

Studies of Shifts and Sleep May Help Correctional Officers

By Philip Bulman

Author's Note: *Points of view expressed in this article do not necessarily represent the official position or policies of the U.S. Department of Justice.*

Two recent studies of work shifts and sleep disorders that focus on law enforcement officers may have implications for correctional officers as well.¹ While law enforcement and corrections present two different work environments, they have much in common, and insights in one field can be valuable for another — especially where factors such as shifts are concerned. Agencies can use this information to develop more effective work schedules that may reduce officer fatigue and cut costs through less absenteeism, reduced overtime, improved officer health and safety, and improved public safety.

An NIJ study conducted by the Police Foundation in 2011 found that executives can improve morale and reduce overtime costs by offering officers the option of working 10-hour shifts. The longer shifts do not adversely affect performance. A separate NIJ-sponsored study, published in the *Journal of the American Medical Association* in 2011, focused on sleep disorders and found that almost 40 percent of officers had sleep disorders. Doctors estimate that only 15 to 20 percent of the general population has such disorders. While the stan-

dard workweek of five consecutive eight-hour shifts is still prevalent, more agencies have moved to some variant of a compressed workweek. Some officers work four 10-hour shifts weekly, and some work 12-hour shifts.

Researchers partnered with the Detroit Police Department and the Arlington (Texas) Police Department to collect data to help them assess the effects of shift length. Data collection took place from 2007 to 2009 by researchers Karen L. Amendola, David Weisburd, Edwin E. Hamilton, Greg Jones, Meghan Slipka, Anneke Heitmann, Jon Shane, Christopher Ortiz and Eliab Tarkghen. Participating officers volunteered to work three types of shifts for six months each: eight-hour, 10-hour or 12-hour. These included day, evening and midnight shifts. At the beginning and end of the study, researchers collected a variety of information using laboratory simulation and departmental data on performance. Health, quality of life, sleep, sleepiness, off-duty employment and overtime hours were measured by self-reporting, including surveys, sleep diaries and alertness logs. Fatigue was measured using laboratory-based instruments.

There were no significant differences among the three shift lengths on work performance, health or work-family conflict, yet there were important differences for other outcomes. The 10-hour shifts offered certain benefits not associated with eight-hour

shifts, and 12-hour shifts had some disadvantages. Officers working 10-hour shifts averaged significantly more sleep than those working eight-hour shifts. Those working 12-hour shifts reported more sleepiness and less alertness at work than those on eight-hour shifts. Officers on eight-hour shifts averaged less sleep and worked significantly more overtime than those on longer shifts. This shows that a 10-hour shift may be a good alternative to the traditional eight-hour shift, but the 12-hour shifts generate more sleepiness and lower levels of alertness.

Officers on eight-hour shifts worked significantly more overtime (more than five times as much as those on 10-hour shifts, and more than three times as much as those on 12-hour shifts). The reduced overtime for those on longer shifts can provide cost-savings for agencies that use compressed schedules. The officers worked an average of 4.78 hours less per two-week period than those on eight-hour shifts. Officers on the 10-hour shifts also reported a higher quality of work life.

Many officers have schedules that change regularly, unexpected overtime and overnight shifts, so it is no surprise that some suffer from sleep disorders. Researchers at Brigham and Women's Hospital in Boston, an affiliate of the Harvard Medical School, collected data from 2005 to 2007 on almost 5,000 officers. They

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found that officers were about twice as likely to have sleep disorders as the general population. Officers with sleep disorders had a higher risk of falling asleep on the job, committing an error or safety violation attributable to fatigue, and experiencing uncontrolled anger. They were also more likely to report committing a serious administrative error and had a higher rate of absenteeism than those without sleep disorders.

The most common sleep disorder, affecting about 33 percent of officers screened, was obstructive sleep apnea, a condition in which the airway becomes narrower or blocked during sleep. Excessive sleepiness affected 28.5 percent, and moderate-

to-severe insomnia affected 6.5 percent of officers surveyed. Officers with these disorders also had an increased prevalence of physical and mental health problems, including diabetes, cardiovascular disease and depression. Indeed, having a sleep disorder increased an officer's chance of having heart disease by 45 percent, and depression by 120 percent.

ENDNOTE

¹ Amendola, K.L., et al. 2012. The impact of shift length in policing on performance, health, quality of life, sleep, fatigue, and extra-duty employment. Research report submitted to the U.S. Department of Justice. Retrieved from <https://www.ncjrs.gov/pdffiles1/nij/grants/237330.pdf>.

Grandner, M.A. and A.I. Pack. Dec. 21, 2011. Sleep disorders, public health, and public safety. *The Journal of the American Medical Association*, 306(23). Retrieved from <http://jama.jamanetwork.com/article.aspx?articleid=1104742>.

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