

Researchers investigate impact of stress on police officers' physical and mental health

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Policing is dangerous work, and the danger lurks not on the streets alone. The pressures of law enforcement put officers at risk for high blood pressure, insomnia, increased levels of destructive stress hormones, heart problems, post-traumatic stress disorder (PTSD) and suicide, University at Buffalo researchers have found through a decade of studies of police officers.

UB researchers now are carrying out one of the first large-scale investigations on how the stress of police work affects an officer's physical and mental health, funded by a \$1.75 million grant from the National Institute of Occupational Safety and Health (NIOSH).

The National Institute of Justice added \$750,000 to the study to measure police officer fatigue and the impact of shift work on health and performance.

John M. Violanti, Ph.D., research associate professor in UB's Department of Social and Preventive Medicine in the School of Public Health and Health Professions, is principal researcher of the study, called the Buffalo Cardio-Metabolic Occupational Police Stress (BCOPS) study.

More than 400 police officers have participated in the study to date, with the researchers aiming for 500. The clinical examination involves questionnaires on lifestyle and psychological factors such as depression and PTSD, in addition to measures of bone density and body

composition, ultrasounds of brachial and carotid arteries, salivary cortisol samples and blood samples. The officers also wear a small electronic device to measure the quantity and quality of sleep throughout a typical police shift cycle.

Results from Violanti's pilot studies have shown, among other findings, that officers over age 40 had a higher 10-year risk of a coronary event compared to average national standards; 72 percent of female officers and 43 percent of male officers, had higher-than-recommended cholesterol levels; and police officers as a group had higher-than-average pulse rates and diastolic blood pressure.

"Policing is a psychologically stressful work environment filled with danger, high demands, ambiguity in work encounters, human misery and exposure to death," said Violanti, a 23-year veteran of the New York State Police. "We anticipate that data from this research will lead to police-department-centered interventions to reduce the risk of disease in this stressful occupation."

Violanti and colleagues are using measures of cortisol, known as the "stress hormone," to determine if stress is associated with physiological risk factors that can lead to serious health problems such as diabetes and cardiovascular disease.

"When cortisol becomes dysregulated due to chronic stress, it opens a person to disease," said Violanti. "The body becomes physiologically unbalanced, organs are attacked, and the immune system is compromised as well. It's unfortunate, but that's what stress does to us."

The investigation's two most recent studies report on the effect of shift work on stress and suicide risk in police officers, and on male/female differences in stress and possible signs of cardiovascular disease.

Results of the shift work pilot study, involving 115 randomly selected officers, showed that suicidal thoughts were higher in women working the day shift, and in men working the afternoon/night shifts. The findings appear online in the October issue of the American Journal of Industrial Medicine.

Data showed that 23 percent of male and 25 percent of female officers reported more suicidal thoughts than the general population (13.5 percent). In a previous study, suicide rates were three times higher in police than in other municipal workers, Violanti found.

The findings, that in women officers working day shifts were more likely to be related to depression and suicide ideation, while in men working the afternoon or night shift was related to PTSD and depression, were surprising, said Violanti. "We thought both men and women officers would be negatively affected by midnight shifts."

"It's possible women may feel more uneasy and stressed in a daytime shift, where there can be more opportunity for conflict and a negative environment," he said. "On the other hand, higher suicide ideation reported by males on the midnight shift may be accounted for in part by a stronger need to be part of the social cohesiveness associated with peers in the police organization. Working alone at night without the support of immediate backup can be stressful," he said.

Source: University at Buffalo

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