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Defining and improving healthy sleep in working populations

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We at the **Work Stress Lab** present our expert guide to: (a) what healthy sleep looks like, (b) its importance for personal health and organizational success, and (c) best practices for improving your sleep or the sleep of your workforce. We go beyond unrealistic, one-size-fits-all advice (e.g., avoid caffeine, never use technology before bed) to show you how to identify needs and target solutions. Better sleep starts here!

Read through our white paper for a full review, or click the links below to skip ahead.

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Why does sleep matter?

1. **For public health.** Of the "big three" health behaviors (i.e., sleep, exercise, diet), sleep is the "biggest" (Wickham et al., 2020). Large-scale studies link poor sleep to:
    - Heart disease and stroke (Cappcuccio et al., 2011)
    - Type II diabetes (Holliday et al., 2013)
    - Depression (Zhai et al., 2015)
    - Reduced memory (Leong et al., 2019)
    - All-cause mortality (Cappuccio et al., 2010)

    A single bad night of sleep alone may not be catastrophic, but consistently poor sleep alters immune, heart, and metabolic functions, explaining disease risk (Ganster & Rosen, 2013). Poor sleep is also a key contributor to health disparities across many of these conditions, given heightened vulnerability of racial and ethnic minorities to sleep problems (Laposky et al., 2016).

2. **For workplaces.** The advantages of good sleep for organizations and employees alike cannot be easily overstated. Organizations have an enormous financial and moral investment in their employees' sleep health.
    - **Better employee well-being:** Good sleep protects employees from fatigue, anxiety, and even physical symptoms like headaches (Litwiller et al., 2017).
    - **More functional workplaces:**
        i. Healthy sleep supports a workforce that is satisfied, has lower work-family conflict, and is less likely to turnover (Litwiller et al., 2017).
        ii. Poor sleep, however, impedes basic job performance and increases likelihood of counterproductive behaviors like stealing (Henderson & Horan, 2021).
        iii. A bad night's sleep may even impact interpersonal functioning, such as abusive leadership (Barnes et al., 2015) and unethical behaviors (Barnes et al., 2020).
    - **Minimizing costs:**
        i. Good sleep linked to **23% lower risk of sick leave** (Amiri & Behnezhad, 2020)
        ii. Getting fewer than 4-5 hours of sleep on a given night **doubles likelihood of a car crash** (Sprajcer et al., 2023)
        iii. A staggering **13% of all work injuries** are due to sleep problems (Uehli et al., 2014), costing over **$20 billion each year** (OSHA, 2019)

Who should invest in employee sleep health?

- Workplaces that care about **public health and equity**
- Workplaces that want to **boost productivity, attendance, and retention**
- Workplaces that want to **save thousands** in healthcare and injury costs

What is the state of sleep today?

First, let's define healthy sleep. Experts suggest assessing your sleep health across these dimensions (Buysse, 2014):

- **Quantity** – do you get 7-9 hours of sleep each night?
- **Quality** – do you personally feel satisfied with your sleep?
- **Regularity** – do you wake up and go to sleep at consistent times each day?
- **Timing** – do your bed and wake times align with your chronotype (i.e., biologically based preferences as a "night" or "morning" person)?
- **Efficiency** – do you stay sound asleep until it is time for you to wake up?
- **Onset latency** – do you fall asleep within 30 minutes of getting into bed?
- **Daytime function** – do you generally feel alert when you are awake?

But *half* of people are not healthy sleepers!

- In our own research, only 50% of our large and representative sample of workers were "good sleepers" across all dimensions (Smith et al., 2024)
- Over 100 million American adults regularly fall short of the recommend 7 hours of nightly sleep (CDC, 2022)
- Sleep disorders are prevalent at similar rates, with another 100 million each experiencing insomnia symptoms and sleep apnea (NCOA, 2024)
- Working adults are particularly vulnerable to short sleep duration and sleep disorder symptoms (Swanson et al., 2011)

What is the role of an organization in promoting healthy sleep?

