

Game Over or Game On? The Effects of Bedtime Gaming on Sleep Quality, Next-Day Cognitive Performance and Mental Health

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RESEARCH QUESTION

Does engaging in online video gaming before bed affect sleep quality, next-day cognitive performance, and daily mood?

BACKGROUND

Evening screen exposure, particularly interactive media like video games, has been associated with delayed sleep and reduced sleep quality. Blue light exposure and cognitive stimulation may disrupt circadian rhythms and impair restorative sleep processes.

Poor sleep has also been linked to decreased cognitive performance, including attention, memory, and spatial reasoning, as well as negative mood outcomes such as irritability and fatigue. However, limited research has examined the daily, real-world effects of bedtime gaming behavior on next-day functioning in college populations.

Does bedtime gaming disrupt your sleep and impair next-day cognitive performance and mood?



METHODS

Design: 14 Day longitudinal within-subject study

Participants: 10 TCU students who are regular nighttime gamers

Procedure: Participants who play video games before bedtime will wear a Garmin device to track sleep. The next day, they will conduct a morning survey to assess their sleep quality and prior nighttime gaming behavior. In the evening, they will also conduct an evening survey on their overall daily mood and cognition. Each survey will include a brief spatial recognition test to assess cognitive performance at the time.

RESULTS

Expected Findings:

Increased bedtime gaming → lower sleep quality
Poor sleep → decreased cognitive performance
Poor sleep → worse mood next day

FUTURE DIRECTIONS

- Expand sample size for stronger statistics
- Compare different types of games (e.g., Competitive multiplayer, casual solo)
- Examine Long-term mental health outcomes
- Inform Guidelines for healthy gaming habits