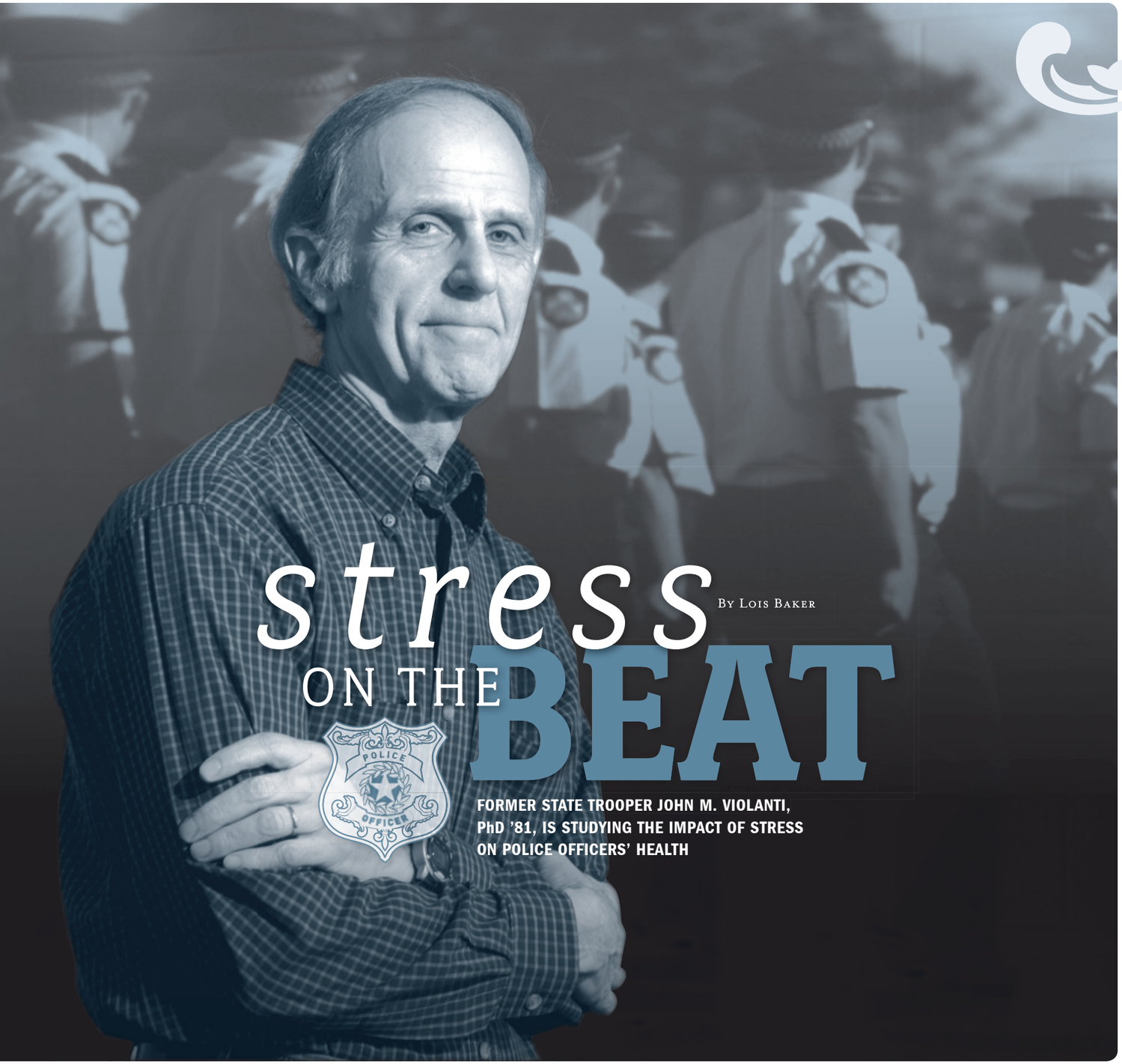


stress ON THE BEAT

By Lois Baker

FORMER STATE TROOPER JOHN M. VIOLANTI, PhD '81, IS STUDYING THE IMPACT OF STRESS ON POLICE OFFICERS' HEALTH

Policing is dangerous work, **AND THE DANGER LURKS NOT ONLY ON THE STREETS.**

THIS HAS BEEN DOCUMENTED IN STUDIES CONDUCTED OVER THE LAST DECADE BY UB RESEARCHERS WHO HAVE FOUND THAT THE STRAINS 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.

