Shift work may impair memory and cognition, per data on nearly 50,000 Canadian adults

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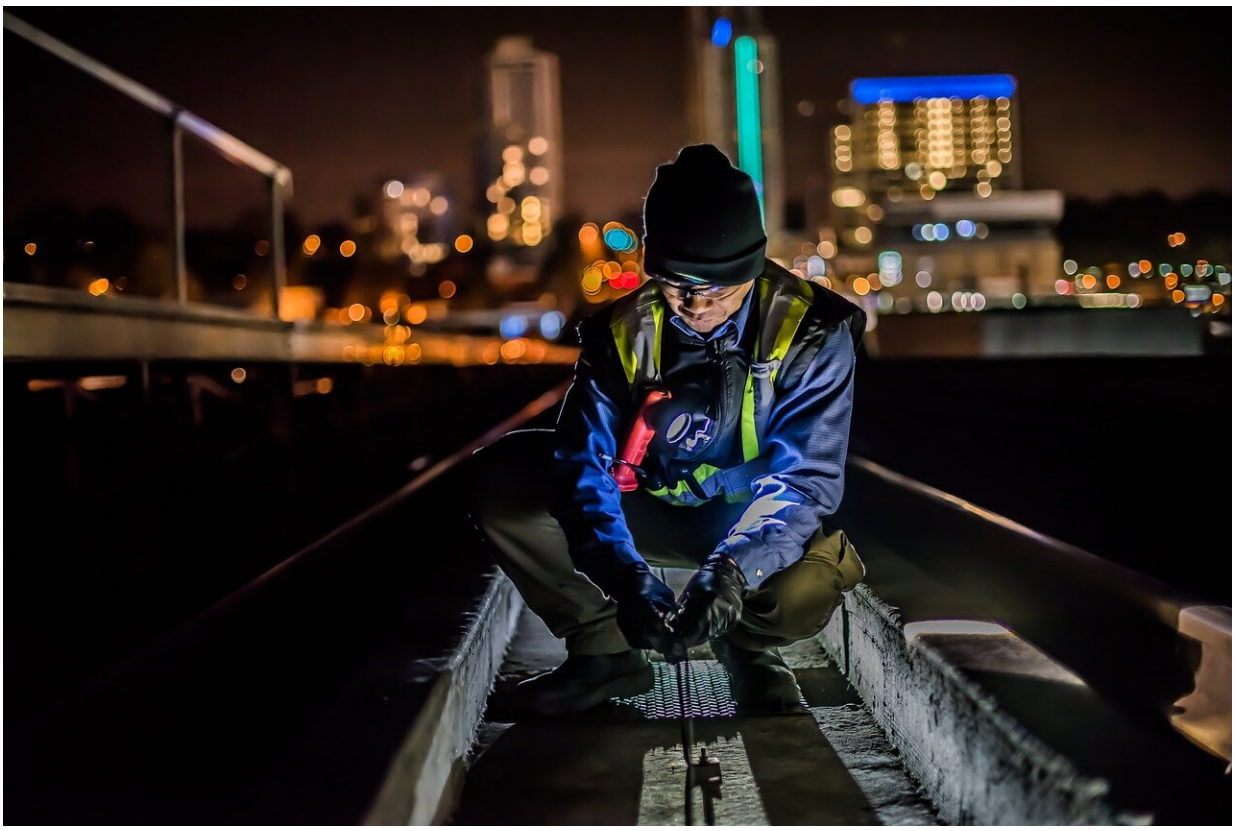

The study findings suggest a potential link between shift work exposure and cognitive function impairment. Credit: dayamay, Pixabay, CC0 (https://creativecommons.org/publicdomain/zero/1.0/)

Exposure to night shift work and rotating shift work is associated with an increased risk of cognitive impairment among middle-aged and older adults, according to a new study published in the open-access journal *PLOS ONE* by Durdana Khan of York University, Canada, and colleagues.

Previous research has established that shift work, which refers to any work schedule that occurs outside the traditional 9am to 5pm working hours, has significant health impacts. In the new work, the researchers analyzed data on 47,811 adults in the Canadian Longitudinal Study. The dataset included self-reported information on employment and work schedules alongside results of cognitive function tests.

Overall, one in every five individuals (21%) reported having been exposed to some kind of shift work over their career. Higher rates of cognitive impairment were found among participants who reported to be exposed to night shift work during their current job (OR, 1.79; 95% CI, 1.08–2.96) or night shift work during their longest job (OR, 1.53; 95% CI, 1.04–2.26) when compared to those who only reported daytime work.

Within subdomains of cognition, night shift work was associated with memory function impairment and rotating shift work was associated with impairment of executive function.

The authors conclude that circadian rhythm disruption due to shift work could have a negative impact on cognitive function in middle-aged and older adults, which warrants further investigation.

The authors add, "The study findings suggest a potential link between shift work exposure and cognitive function impairment. We speculate that disruptive circadian stimuli may play a role in neurodegeneration contributing to cognitive impairment; however, additional studies are

needed to confirm the association between shiftwork and cognitive impairment as well as any physiological pathways that underlie the mechanism."

More information: The association between shift work exposure and cognitive impairment among middle-aged and older adults: Results from the Canadian Longitudinal Study on Aging (CLSA), *PLoS ONE* (2023). DOI: 10.1371/journal.pone.0289718

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