DAILY STRESS, SLEEP QUALITY, AND ADVERSE PSYCHOLOGICAL OUTCOMES AMONG POLICE

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Statement of the Problem: Police service is widely recognized as one of the most dangerous and stressful occupations. Officers are often exposed to various occupational stressors including traumatic events, long work hours, and poor sleep quality (Violanti et al., 2006). Research shows that experiencing stressful situations may lead to adverse mental health outcomes such as depression and anxiety. Additionally, it has been reported that sleep disorders among police are associated with mental health conditions including depression (Rajaratnam et al., 2011). Research in the area of police stress has emphasized the importance of assessing daily work experiences and their influences on well-being (Hart et al., 1993). However, studies on psychosocial outcomes in relation to daily hassles and experiences and sleep quality among police officers are very limited. The aims of this cross-sectional study were to investigate associations between police-specific daily hassles, anxiety, and depression among Buffalo, NY police officers, and to determine the role of sleep quality in these associations.

Procedures: A total of 216 Buffalo, NY police officers completed questionnaires, which were used to assess demographic characteristics, daily hassles, anxiety, and depressive symptoms. The Daily Hassles Instrument, an 86-item questionnaire, assesses whether certain police-specific experiences have hassled or bothered one during past month. Responses range from 0 (Definitely does not apply to me) to 4 (Strongly applies to me). The overall score is a sum of responses to all 86 items. Anxiety was assessed using the Beck Anxiety Scale (Beck & Steer, 1990), a 21-item selfreported instrument measuring anxiety symptom severity using a 4-point scale: 0 (Not at all) to 3 (Severely). Fourteen items measure somatic symptoms of anxiety; the remaining items measure cognitions specific to anxiety and panic but not depression. The overall score is a sum of all 21 items, ranging from 0 to 63 with higher scores indicating more anxiety. The Beck Depression Inventory (BDI-II; Beck, Steer & Brown, 1996) was used to assess depressive symptoms. It is a 21-item self-reported instrument intended to evaluate 21 symptoms of depression: 15 related to emotions, four related to behavioral changes, and six related to somatic symptoms. Each symptom is rated on a 4-point intensity scale, ranging from 0 (Not at all) to 3 (Severely). The overall score ranges from 0 to 63, with higher scores representing more severe depressive symptoms. The Pittsburgh Sleep Quality Index (PSQI), a 19-item self-rated questionnaire, was used to assess sleep quality in seven areas (Beck, Schwartz, Towsley, Dudley, & Barsevick, 2004). The global sleep quality score, obtained by summing the seven component scores, was categorized into 'poor' (a score =6) and 'good' sleep quality (a score =5).

Analyses: Descriptive statistics were used to characterize the study population. Participants' overall daily hassles scores were ranked and divided into quartiles. Unadjusted and age-, sex-, and race/ethnicity-adjusted mean depression and anxiety scores were assessed across quartiles using analyses of variance and covariance. Tests for the linear trend were obtained from linear regression models. Effect modification was assessed for sleep quality ('poor' vs 'good'). The criterion for statistical significance for interaction was set at p-value of <0.05.

Results: The mean age of the officers was 46 years, 29% were women, and 70% were married. Fifty-five percent held the rank of patrol officer, and 74% had served for more than 15 years in the department. Unadjusted associations of anxiety and depressive symptoms with daily hassles were significant

(p<0.001). Adjusting for age, sex, and race/ethnicity did not appreciably alter the results (p<0.001). Adjusted mean values of anxiety and depression showed positive trends across quartiles of daily hassles (Mean± SE: 4.0±0.8, 4.1±0.8, 6.4±0.8, 8.6±0.8, and 3.8±0.8, 5.6±0.8, 6.9±0.8, 9.4± 0.8, respectively). Sleep quality significantly modified the associations (pinteractions <0.05). More pronounced linear trends between daily hassles and anxiety and depressive symptoms were observed among those who reported having 'poor' quality of sleep (p-trend=0.0003 and <0.001, respectively) compared to those with 'good' quality sleep (p-trend=0.044 and 0.024, respectively).

Practical Implications: Daily stress hassles at work may have a significant impact on psychological outcomes including anxiety and depressive symptoms. This association may be further negatively impacted when the individual is experiencing poor sleep quality. Understanding the deleterious role of sleep quality may be informative in identifying strategies to lessen psychological symptoms in this occupational group.

Conclusions: Results showed that anxiety and depressive symptoms were strongly and positively associated with police daily hassles. This study suggests that poor sleep quality in combination with higher daily hassles is associated with higher levels of anxiety and depression. Sleep quality appears to play an important part in the well-being and mental health of police officers.

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