

Safety and Performance Impact of Impairment Contributing Factors

Many impairment contributing or risk factors negatively impact individual performance and safety, such as chemical exposures, drug use, shift scheduling, fatigue and mental distress. On the job, impairment is influenced by both individual and workplace factors, as well as the intersection of both.

Research Methodology

1. Literature Review
Articles Reviewed: 349
2. Subject Matter Expert Interviews
Experts Interviewed: 31
3. Database Review
Public Databases Reviewed: 18

**Severity
of a physical
factor**

Contributing factors frequently associated with poor cognitive performance and elevated risks of workplace injuries:

Fatigue and burnout	Mental distress
Longer time awake	Extreme heat
Shift work	Alcohol use
Night and rotating shifts	Exposure to hazardous substances

**Neurocognitive
performance
and safety
outcomes**

"You cannot get away from this close connection between work and non-work. I don't think there's a more red-banner example of this than impairment."

Workplace Safety & Health Expert

52%
of employers
**believe that
impairment**
decreases the safety
of their workforce*

The
National Safety Council
defines workplace
impairment as **a temporary
negative change in a person's
ability to do their work
normally or safely,
regardless of cause.**

Examples of contributing factors:



Chemical – chemical exposures, substance use



Physical – exposure to extreme temperatures, fatigue, improper shift scheduling, sleep deprivation



Psychosocial – violence, harassment, anxiety, depression, stress

Fatigue, sleepiness and shift schedules were the most discussed contributing factors in the literature:

- ✓ 53% of studies in the literature review focused on physical factors like fatigue, burnout, shift work and heat
- ✓ 15% of studies in the literature review focused on chemical factors like alcohol, cannabis and opioid use
- ✓ 14% of studies in the literature review focused on psychosocial factors like anxiety, depression and stress

Workplace and Environmental Health and Safety leaders should...

- Focus on identifying and addressing contributing factors when disclosed by the worker
- Engage workers in different positions and levels in safety-related decision making
- Adopt more proactive fitness for duty assessments for safety-sensitive workers to prevent potential impairment
- Consider impairment in terms of hazard recognition and risk assessment
- Provide resources and support to conduct thorough incident investigations and root cause analysis

For the full report, visit
nsc.org/scope