Building on these findings, the researchers are now conducting one of the first large-scale investigations on how the stress of police work affects an officer's physical and mental health. The study, which measures the impact of stress on police officer health and performance, is funded by a $1.75 million grant from the National Institute of Occupational Safety and Health (NIOSH). An additional $750,000 grant from the National Institute of Justice was awarded to study the effects of shift work and fatigue on police officers.

John M. Violanti, PhD '81, research associate professor in the Department of Social and Preventive Medicine in the UB School of Public Health and Health Professions, is principal researcher of the study, called the Buffalo Cardiometabolic Occupational Police Stress (BCOPS) study.

Violanti knows something about police work. Drafted into the Army at 19 during the Vietnam War, he scored high enough on the military's "aptitude" test to be placed in the 57th Military Police Company, which, as luck would have it, was assigned to patrol the grounds of the United States Military Academy at West Point.

Although he was spared Vietnam combat, Violanti was not removed from its human suffering. One of the duties of West Point's military police is to conduct military funerals. "We had two to three soldiers coming back in coffins every week from Vietnam," he says. "It really got depressing after a while, but that was our job."

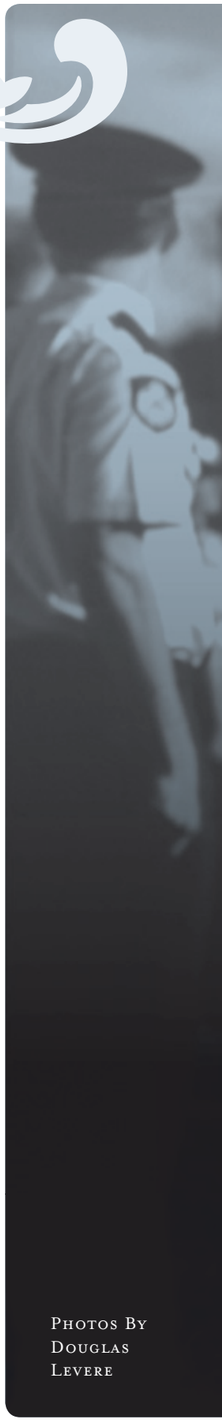
Stress was a way of life then for West Point cadets, not only because the future officers knew they too might return to the academy's parade grounds in a flag-draped coffin, but because intense hazing was standard procedure at that time.

Violanti observed it all, including an innocent-sounding exercise called a "sweat shower." Cadets were commanded to stand at attention in the sun in full dress until they were drenched sufficiently in perspiration to please the upperclassmen. Some stood for hours, and the distress of those young cadets is something Violanti never forgot.

LIFE AS A STATE TROOPER

Policing turned out to be a good fit for Violanti, a native of Buffalo. He took the New York State Police exam while still in the Army, scored high once again, and reported to the state police academy outside Albany hours after his Army discharge. Twenty-four weeks of training later, he reported to his first troop in Poughkeepsie.

Subsequent assignments sent him to state police headquarters in Fulton and Fredonia and finally Buffalo, where he spent 15 years patrolling the New York State Thruway from Grand Island to Rochester, chasing down speeders and responding to accidents.



Photos By Douglas Levere

During this time, VIOLANTI OBSERVED HOW THE ENFORCEMENT OF SOMETIMES MILITARISTIC RULES AND REGULATIONS AFFECTED HIS FELLOW TROOPERS IN A WAY THAT WAS SIMILAR TO WHAT HE OBSERVED AMONG THE CADETS AT WEST POINT. TROOPERS WERE BEING "WRITTEN UP" FOR NOT HAVING THEIR JACKET BUTTONED OR FOR GETTING OUT OF THEIR CAR WITHOUT WEARING THE SIGNATURE "TROOPER" HAT.

