviewed 18 youths, ages 10 to 16, living in Southwest Philadelphia about the stressors in their lives (including community violence) and the assets they have available to them to combat these stressors. The researchers also asked these youths for ideas on how to creatively share the results of these focus groups with their friends and neighbors.

"We were interested in finding out how best to take back to the community what we learned and the recommended actions," says Therese Richmond, PhD, one of the study's authors and an associate professor of Nursing at the University of Pennsylvania School of Nursing. "The community groups told us to work with the youths directly because they wanted the messages relayed in a way that was palatable to them. The youths told us that digital animation was the way to go."

The five [digital animation clips](#), available free of charge on Facebook, feature "Briana" and "Damon," two youths who share ways to prevent violence. Each clip is less than two minutes long, and topics include keeping calm in an altercation, not holding grudges and seeking retribution, finding a neighborhood mentor, and looking to family members as role models. "Our youth partners were involved in every aspect of the production, including the names of the youths and what they wore. The characters' voices are ones of two youths living in Southwest Philadelphia," says Nicole Vaughn, PhD, one of the study's authors and an assistant professor in the Department of Health Management and Policy at Drexel University's School of Public Health. "The digital animation clips give kids the opportunity to develop skill sets in dealing with violence in their neighborhood and at school."

The PCVPC researchers, which include Nicole Thomas, MBA, Thalia Williams, MPH, Sara Jacoby, MSN, MPH, and Terry Guerra, MS, are following up on the study by interviewing youths of the same age living in Southwest Philadelphia who were not involved in developing the animation shorts to see how they resonated with them, as well as counting the number of "likes" on Facebook. But the best metric, as Dr. Richmond explains, would be "a reduction in youth violence in West and Southwest Philadelphia. It's such a complex problem. These digital animation clips are just one approach in, hopefully, a multi-pronged approach we are working to develop in reducing violence."



Different Teens, Different Beliefs About Driving Safety



Researchers at [the Center for Injury Research and Prevention \(CIRP\) at CHOP](#) have been analyzing factors associated with teen crashes, the #1 cause of death for adolescents, to develop interventions to change behaviors that contribute to these crashes. [Findings from a new CIRP study](#) funded by State Farm® and published in *Traffic Injury Prevention* shed light on how best to target driving safety resources and messages to certain subgroups of teens. “To improve teens’ driving safety behaviors, it’s important to first understand what they believe about road safety,” says Michael R. Elliott, PhD, lead author of the study and a member of the [Young Driver Research team at CIRP](#). “By explaining these beliefs, this paper helps the teen driver research community design interventions that not only reach, but resonate, with certain groups of teens.”

Using a statistical process known as latent class analysis, the researchers grouped the beliefs of a nationally representative sample of 5,665 9th to 11th graders into five profiles related to factors important to their safety in cars organized around concepts of internal and external control. The large majority of all types of teen drivers had a balanced perspective about driving risks and recognized both the driver’s role, as well as external factors over which the driver has little control. However, three subgroups -- males, minorities, and those who had been injured in a crash – were more likely to believe external forces, rather than their own behavior, cause a crash.

The findings suggest that designing interventions to help certain subgroups of teens understand their role in crashes may help improve teen driver safety. In particular, for those involved in a crash, interventions designed to help them perceive that the crash was the result of their actions, rather than a random or externally-driven event, may influence them to take control with safety-oriented behaviors. [Previous CHOP research](#) found that the overwhelming majority (75 percent) of serious teen driver crashes are due to "critical errors" associated with inexperience, including lack of scanning to detect and respond to hazards, going too fast for road conditions, and being distracted by something inside or outside the vehicle.



Helping Young Victims of Assault



Preventing injury in children and youths is a complex problem. In this [editorial](#) recently published in the *Journal of Adolescent Health*, Joel Fein, MD, MPH, director and principal investigator of the [Philadelphia Collaborative Violence Prevention Center \(PCVPC\)](#), discusses the crucial role Emergency Department (ED) staff play in preventing future assaults on youths. According to the Centers for Disease Control and Prevention (CDC), more than 80,000 10- to 14-year-olds were treated in EDs for assault-related injuries in 2009, with most discharged by EDs. Of those discharged, 20 percent will be involved in another related altercation. To prevent this chain of violence from occurring, Dr. Fein stresses that ED staff must not only perform a danger assessment, but also determine if there is a need for support after young people leave the hospital. To accomplish this, EDs require training in violence prevention and evidence-based tools to help predict future violence. These “trauma-informed” emergency providers can then help identify the patients at risk of future violence-related assault to prevent another assault.

