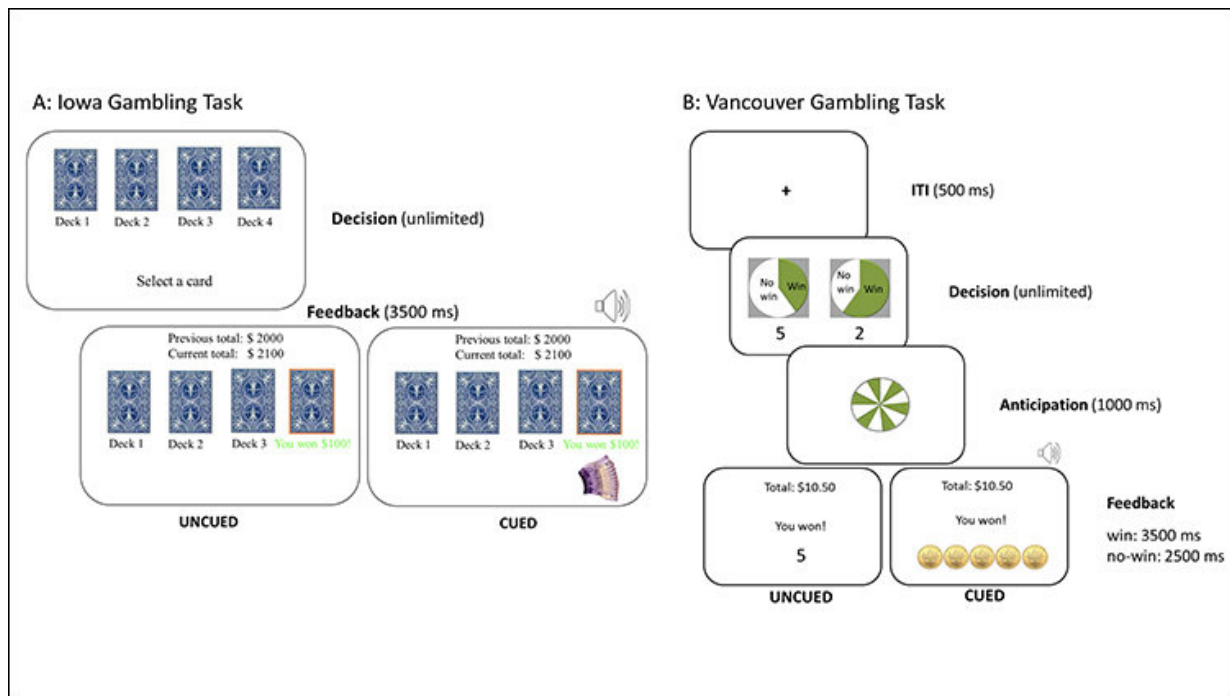


# Casino lights and sounds encourage risky decision-making

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This image illustrates the two gambling tasks used in the study. Credit: Cherkasova et al., *JNeurosci* (2018)

The blinking lights and exciting jingles in casinos may encourage risky decision-making and potentially promote problem gambling behaviour, suggests new research from the University of British Columbia.

The findings, published today in *JNeurosci*, the journal from the Society

for Neuroscience, suggest that sensory features in casinos may directly influence a player's decisions and encourage riskier choices—raising new concerns that these features may promote problem gambling.

"We found that an individual's choices were less guided by the odds of winning when the casino-like audiovisual features were present in our laboratory gambling game," said UBC postdoctoral research fellow and the study's lead author Mariya Cherkasova. "Overall, people took more risks when playing the more casino-like games, regardless of the odds."

The latest study was prompted by earlier UBC research that found rats were more willing to take risks when their food rewards were accompanied by flashing lights and jingles.

To determine if this would also be the case for humans, researchers had more than 100 adults play laboratory gambling games that featured sensory feedback modelled after the "bells and whistles" used to signal winning in real slot machines. They found money imagery and slot machine sounds can directly influence an individual's decisions.

"Using eye-tracker technology, we were able to see that people were paying less attention to information about the odds of winning on a particular gamble when money imagery and casino jingles accompanied the wins," said the study's senior author Catharine Winstanley, professor in the UBC department of psychology and investigator at the Djavad Mowafaghian Centre for Brain Health. "We also noted that participants showed greater pupil dilation, suggesting that individuals were more aroused or engaged when winning outcomes were paired with sensory cues."

In the absence of sensory cues, the researchers found that participants demonstrated more restraint in their decision-making.

These findings provide context for why it can be hard for those with a tendency toward gambling addiction to resist the lure of the casino.

"Together, these results provide new insight into the role played by audiovisual cues in promoting risky choice, and could in part explain why some people persist in gambling despite unfavourable odds of winning," said Cherkasova.

"These results form an important piece of the puzzle in terms of our understanding of how gambling addiction forms and persists," added Winstanley. "While sound and light stimuli may seem harmless, we're now understanding that these cues may bias attention and encourage risky decision-making."

**More information:** Win-concurrent sensory cues can promote riskier choice, *JNeurosci* (2018). [DOI: 10.1523/JNEUROSCI.1171-18.2018](https://doi.org/10.1523/JNEUROSCI.1171-18.2018)

Provided by University of British Columbia

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