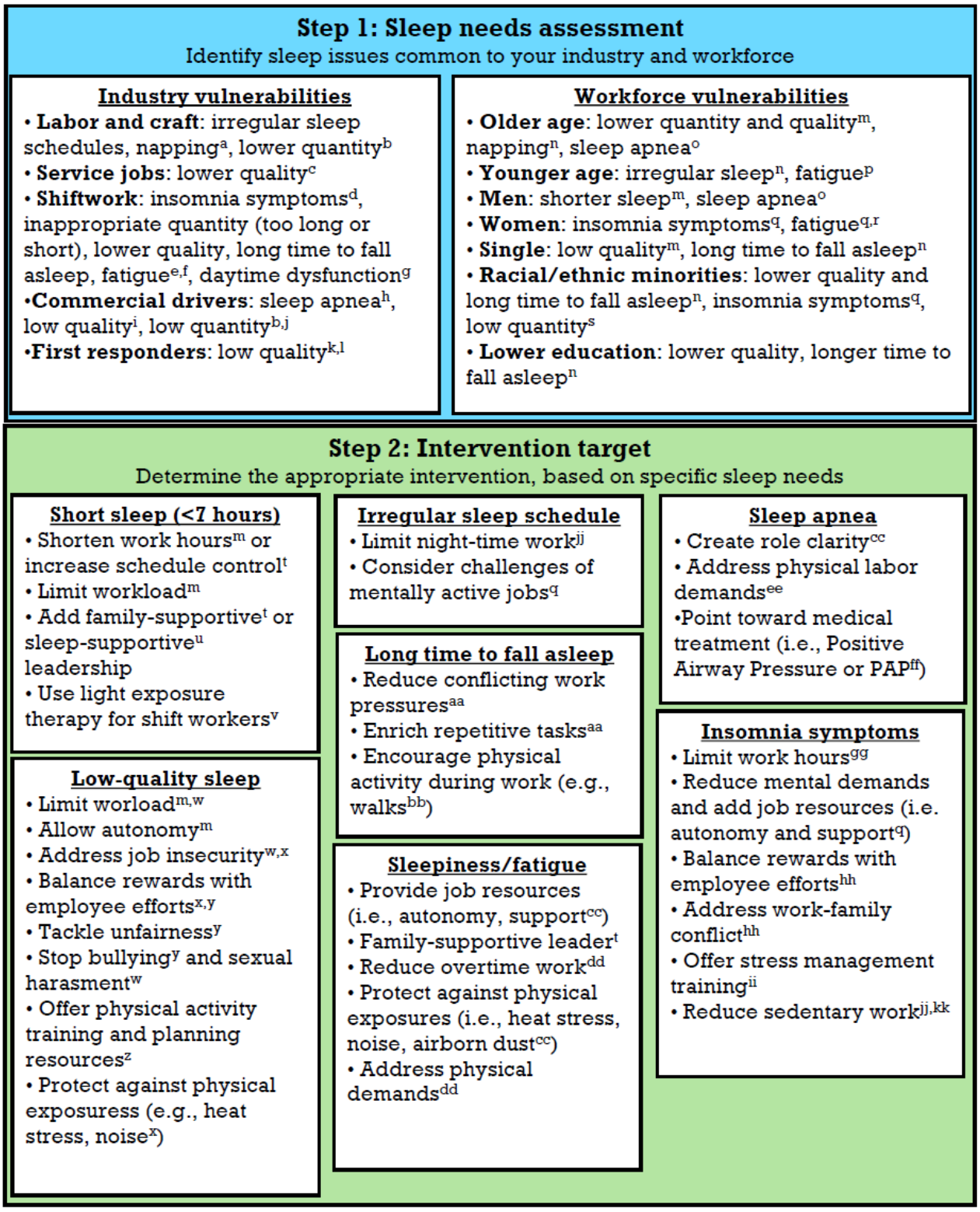
Work is an appropriate and effective setting for sleep interventions, and many modern companies have gotten on board – think Google, Ben & Jerry's, Aetna. **Why try to promote better sleep at work, instead of at home?**

- **What happens at work affects employee sleep**. Exposing employees to excessive mental and physical job demands, long work hours, lack of autonomy or support (Litwiller et al., 2017), and interpersonal stressors like workplace bullying (Nielsen et al., 2020) threatens their sleep!
- **Poor sleep is contagious**; it can "spread" within a workplace (Tariq et al., 2019). On the other hand, leaders who role model and advocate for good sleep promote positive contagion (Sianoja et al., 2020).

I want to create a sleep-healthy workforce. What should I do?

- **Existing workplace interventions** are underwhelming in their effectiveness. Around half do not sufficiently improve sleep (Robbins et al., 2019), and those that do tend to be inconsistent (Soprovich et al., 2020) and weak (Redeker et al., 2019) in their impact. We see two reasons for this:
    - **They ignore the full spectrum of healthy sleep indicators** (e.g., regular sleep schedule, time to fall asleep, daytime alertness) by hyper-focusing on sleep quantity.
    - **They offer one-size-fits all solutions.** Most interventions involve a one-time lecture on sleep hygiene (e.g., blue light, mindfulness, caffeine). These strategies do not account for the fact that sleep problems – and, in turn, appropriate solutions – differ based on:
        - Industry (e.g., service work vs. healthcare)
        - Demographics (e.g., age, gender)
- We have developed a state-of-the art tool that draws on meta-analyses and large cohort studies to help you (1) determine the **sleep needs** of your industry and workforce and (2) **identify targets for intervention** that are specific to those needs. Scroll to the next page to use our tool!
    - We also offer training and consulting services, for improving employee health. Contact us at: clairesmith3@usf.edu

How to identify sleep needs and appropriate interventions in your workforce



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