

The Science Behind the Heroism in Boston

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The onsite response to the Boston Marathon bombings — bystanders bravely running toward the gruesome scene to help the wounded — exemplifies a growing body of psychological research on compassionate behavior.

The classic research on the bystander effect and diffusion of responsibility suggests that in the tragedy on Boylston Street, the vast number of onlookers would be more likely than not to avoid providing help — largely because each person assumes there are plenty of others nearby who will do so. (Theoretically, this phenomenon would be compounded by the fact that so many medical personnel were already at the finish line on standby to help runners suffering from the typical end-of-race exhaustion or muscle aches.)

But more recent studies suggest that compassion — defined as an authentic desire to help people who are suffering — may be a natural human instinct. The interpersonal connection that occurs during times of crises may be responsible, at least in part, for our collective survival as a species, suggests psychological researcher Emma Seppala, associate director of the Center for Compassion and Altruism Research and Education (CCARE) at Stanford University.

Other research indicates that acute stress may actually lead to cooperative behavior. Markus Heinrichs and Bernadette von Dawans, of the University of Freiburg, Germany, found that participants who experienced acute social stress in a lab setting engaged in substantially more prosocial behavior compared with participants who did not experience the social threat. Their findings were [published last year in the journal *Psychological Science*](#).

In the study, male participants were assigned to either an experimental group, with a stressful procedure (a public speaking exercise followed by complicated mental arithmetics), or a control group of men who experienced no stress. All of the participants were then asked to play an economics game involving potential financial gain based on the choices they make. In this game, they could choose to cooperate with others and trust them or not.

Men in the stress group actually became more trusting of others, exhibited more trustworthy behaviors, and were more likely to share profits. But the stress group showed no impaired ability, compared with the controls groups, in making decisions or in being willing to sanction another participant who behaved unfairly.

“These findings support the idea that humans have a tendency to provide and receive joint protection within groups during threatening times,” Heinrichs and von Dawans concluded.

CCARE’s Seppala forecasts that the study of compassion is bound to generate more rigorous attention in the coming years. And in a recent [blog post](#), she points out that extreme stress, as awful as it can be, may also be an opportunity to foster social connection and love.

“Understanding our shared vulnerability — life makes no promises — may be frightening,” Seppala says, “but it can inspire kindness, connection, and desire to stand together and support each other.”

Emma Seppala will discuss in detail the science of compassion in an article appearing in the May/June issue of [The Observer](#).