Wanting to understand the effects of such stress, he enrolled at UB and majored in psychology, volunteering to work the midnight shift so he could go to class during the day. He received his bachelor of arts degree in 1973, yet thought he needed to learn more. "You get addicted to it," says Violanti, who went on to earn a master's degree in social sciences in 1975 and a doctorate in sociology in 1981, after completing his dissertation on police stress and organizational behavior.

While teaching and conducting research at UB part time as an assistant clinical professor, Violanti became friends with John Vena, PhD, then UB associate professor of social and preventive medicine, who was looking at causes of death among City of Buffalo employees. "I got together with John, and we looked at the police cohort and what they died from," recounts Violanti, "and sure enough, police suicide was right at the top of the list along with heart disease and cancer. That was way back in 1984. I've been studying the police ever since."

After 24 years as a state trooper, Violanti retired from policing in 1989 and intensified his investigation into the various stressors that affect officers' health. His background and understanding of the closed society of a police department helped him gain access to the force for his research.

His pilot studies revealed that officers over age 40 had a higher 10-year risk of a coronary event compared to average national standards, that 72 percent of female officers and 43 percent of male officers had higher-than-recommended cholesterol levels, and that police officers as a group had higher-than-average pulse rates and diastolic blood pressure.

NIOSH began funding his research in 1999 and has been supporting it ever since. The National Institute of Justice recently committed money to have Violanti study the effects of shift work on officers' health. In the wings is a longitudinal study of the effects of shift work on officers, and he has received additional funds from NIOSH to study the effects of shift work on cancer risk.

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

DATA FOR CHANGE

More than 440 police officers have participated in the BCOPS, NIOSH and NIJ 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.

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," says 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 (1) the effects of shift work on stress and suicide risk in police officers, and on (2) male/female differences in stress and possible signs of cardiovascular disease.

Results of the shift-work pilot study—published online in the October 2008 issue of the *American Journal of Industrial Medicine*—involved 115 randomly selected officers.

Overall, the data showed that 23 percent of male officers 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 researchers were surprised to discover that women officers working day shifts were more likely to experience depression and suicidal ideation, while men working the afternoon or night shift experienced PTSD and depression.

"We thought both men and women officers would be negatively affected by midnight shifts," explains Violanti.

"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 adds. "On the other hand, higher suicidal 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.

"There also is the problem of physiological disruption of circadian rhythms. Being awake all night while one should be sleeping can affect judgment and decision making. The combination of these two has a double-barreled stress effect."

Results of the study that looked at male-female differences in stress and possible signs of cardiovascular disease—recently accepted for publication in *Psychiatry Research*—found that female police officers had higher cortisol levels upon awakening and that levels remained high throughout the day. Normally, cortisol is highest in the morning and decreases to a low point in the evening. These constantly high cortisol levels were associated with less arterial elasticity, a risk factor for cardiovascular disease.

Violanti says these findings, once again, reflect the impact of police work on women officers. "Women police officers are probably under more stress than male officers. It's still basically a male occupation, and women can feel socially isolated on the job. Also, most women have more home responsibilities to worry about—family, child care."

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—John M. Violanti, PhD '81

JOHN M. VIOLANTI, PhD '81, WITH ULTRASOUND TECHNICIAN VIVIAN BOYD AND PATIENT, IN THE LABORATORY OF JOAN DORN, PhD.

Publishing papers and conducting studies about stress may not change police departments overnight, Violanti admits, but it is one way of getting the message out that the negative effects of stress must be acknowledged, destigmatized and treated.

"Intervention is necessary to help officers deal with this difficult and stressful occupation," he says. "We want to inform them on how to survive 25 years of police work. They need to learn how to relax, how to think differently about things they experience as a cop. There is such a thing as post-traumatic growth. People can grow in a positive way and be better cops and persons after they survive the trauma of police work. That is an important message." BP