

# research snapshot

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## The role of ambient lighting in gambling

### What this research is about

Many aspects of the environment can influence one's gambling behaviour. Past research has noted that the structural characteristics of gambling machines (e.g., colour, sounds) as well as access to ATM machines, food, and alcohol can increase one's gambling frequency. However, sensory factors in gambling venues, such as music and lighting, can also influence gambling behaviour. Research is yet to examine the sensory factor of ambient lighting in influencing gambling behaviour.

In commercial research, there is evidence that ambient lighting can influence people to stay longer at a restaurant and eat more. This may translate to gambling venues. Dim lighting may increase gambling behaviour in terms of game play duration and total spend. Also, research in environmental psychology has found that dim lighting can lower people's self-regulation, which can lead them to engage in riskier behaviours. However, when one becomes more self-aware, then risk-taking decreases.

This study sought to examine whether people would gamble more and spend more money when gambling in dim lighting. The researchers also explored whether dim lighting was associated with more risk-taking behaviours, and whether self-awareness would reduce the effect of dim lighting on risk-taking and subsequent gambling behaviours.

### What the researchers did

The researchers did three experimental studies. In the first study, they recruited 105 undergraduate students from an Australian university. They randomly assigned the participants into two different lighting levels: bright or dim ambient lighting. The participants were

### What you need to know

This research examined how dim ambient lighting might influence risk-taking and subsequent gambling behaviours. The researchers recruited undergraduate students to participate in three experiments. In the first study, they found that dim lighting influenced how long participants gambled and how much they spent. In the second study, they found that dim lighting predicted risk-taking. In turn, risk-taking predicted gambling behaviours. In the third study, they found that dim lighting predicted risk-taking when self-awareness was low. When self-awareness was heightened by creating an open gambling space, people were less likely to take risks.

asked to sit in one of 10 cubicles in a room. They had a laptop that featured an online machine game. The participants could play on the gaming machine for as long as they wanted, up to 20 minutes. After the game, they rated their attitude toward the images and colours of the machine. They also rated how mentally alert they were and their perception of the brightness of the room.

For the second study, the researchers recruited 130 undergraduate students. Everything replicated the first study, but in addition, the participants completed a self-report risk-taking measure (e.g., "Did something risky or dangerous on a dare").

For the third study, the researchers recruited 140 undergraduate students. Aside from dim and bright ambient lighting, they also set up the gambling space to affect self-awareness. Specifically, the space was set up to include cubicles to decrease self-awareness,

or be an open space by removing all screens between the cubicles to increase self-awareness.

The participants did the study as in the second study. But instead of a self-report risk-taking measure, they completed the Balloon Analogue Risk Task for Youth (BART-Y). They had 30 digital balloons and needed to pump each balloon to receive a prize. Each pump would inflate the balloon that would get them closer to the prize. If the balloon exploded, they would not receive the prize. Therefore, each pump resulted in greater risk because they did not know when it would pop. The participants also evaluated their public self-awareness (“Right now, I am concerned about the way I present myself”; “Right now, I am concerned with what other people think of me”; “Right now, I am self-conscious about the way I look”).

### What the researchers found

The results of the first study revealed that ambient lighting affected gambling duration and money spend. Participants in the dim ambient lighting condition played the online gaming machine for longer than those in the bright ambient lighting condition. Those in the dim lighting condition also spent more money than those in the brighter room.

Furthermore, the second study revealed that ambient lighting predicted risk-taking. In turn, risk-taking predicted gambling behaviours. In other words, those in the dim lighting condition were more likely to report taking risks. As a result, they played longer and spent more money.

Finally, the third study showed that both dim lighting and self-awareness affected risk-taking. In other words, risk-taking behaviours increased in dim lighting conditions when self-awareness was low. When self-awareness was heightened in dim lighting conditions, participants were less likely to take risks, and spent less time and money playing the gaming machine.

### How you can use this research

This research could be used by policy makers, service providers, and other researchers. Policy makers could consider regulations regarding lighting and removing of screens to create open space in gambling

environments. This could reduce risk-taking behaviours and problem gambling. Service providers could develop early preventative or educational tools to make people more aware about how the environment can shape their behaviours. Future studies could examine how dim lighting influences people’s gambling in real context, such as casinos.

### About the researchers

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### About Gambling Research Exchange (GREO)

Gambling Research Exchange (GREO) has partnered with the Knowledge Mobilization Unit at York University to produce Research Snapshots. GREO is an independent knowledge translation and exchange organization that aims to eliminate harm from gambling. Our goal is to support evidence-informed decision making in safer gambling policies, standards, and practices. The work we do is intended for researchers, policy makers, gambling regulators and operators, and treatment and prevention service providers.

Learn more about GREO by visiting [greo.ca](http://greo.ca) or emailing [info@greo.ca](mailto:info@greo.ca).