As an ED physician at The Children’s Hospital of Philadelphia and a researcher, Dr. Fein is working to bring violence prevention and mental health promotion into the medical arena by developing tools and pathways that ED doctors can really use. “We are an important piece in the violence prevention puzzle,” he says. “For many assault-injured youth, we are the last stop before they potentially go back into an unsafe situation.”



CIRP Researcher Receives NIH Career Development Award



Dr. Kassam-Adams and Dr. Marsac collaborate on several post-injury care and recovery research projects at CIRP.

When Meghan Marsac, PhD was recognized with the Mentored Patient-Oriented Research Career Development Award (K23) from the National Institutes of Health (NIH) in April 2012, it marked the satisfying conclusion to a three-year application process. NIH gives career development awards annually to ensure that diverse, highly trained research scientists are available to address the nation's biomedical, behavioral, and clinical research needs. This award will support Dr. Marsac's work over the next four years.

Dr. Marsac, director of training at the Center for Injury Research and Prevention (CIRP) and a behavioral researcher, says her focus will be on studying [post-traumatic stress disorder \(PTSD\) in children](#) in two distinct ways: "The goals of the career development award are to increase my skills as an early career researcher to be able to best study PTSD in children after a medical event and to conduct a research project examining biological, psychological, and environmental factors that lead to PTSD in children after an injury."

A vital component of the award is mentorship, provided by a diverse team of advisors from the University of Pennsylvania, Kent State University, the University of California, the University of Guelph in Canada, and CIRP to ensure Dr. Marsac achieves her career goals and research aims.

One of these mentors is Nancy Kassam-Adams, PhD, CIRP's associate director of behavioral research and newly appointed associate research professor of Clinical Psychology in Pediatrics at the Perelman School of Medicine at the University of Pennsylvania. Dr. Marsac says the award is as much a testament to her mentors and The Children's Hospital of Philadelphia (CHOP) as it is to her as an individual: "I have been fortunate to have a wonderful mentor in Dr. Kassam-Adams over my four years with CIRP. This award will allow me to continue learning from her, as well as other leaders in the field," she says. "I will be able to bring together their various expertise and apply it in a new, innovative way. With the guidance of my mentorship team, I hope to create a new and exciting direction of research in the field."



CIRP Kicks Off Second Year of Training Future Scientists



Eight new Research Experiences for Undergraduates students join the team at CIRP. Pictured left to right are Nishi Mehta; Danielle Grams; Julianne Lewis; Bukola Famakinwa; Jessica Harrington; Elizabeth Hedges; Ika Kovacikova; and Amanda Parks.

The Center for Injury Research and Prevention (CIRP) at CHOP kicks off the second year of its National Science Foundation (NSF) [Research Experiences for Undergraduates \(REU\) program](#) this week with eight students from colleges across the country joining CIRP for a unique 10-week experience.

“The REU program is an exceptional opportunity for both the students and the staff at the Center. Each student works with a CIRP mentor on an assigned research project, becoming immersed in the multidisciplinary aspects of CIRP and being a valued member of the research team,” says Meghan Marsac, PhD, CIRP director of training and co-director of the Injury Science REU site. “They gain not only new skills, but also unparalleled insight to a career in injury science.”

CIRP’s REU program provides the selected student scholars with mentorship and hands-on research experience in the fields of Engineering, Behavioral Science, Population Science, and Statistics as applied to Pediatric Injury science. Over 320 applications were received for the Center’s 2012 REU program.

After a rigorous selection process, eight students were chosen from the following universities: Cheyney University; Cornell University; the University of Delaware; the University of Pennsylvania; the University of South Florida; Tufts University; and Wellesley College. These exemplary students will work with CIRP mentors Kristy Arbogast, PhD; Aditya Belwadi, PhD; Allison Curry, PhD; Dennis Durbin, MD, MSCE; Joel Fein, MD, MPH; Chris Gantz, MBA; Nancy Kassam-Adams, PhD; Stephen Leff, PhD; Meghan Marsac, PhD; Jessica Mirman, PhD; and Mark Zonfrillo, MD, MSCE on a diverse range of project topics, including the development and evaluation of violence prevention programs for urban adolescents, epidemiologic evaluation of a teen driver Graduated Driver Licensing (GDL) law, and long-term functional outcomes and disability following pediatric injury.

“We are so proud of the success of the Center’s inaugural REU experience in 2011. Last year’s group of students has gone on to be accepted into graduate school, participate in other summer research programs, and present research at conferences,” says Flaura Winston, MD, PhD, CIRP founder and co-scientific director and director of the Injury Science REU site. “The NSF has provided us the opportunity to expose promising undergraduate students to pediatric injury science research. We’re hopeful that the training they receive at CIRP serves as a springboard for their future careers in the field.”

