

# CPH News and Views

*A semi-monthly column on emerging topics related to healthy workplaces*

## **Issue #57: A Healthy Sleep Intervention for Correctional Supervisors**

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### **I. Poor sleep quality and quantity: A health and safety concern among correctional supervisors**

Correctional supervisors (i.e., lieutenants, captains, counselor supervisors) are an understudied and overlooked occupational group (Owen, 2006). Limited interventions and programs have been designed and implemented to improve their health and well-being (Dugan et al., 2017). Correctional supervisors have high physical and psychological job demands (Buden et al., 2017; Namazi et al., 2018) often with limited organizational support. They also are shift workers who are subject to mandatory overtime. CPH-NEW research staff partnered with the Connecticut Correctional Supervisors' Council union to form a design team (DT) to develop interventions aimed at improving supervisor health and well-being. The partnership used community-based participatory research to identify factors associated with poor correctional supervisor health. DT members tailored and used the CPH-NEW Healthy Workplace Participatory Program (HWPP)'s All Employee Survey and Focus Group Guide to assess the workforce, and identified **poor sleep** quality and quantity as a significant health and safety priority among correctional supervisors that the union wanted to address.

### **II. Design and implementation of the healthy sleep intervention for correctional supervisors**

Once the DT identified a priority health and safety topic, they used HWPP Intervention Design and Analysis Scorecard (IDEAS) tool to help them identify root causes of poor sleep. They developed intervention objectives and activities, and identified key performance indicators to evaluate their designed interventions against desired criteria (Robertson et al., 2013). The DT developed a Healthy Sleep Intervention for correctional supervisors that included a Healthy Sleep Training and a smartphone-based sleep-tracking app called CorrectSleep. The Healthy Sleep Training included a sleep hygiene concepts and a simple guided mediation to improve sleep among shift workers with long or irregular work hours.

The DT recruited 101 supervisors to pilot-test the intervention and divided participants into two groups to test the effectiveness of specific intervention components. Group A (n=51) only received the Healthy Sleep Training and took a survey before the training and two surveys after the completing the training (one month, three months after). Group B (n=50) received the Healthy Sleep Training and used CorrectSleep for two weeks prior to the training. Group B took a survey prior to using CorrectSleep and two weeks after app use, as well as a survey prior to the training, and one and three months after the training. All participants also received a weekly "Sleep Tip" via email that reinforced the content delivered during the Healthy Sleep Training, with reminders to use the sleep hygiene and mediation practice they learned to improve their sleep (Dugan et al., 2017). We examined key dissemination and implementation (D&I) outcomes (adoption, sustainability, and diffusion) to determine the perceived appeal of the designed interventions.

### III. Evaluation of the healthy sleep intervention for correctional supervisors

Results of the healthy sleep intervention showed that using the CorrectSleep app alone (without also taking the training) led to increased self-awareness regarding sleep, greater knowledge about sleep improvement behavior, such as managing slept debt, frequency of managing slept debt, and improved participants' sleep quality. In addition, the training led to less difficulty in sleeping due to physical health problems, and less use of substances to help with fatigue management (i.e., inducing sleepiness or wakefulness, as needed). Completing the Healthy Sleep Training alone (without also using the app) increased knowledge of sleep improvement behaviors, and improved sleep-related behaviors. Sleep quality also significantly improved and participants reported less fatigue and difficulty sleeping because of emotional problems. Finally, participants who both completed the Healthy Sleep Training and used the CorrectSleep App (i.e., a combined approach) reported greater improvements compared to those who only completed the training. A combined approach resulted in greater self-awareness regarding sleep hours, sleep debt, and the average sleep hours of other supervisors. It also resulted in better overall sleep quality, and less difficulty sleeping due to a physical health problem.

Findings of the Healthy Sleep Intervention study showed that using community-based participatory research in corrections could result in evidence-based interventions that improve the total worker health of correctional workers. Moreover, it provides evidence that participatory approaches can increase program sustainability; the success of this study empowered correctional supervisor union to negotiate a one-day annual training on health and wellness for correctional supervisors, in which the Healthy Sleep Training will be an ongoing core component.

#### References

- Buden, J. C., Dugan, A. G., Namazi, S., Huedo-Medina, T. B., Cherniack, M. G., & Faghri, P. D. (2016). Work characteristics as predictors of correctional supervisors' health outcomes. *Journal of occupational and environmental medicine/American College of Occupational and Environmental Medicine*, 58(9), e325.
- Dugan, Namazi, Rinker, Preston, Steele, Lemelin, Keel, Sheppard, Semple, Cavallari, & Cherniack. (June, 2017). Workforce Health Assessment and Intervention Planning with Correctional Supervisors Using Participatory Action Research. *Work, Stress & Health*, Minneapolis, MN.
- Namazi, S., Dugan, A.G., Fortinsky, R., Barnes-Farrell, J., Coman, E., El-Ghaziri, M., & Cherniack, M. (2018). Examining a comprehensive model of work and family demands, work-family conflict, and depressive symptoms in a sample of correctional supervisors. Unpublished Manuscript.
- Owen, S. S. (2006). Occupational stress among correctional supervisors. *The Prison Journal*, 86(2), 164-181.
- Robertson, M., Henning, R., Warren, N., Nobrega, S., Dove-Steinkamp, M., Tibirica, L., & CPH-NEW Research Team. (2013). The intervention design and analysis scorecard: A planning tool for participatory design of integrated health and safety interventions in the workplace. *Journal of Occupational and Environmental Medicine*, 55, S86-S88.

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