ASSOCIATION OF WORK ORGANIZATION STRESSORS WITH PSYCHOSOCIAL OUTCOMES IN POLICE OFFICERS

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Statement of the problem: The demands of police work expose officers to a range of routine and intermittent work organization stressors that may have deleterious effects on psychological health and work performance. Job strain has been used to characterize these stressors, but has been studied sparingly in police officers. Our objective was to determine if the job strain construct is associated with psychological symptoms of anxiety, depression, or posttraumatic stress disorder (PTSD); perceived stress; or sleep in police officers.

Procedures: This cross-sectional study included active duty officers from the Buffalo Cardio-Metabolic Occupational Police Stress (BCOPS) Study (2011-2014). Job strain (JS) was assessed with a customary subset of items from the Job Content Questionnaire (JCQ) that represent the construct and its two components: decision latitude (DL) and psychological demands (PD). Scores for DL and PD were dichotomized using sample median values. Four pairs were created using the two categories for the two components. High JS was low DL with high PD. All other pairs were low JS. Associations of JS with the psychosocial outcomes evaluated its applicability in police officers. Symptoms of depression and anxiety were assessed with the Center for Epidemiologic Studies Depression (CES-D) scale, the Beck Depression Inventory (BDI-II), and the Beck Anxiety Inventory (BAI) (Beck & Steer, 1990; Beck, Steer, & Brown, 1996; Radloff, 1977). PTSD symptoms were assessed with the PTSD Checklist (PCL-C) (Weathers, Litz, Herman, Huska, & Keane, 1993). Perceived stress was assessed with the Perceived Stress Scale (PSS) and the Spielberger Police Stress Survey and its subscales: 1) administrative and organizational pressure; 2) physical and psychological threat; and 3) lack of support (Cohen & Williamson, 1988; Spielberger, Westberry, Grier, & Greenfield, 1981). Sleep duration and quality were obtained with the Pittsburgh Sleep Quality Index (PSQI) questionnaire (Buysse, Reynolds, Monk, Berman, & Kupfer, 1989).

Analyses: Mean values for each psychosocial outcome were compared across categories of job strain using analysis of variance and covariance. Models were adjusted for age, alcohol intake, race, and smoking status, and stratified by gender.

Results: The mean (\pm SD) age of the 199 subjects was 46.2 \pm 6.8 years and 27.6% were women. Job strain was associated with depressive symptoms (BDI-II) in women, but the association was attenuated in the multivariable adjusted model (JS_{Low}: 7.75 \pm 1.09, JS_{High}: 12.61 \pm 2.21, p=0.057). The four job strain pairs were associated with depressive symptoms in men (CES-D: p=<0.0001; BDI-II: p=0.001) and in all officers (CES-D: p=0.012). The job strain pairs were also associated with PTSD symptoms in men (p=0.001). However, among these associations with depression and with PTSD, the DL_{Low}-PD_{Low} pair had the highest mean values rather than the DL_{Low}-PD_{High} pair representing high job strain. Job strain was associated with perceived stress in men (JS_{Low}: 17.11 \pm 0.73, JS_{High}: 20.36 \pm 1.15, p=0.019; JS pairs: p=0.0004) and in all officers (JS pairs: p=0.034). Job strain was associated with the overall Spielberger values in women (JS_{Low}: 260.61 \pm 36.15, JS_{High}: 471.79 \pm 72.33, p=0.013; JS pairs: p=0.049), in all officers (JS_{Low}: 280.87 \pm 19.01, JS_{High}: 382.35 \pm 32.08, p=0.007; JS pairs: p=0.046), and with the Spielberger subscale values in women and all officers. The job strain pairs were associated with physical and psychological threat in women (p=0.024) and with lack of support for all officers (p=0.035). Neither job strain nor the job strain pairs were associated with anxiety or sleep.

Practical implications: Results from this study suggest that the job strain construct and items on the JCQ may not effectively capture information about work organization stressors in police officers. The high job strain category did not consistently contain the individuals with the most adverse values for the psychosocial outcomes. Given that both job strain pairs with low DL contained the most adverse values, perhaps DL is a more pivotal factor than PD for police officers. This study provides support to explore the officers' perceptions of the JCQ and work organization stressors to develop a questionnaire more applicable to police work.

Conclusion: This study explored associations between job strain and various psychosocial outcomes and revealed that refinement may be needed in the job strain construct for police officers, lack of associations with plausible outcomes such as anxiety or sleep, and gender differences that need further study. The cross-sectional study design prevents causal inference. Future longitudinal study designs may help describe temporal associations between work organization stressors and psychosocial outcomes in police officers.

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 - David A. Hurtado, ScD, Oregon Health & Science University, Portland, OR; Eileen McNeely, PhD
- Paper 2 Metrics That Matter: A Case Review of a Fatigue Risk Management Implementation Process
 - Mike Harnett, BPE, Six Safety Systems, Calgary, AB, Canada
- Paper 3 The Effects of Fatigue Management Training on Police Officer Sleep, Health, and Wellness: Results From a Pilot Study
 - Lois James, PhD, Washington State University,
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- Paper 4 Team Microbreaks With Exercise During Surgery: Are They a Benefit?
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 Chair: Jessica S. Dunn, PhD, University of Nottingham,
 United Kingdom
- Paper 1 Association of Work Organization Stressors With Psychosocial Outcomes in Police Officers
 - Penelope Baughman, PhD, NIOSH, Morgantown, WV; Anna Mnatsakanova, MS; Ja K. Gu, MSPH; John M. Violanti, PhD; Michael E. Andrew, PhD
- Paper 2 Revisiting Conceptual and Methodological Approaches to Understanding Coping in High-Risk Police Populations
 - Jessica S. Dunn, PhD, University of Nottingham, United Kingdom; N. Hunt, PhD; A. Santos, PhD



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