



### I29 The Effects of Occupation Stress on Cognitive Performance in Police Officers

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After attending this presentation, attendees will understand the principles and mitigating factors that affect the occupational stress of police officers as well as their cognitive performance in the ability to perform their duties.

This presentation will impact the forensic science and law enforcement communities by presenting a better understanding about how occupational stress affects the cognitive performance of police officers as it relates to their working memory.

The hypothesis being investigated is whether police officers experiencing occupational stress will also suffer from adverse effects on their working memory. The mitigating factors under investigation for potentially impacting on an officer's cognitive performance are: empathy; perceived stress; resilience to stress; dissociative states; job burnout; and sleep quality. The other variables which were investigated are the officer's age, education, number of days and hours worked, court time, off-duty work, and family situations. Each of these principles and mitigating factors are perceived to have an impact on the officer's ability to think clearly, to act quickly, and to recall details within a short amount time. Higher scores on tests which measure empathy, resilience to stress, and quality of sleep correlate with better scores on memory tests. However, higher scores reported for dissociative states, burnout, and perceived stress correlate with lower performance on memory tests. This is the first survey that attempts to gauge these stress factors and impacts on cognitive memory, utilizing a survey pool of law enforcement officers at various levels of training and field experience, as well as time on the job.

Over 100 police officers in South Florida (Broward County) were asked to take part in this research study. Only 30 officers were willing to participate. Of the 30 officers, only 17 actually completed the surveys and working memory tests. The police officers were divided into three groups: junior officers ranging from 0 to 7 years of service; veteran officers ranging from 7 to 14 years of service; and senior officers with 14 or more years of service. The officers' responses to the survey questions and working memory tests were anonymous in order to allow for greater disclosure, more accurate answers on the surveys, and possibly improved performance of the memory tests. The officers who participated in this study completed the surveys and working memory tests on two different occasions. The first occasion was on the first day of the officers' two-week work schedule, in order to establish baseline behaviors. The second occasion was on the last day of the officers' two-week work schedule.

The results of the surveys and memory tests indicate that the junior and veteran officers showed signs of memory failure on baseline assessment with points ranging from 4 to 17 out of 36 possible points on the memory test. The senior officers showed a considerable increase in baseline memory test scores, ranging from 15 to 25 out of 36 points. On the testing at the end of the officers' second work week, the junior officers' scores varied with three officers scoring 32 points out of the 36 points, and two officers scoring under 17 points. The only variable with higher scores was with two officers scoring higher (17 points) on the Perceived Stress Survey. The veteran officers' scores varied as well, with points ranging from 18 to 31 out of 36 points. The two veteran officers with the lowest scores also had higher scores on the Burnout Surveys. The senior officers seemed to perform the best, with scores between 23 to 28 points on the memory tests. The only apparent factor which seems to explain these score differences is that the senior officers have more experience at recalling memory under pressure than the junior and veteran officers who perform the same duties while on road patrol.

#### **Occupational Stress, Working Memory, Police Officer**