Recent Center Presentations

Arbogast K. Biomechanical Differences Between Children and Adults. Bucknell University. Lewisburg, PA. April 6, 2012.

Arbogast KB, McGinley A, Masters CL, Grady M, and Zonfrillo M. Primary Care Emphasis on School-Based Recommendations for Pediatric Concussion Management. Platform Presentation. Pediatric Academic Societies (PAS) Annual Meeting. Washington, DC. May 3, 2012.

Arbogast K. Differences in Thoracic Injury Causation Patterns Between Children and Adults. Advances in Child Injury Prevention Conference (ACIP). Plymouth, MI. May 17, 2012.

Arbogast K. Naturalistic Study of Children's Posture in the Rear Seat. Advances in Child Injury Prevention Conference (ACIP). Plymouth, MI. May 17, 2012.

Arbogast KB, et al. Kinematic Evaluation of Children and Young Adults in Lateral Loading. 2012 Society of Automotive Engineers of Japan Inc. (JSAE) Annual Congress. Okohama, Japan. May 23, 2012.

Belwadi A, et al. Comparative Performance of CRS Installed on the C/FMVSS 213 Bench and Vehicle Seats in Simulated Frontal Crashes - Experimental and Finite Element Based Analysis. Trauma Site Survey, Pennsylvania State Trauma System Foundation, The Children's Hospital of Philadelphia. Philadelphia, PA. May 3, 2012.

Kassam-Adams N. Child Acute Stress Reactions: Does Trauma History Make A Difference? World Congress on Traumatic Stress. Mexico City, Mexico. May 23, 2012.

Kassam Adams N. World Congress on Traumatic Stress. Reaching Out to Address Acute Child Trauma: Doing Secondary Prevention in Medical Settings and on the Web. Mexico City, Mexico. May 25, 2012.

Klingbeil O. The Cellie Cancer Coping Kit: Acceptability, Feasibility, and Initial Outcomes. LEND Research Symposium and Poster Day. Philadelphia, PA. May 24th, 2012.

Locey C. Headform Impact Tests to Assess Energy Management of Seat Back Contact Points Associated with Head Injury for Pediatric Occupants. SAE World Congress. Detroit, MI. April 25, 2012.

Masters CL, Zonfrillo MR, Grady MF, and Arbogast KB. Clinician Understanding of Cognitive Rest in the Management of Pediatric Concussion (Poster presentation). Pediatric Academic Societies (PAS) Annual Meeting. Washington, DC. May 3, 2012.

Samuels M, Seacrist T, Reed MP, and Arbogast KB. Modeling Trajectories of Human Volunteers in Low-speed Frontal Impacts Using Bezier Curves. 8th Annual Injury Biomechanics Symposium. Columbus, OH. May 15, 2012.

Seacrist T. Dynamic Comparison of Pediatric and the 5th Percentile Female Anthropomorphic Test Devices (ATDs). Advances in Child Injury Prevention Conference (ACIP). Plymouth, MI. May 17, 2012.

Winston FK. Research Dissemination –Case Studies in Road Safety. Research Club – Or Yarok. Hod Hasharon, Israel. April 22, 2012.

Winston FK. Using the Web for Safety Interventions. Beterem – Safe Kids, Israel. Petach Tikva, Israel. April 23, 2012.

Winston FK. Recent Topics in Child Passenger and Teen Driver Safety, National Road Safety Authority. Jerusalem, Israel. April 29, 2012.

Winston FK. Trauma-informed Care for Child Injury. Alyn Hospital. Jerusalem, Israel. April 29, 2012.

Winston FK. Trauma-informed Care for Child Injury. Pediatric Trauma Conference. Rambam, Haifa, Israel. May 1, 2012.

Winston FK. Creating Evidence-based Interventions in Child Safety. Pediatric Trauma Conference. Rambam, Haifa, Israel. May 1, 2012.

Winston FK, Durbin DR, Zonfrillo M, Arbogast K, and Marsac M. From Rigorous Injury Science to Real World Change: Center for Injury Research and Prevention. 2012 CHOP Research Institute Scientific Symposium. Philadelphia, PA. May 4, 2012.

Zonfrillo M, Masters CL, Grady MF, and Arbogast KB. General Pediatric and Emergency Medicine Providers' Self-reported Practices and Attitudes Surrounding Concussion Management (Poster presentation). Pediatric Academic Societies (PAS) Annual Meeting. Washington, DC. May 3, 2012.

[View CIRP's extensive library of published papers here](#)