

knowledge snapshot

A systematic review of near misses and losses disguised as wins



What this article is about

This article reviews evidence surrounding the structural characteristics of electronic gaming machines (EGMs). In particular, it reviews the effects of near misses and losses disguised as wins (LDWs) on gamblers. Previous studies have shown that EGMs may be the most problematic form of gambling. This is likely due to EGMs' addictive characteristics. For example, bright lights and celebratory sounds may cause excitement and reinforce gambling behaviour.

In addition, EGMs include more subtle ways to encourage gamblers to keep playing. Research has examined two particular characteristics: near misses and LDWs. Near misses occur when the outcome is very close to winning (i.e., being one symbol away from a jackpot or a win). LDWs occur when the loss is hidden by a smaller win (i.e., betting 75 cents, but getting back 30). To date, knowledge about how near misses and LDWs influence gamblers and reinforce play remains poor. Thus, this systematic review aims to examine the psychological, behavioural, and psychobiological effects of near misses and LDWs.

What was done?

The researchers conducted a comprehensive scan of published articles that focus on the effects of near misses/LDWs. Initially, they identified 802 articles. After removing duplicates and screening the abstract and title, 80 articles remained. After a full-text screening, the researchers selected 51 articles as being relevant. All articles were published in English in peer-reviewed journals between 1991 and 2015.

The researchers created a data extraction tool to obtain information from the studies. The tool extracted information about the primary author,

Why is this article important?

Research on the structural characteristics of EGMs is very common. The effects of near misses and losses disguised as wins (LDWs) have been of interest to policy makers and researchers for many years. But knowledge about how they affect gamblers and reinforce play remains poor. This article provides a review of 51 research studies that were published between 1991 and 2015. It focuses on evidence regarding the psychological, behavioural, and psychobiological effects of near misses and LDWs. The review also highlights areas of inconsistencies across the studies and suggests directions for future research.

jurisdiction, study design, sample size, population employed, type of gambling task studies, topic of research, effects or outcomes, concluding remarks, and policy recommendations. The researchers then summarized the evidence across the studies.

What you need to know

Psychologically, many studies revealed that near misses motivated gamblers to keep playing and players overestimated their wins after experiencing near misses. There was also evidence of reduced self-control and more willingness to take risks. Some studies found that players reported wins as being more pleasant than near misses and losses. But near misses were rated as more pleasant than losses.

Behaviourally, near misses were found to extend gambling sessions. Results about gambling behaviour were inconsistent; some studies found it increased, decreased, or had no difference. In three studies,

near misses had no effect on the number of times people gambled. Some studies measured the pause that gamblers took upon seeing an outcome. Results again were inconsistent. Studies either found that there was a longer pause or a shorter one after a near miss compared to a loss or a win.

Psychobiological evidence revealed that gambler's skin conductance levels elevated after near misses. Evidence regarding heart rate was inconsistent. Studies either showed elevated or reduced heart rate following near misses. Studies also showed that various areas of the brain were more active following near misses. These brain areas are involved in the processing of uncertainty and reward. Overall, there was evidence to suggest that gamblers consider near misses to be negative, but may take longer to fully process the uncertain nature of near misses.

Psychologically, LDWs were consistently found to inflate win estimates among players. One study found that players who experienced LDWs reported more enjoyment and motivation. Behaviourally, players showed preference for multiline EGMs with LDWs compared to single line EGMs. Players were found to be reinforced by sound and visual effects associated with LDWs. Physiobiological measures revealed inconsistent results with regard to heart rate and skin conductance levels.

More research is needed to compare the effects of near misses and LDWs between problem gamblers and non-problem gamblers. There was some evidence to suggest the problem gamblers might have blunted emotional responses to near misses and LDWs. Some studies found that problem gamblers had increased brain activity in areas associated with reward and uncertainty processing following near misses. Problem gamblers were also found to prefer multiline EGMs more than non-problem gamblers.

Who is it intended for?

This review is intended to help policy makers and practitioners to understand how EGMs may affect gambling. It can be useful for regulators to find ways to minimize the effects of near misses and LDWs. This review can also serve as a guide for future studies.

About the researchers

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Keywords

Losses disguised as wins, near misses, systematic review, gambling, behavior, psychophysiology

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