

QIC WD QUALITY IMPROVEMENT CENTER FOR WORKFORCE DEVELOPMENT February 10, 2021

# Sleep

A Summary of Workforce Research Evidence Relevant to the Child Welfare Field

#### What is sleep?

In the context of the workplace, investigations into sleep tend to focus on two main aspects: sleep quantity and sleep quality. Though sleep is occasionally measured using objective measures that assess physiological indicators, subjective self-report measures are most often used (Litwiller et al., 2017). There are dozens of measures for assessing sleep quality or quantity, some of which are single items and others that include multiple items. A more commonly used multidimensional measure is the 19-item *Pittsburgh Sleep Quality Index*, which assesses factors like sleep duration, sleep disturbance, and sleep efficiency, among others (Buysse et al., 1989). Example items include, "During the past month, how often have you had trouble sleeping because you wake up in the middle of the night or early morning?" and "During the past month, what time have you usually gone to bed at night?" In contrast to retrospective measures that require respondents to recall sleep patterns over the past week or several weeks, sleep diaries provide ongoing assessment of behaviors. For example, the Consensus Sleep Diary includes 9 items that should be completed every day (for weeks or even months) within an hour of waking (Carney et al., 2012).

#### Why is sleep important?

Sleep is important for a host of reasons (e.g., physical and mental health, safety, longevity), but in the context of the workplace, it is important because it is associated with job attitudes, performance, attendance, and turnover intentions (Henderson & Horan, 2020; Litwiller et al., 2017). More specifically, both sleep quality and quantity are modestly associated with job satisfaction, and sleep quality is moderately connected with work engagement (Litwiller et al., 2017). Sleep quality is also modestly connected to turnover cognitions, such that people with better sleep quality are less likely to intend to leave their jobs; the connection with sleep quantity is unknown (Litwiller et al., 2017). Overall sleep is moderately connected to attendance and task performance (Henderson & Horan, 2020). To the extent that sleep has a causal effect on these workplace outcomes, it appears to do so through its effect on cognitive resources (e.g., motivation and concentration) and mood (Litwiller et al., 2017).

#### What contributes to sleep?

Many individual factors have been examined that have either very modest or no connection with sleep quantity or quality (e.g., gender, age, marital status, and tobacco, alcohol, or caffeine use; Litwiller et al., 2017). Among the few workplace factors that have been studied, workload

and the number of hours worked have stronger connections to sleep (Litwiller et al., 2017), along with employees' perceptions that they have the ability to alter circumstances or outcomes of their work. Notably, support from coworkers, supervisors, or the organization in general is not connected to sleep (Litwiller et al., 2017). It should be noted that this research only examined factors that are merely associated with sleep, not on what factors influence sleep.

#### How can sleep be improved?

In the context of the workplace, there are many employee wellness programs that are intended to improve sleep habits. They have been categorized as falling into one of three types: educational interventions, health promotion interventions, and workplace environment modifications (Redeker et al., 2019). Educational interventions focus on providing information about sleep and the factors and strategies that might affect it. Health promotion interventions focus on increasing healthy behaviors, such as diet and exercise, to improve both health and sleep. Finally, workplace environment modifications involve changing physical aspects of the work setting, such as lighting and ventilation. Unfortunately, because there is too much diversity in these programs to conduct a meta-analysis, the stable effects of these programs are unknown. These types of sleep-focused programs are primarily in occupations that create sleep challenges, due to long hours or shift work, or that involve safety risks (e.g., truckers, law enforcement, health care). For occupations that do not fall in these categories, broader employee wellness programs sometimes include sleep-related advice as one of many supports for improving overall health and well-being.

#### QIC-WD Takeaways

- Both sleep quality and quantity are modestly associated with job satisfaction, and sleep quality is moderately connected with work engagement.
- Sleep quality is modestly connected to turnover cognitions, such that people with better sleep quality are less likely to intend to leave their jobs.
- Overall sleep is moderately connected to attendance and task performance.
- To the extent that sleep has a causal effect on these workplace outcomes, it appears to do so through its effect on cognitive resources and mood.
- Workload, hours worked, and perceptions of control at work may influence sleep.
- There are many types of workplace interventions to improve sleep, but more research is needed to determine their effectiveness. They have been broadly categorized as educational interventions, health promotion interventions, and workplace environment modifications.
- There are dozens of measures for assessing sleep quality or quantity, but a more commonly used measure is the 19-item <u>Pittsburgh Sleep Quality Index</u> by Buysse et al. (1989).

#### References

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