

Police with higher multitasking abilities less likely to shoot unarmed persons

March 30 2009

In the midst of life-threatening situations requiring split-second decisions, police officers with a higher ability to multitask are less likely to shoot unarmed persons when feeling threatened during video simulations, a new Georgia State University study suggests.

Heather Kleider, Dominic Parrott and Tricia King, assistant professors of psychology at Georgia State, have taken a unique look at officer-involved shooting situations, signs of [negative emotions](#) and working [memory capacity](#) — the capacity to perform multiple mental tasks, such as reasoning, at the same time.

Other studies have examined factors such as ethnicity, stereotypes, neighborhood crime rates and other factors, but this study examines the effects of police officers' characteristics on shooting decisions.

"In [cognitive psychology](#), operation span, or working memory, is an overarching cognitive mechanism that indicates the ability to multitask, and the amount of available capacity to perform tasks varies by individual and situation," Kleider said. "People with a higher capacity are able to keep more things 'in play' at one time."

Urban [police officers](#) participated in the study, completing a test of working memory capacity, and then watched a video of an officer-involved shooting that resulted in the death of the officer, during which time negative affect and stress indicators were measured; including elevated heart rates and increased sweating.

Following the video, officers participated in a computer-based simulation where they were required to make split-second decisions whether to shoot or not to shoot someone, based on 80 slides that presented a person holding either a gun or a harmless object like a cell phone, for only a fraction of a second. Officers then pressed either a "shoot" or a "don't shoot" button.

Analyzing the data, the researchers found that lower levels of working memory capacity increased the likelihood of shooting unarmed people among those officers who had higher levels of negative emotionality — a score determined by comparing readings of facial movement and heartbeat rates between a baseline reading and readings taken during the stressful situation.

Officers with a higher working memory capacity seemed to buffer officers against the negative effects of a threat when making shooting decisions.

"An important thing to consider is that some decision making requires controlled processing wherein balanced/accurate decisions require impulse control" Kleider explained. "For some people, this usurps a substantial amount of available working memory capacity to control impulses, and if you are someone with a lower capacity, it's harder to do."

Psychologists are not sure whether working memory capacity can be increased with training, but Kleider and her colleagues are planning to investigate this, and are also planning to work with several police departments on a broader study to see if training and years of experience influence shooting decisions.

[More information:](#) The study, "Shooting Behavior: How Working Memory and Negative Emotionality Influence Police Officer Shoot

Decisions" will appear in a 2009 edition of *Applied Cognitive Psychology* (in press).

Source: Georgia State University ([news](#) : [web](#))

Citation: Police with higher multitasking abilities less likely to shoot unarmed persons (2009, March 30) retrieved 28 April 2024 from <https://medicalxpress.com/news/2009-03-police-higher-multitasking-abilities-unarmed.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.