De'Jour Stewart remembers feeling happy as he walked to school for a soccer practice last May. Then, two blocks from his Cabrini-Green home, shots rang out. As he dived for cover behind a garbage bin, De'Jour heard bullets ricocheting around him. Nearby, a wounded man slumped in a car. De'Jour escaped physical harm that day, but he hasn't been the same boy since.

"Before this happened, I was happy," said a despondent De'Jour, now 11. "I liked to go places---downtown and around Cabrini---I'd ride my bike all over." Now he prefers to stay close to home.

"I don't think the world is safe for me," he said.

Twenty-one Chicago public school students have been fatally shot this school year, victims of violence gripping the city, and others survived their injuries. But countless more children carry invisible wounds from witnessing acts of violence up close or even just hearing about it. People are quick to speak of "an epidemic of violence," but some health experts say the expression deserves closer attention. Chicago's violence, they argue, is a public health crisis for its children.

According to a large and growing body of research, exposure to violence is linked to childhood depression, anxiety, post-traumatic stress disorder, learning problems, sleep difficulties, poor academic performance and a host of other problems. Persistent fear, scientists say, can cause neurophysiological changes in a child's brain that can impair physiological, behavioral, cognitive and social functioning.

"What we're seeing more and more is that the impact of street violence and trauma is not just from being a victim, but from living in a neighborhood where people are talking about it and feeling anxious," said Colleen Cicchetti, a pediatric psychologist who directs trauma services at Children's Memorial Hospital.

Some health professionals believe the impact goes even deeper---that the fear keeping children like De'Jour off their bikes and behind closed doors is contributing to increases in obesity, diabetes and other chronic health problems.

As the ripple effects of violence are increasingly recognized, collaborations between state, city and private organizations are forming to help children and families. The Chicago Department of Public Health operates the Chicago Safe Start program with more than $3 million in funding from the U.S. Department of Justice, and thousands of early child-care and education providers have completed training on the effects of childhood exposure to violence.

"From the health department's perspective, when bad things happen to children and it isn't addressed in a proactive way, it can have long-term emotional and physical impacts," said Anne Parry, director of the city health department's office of violence prevention.

"Shame on us if we know this and don't do something."

'Living in a war zone'

In some Chicago neighborhoods, the city estimates, 25 percent of children have witnessed a shooting and 30 percent have witnessed a stabbing.
"We believe this nonsense that kids get adjusted to the gunshots, but living in a war zone is a form of terrorism," said Carl S. Taylor, a sociology professor at Michigan State University who has spent more than 20 years studying violence and children in urban communities.

"I see kids who look old beyond their years. They do not have the joy and sense of childhood. It's a living hell in these communities, and in the long run you're not going to produce healthy people."

In the Brighton Park neighborhood, 14-year-old Michelle Formella lost her next-door neighbor and surrogate big brother to a shooting in February 2006. Matthew Ramirez was only 16 when he died.

She tries to focus on positive memories, but the shooting "will always be in my head," she said. "It can really hurt a kid and make them think differently about the world."

Even children far from a crime scene can be deeply affected.

Demear Thorne, 10, lives in the Logan Square neighborhood, miles from the Far South Side shooting that took the life of 16-year-old Julian High School student Blair Holt on a CTA bus last May.

Holt was killed when an alleged gang member fired at another teenager seated at the back of the bus. He died shielding a classmate.

Hearing about the incident left Demear terrified of riding a CTA bus. When he boarded one for the first time since the shooting---nine months later---the slight boy with wire-rimmed glasses said his heart was pounding with fear.

"I was hoping I would be safe," he said, tugging at his shirt as if his heart was leaping out of his chest. "My heart kept going 'thump-thump, thump-thump.' "

"I was shocked," said Sari Mills, his great-aunt, who learned about his fear only after quizzing him about his missing book bag. He was so nervous he had left it at his grandmother's. "We had no idea that he was going through all this trauma."

Dr. Karen Sheehan, an attending physician at Children's Memorial Hospital, said some of her pediatric patients confide that they sometimes have difficulty falling asleep because they feel afraid. She worries about the emotional and physical toll.

"Lack of sleep leads to obesity, attention-deficit disorders and other things that feed into a cycle of poor health," said Sheehan, who works in the hospital's emergency room and in one of its primary-care clinics.

Lower IQ, reading scores

The psychological damage that violence can wreak has been documented in numerous studies in the last decade. For example, a study in the Archives of Pediatrics and Adolescent Medicine in 2002 found that Detroit 1st graders exposed to violence and trauma-related distress had a lower IQ and reading scores. Researchers at the University of Illinois at Chicago reported in 1998 that exposure to community violence resulted in increased aggressive behavior and depression in African-American and Hispanic boys living in low-income Chicago neighborhoods. In 1995, researchers found a high percentage of post-traumatic stress disorder symptoms in teenage girls exposed to violence in New Haven, Conn.

Among the other consequences is decreased physical activity by children whose parents restrict time spent outdoors. That can lead to weight gain, increasing children's risk of developing diabetes, high blood pressure and other chronic illnesses.

Maryann Mason, associate director of the Child Health Data Lab at Children's Memorial Research Center, is conducting research on the physical activity levels of children ages 5 to 10 who live in five primarily low-income black and Hispanic neighborhoods in Chicago.
Her team has found that the parents most likely to keep their children indoors weren't always the ones living in areas with the most crime; they were the ones who thought the crime rate was highest.

"The higher the parental perception of crime, the more sedentary the kids are after school," Mason said. "It's probably true that they are keeping them inside to play video games and watch TV."

Beyond its effects on weight, play is the primary means by which children learn to regulate their emotions and behavior, said Dr. Stuart Brown, a psychiatrist and president of the National Institute for Play.

"Social learning is fostered by play and exploration," he said. "When those types of activities are constricted, a child's future is also constricted."

Experts said the message children get about the city's relentless violence is equally damaging. The violence reinforces feelings of limitation, helplessness and loss.

"No matter what they're doing or where they're going, it's in the backs of their minds---sometimes even in the forefront of their minds---that they may not be safe," said Brad Stolbach, a psychologist at the Child Trauma Center at La Rabida Children's Hospital. "Even if children are not dealing with specific personal loss or injury, they have a lingering and foreboding sense that the world is not safe."

De'Jour Stewart's mother, Norine Rhodes, said she has enrolled him in tutoring, mentoring and other programs to give him an outlet for his energy in a safe, indoor environment.

The shooting shook her to the core. "But you have to keep your child encouraged, strong and uplifted," she said. De'Jour said he tries to cope with his fears by avoiding crowds and staying close to home. He fondly recalls his more carefree life.

"I was happy," he said.

dshelton@tribune.com
Copyright © 2008, Chicago Tribune