

**Research Summary:** Sharpe, L., Blaszczynski, A., Walker, M., Coughlan, M. J., & Enersen, K. (2005). 'Structural Changes to Electronic Gaming Machines as Effective Harm Minimization Strategies for Non-Problem and Problem Gamblers.' *Journal of Gambling Studies*, 21(4), 503-520.

**Aim:** This study aimed to evaluate the effectiveness of three proposed modifications to the structural characteristics of electronic gaming machines (EGMs) as harm minimisation strategies for non-problem and probable problem gamblers. Structural changes included reducing the maximum bet size, reducing reel spin and removing large note acceptors. The authors hypothesised that on standard EGMs, a higher proportion of problem gamblers would exhibit patterns of play that included bets in excess of \$1 AUD faster rates of play and the use of \$50 and \$100 as compared to non-problem players. Modified machines would result in a reduction in playing time and net expenditure on modified as compared to unmodified machines.

**Methods:** Participants (n = 779) were recruited from seven hotels and four club venues in Sydney, Australia. All participants played with their own money and were instructed to play exactly as they per usual. Participants played on one of 14 gaming machines placed in the venue after being provided to the researchers by the manufacturer. Of these, seven machines were designated as control machines<sup>1</sup>. After the session of play, participants completed a measure of gambling behaviour using the South Oaks Gambling Screen (SOGS) lifetime history measure.

**Results:** The majority of players maintained consistent bet sizes. Only a small proportion of players (4%) were observed to routinely wager in excess of one dollar per bet. More probable problem (8%) than non-problem (2%) participants bet amounts greater than one dollar per wager. Only 13% inserted notes with denominations higher than \$20 in value with 22% of probable problem as compared to 10% of non-problem participants doing so. Only 12% were observed to play at a wager cycle rate faster than five seconds and this did not differ on the basis of gambling severity. On average, players gambled for 31 minutes, making an average of 211 bets. The average loss per session was \$20. Compared to those playing modified one-dollar maximum bet, participants on standard machines with \$10 maximum bet were found to spend more time on the machines, place more individual bets, sustain greater loses, smoke more cigarettes, and consume more alcohol. Patterns of play between participants who played machines with fast (3.5 seconds) as compared to slow (5 second) reel spin speed, and for machines with and without the high denomination bill acceptors did not differ.

**Discussion:** Reduction in maximum bet showed potential to reduce harm associated with gaming machine play. Slowing down the reel spins and reconfiguring bill acceptors to accept lower denominations were not effective machine modifications. The authors noted a number of limitations in the study. Participants may not have been representative of the general population. Observation by a researcher may have influenced patterns of play. There were an insufficient number of probable problem gamblers to compare whether modifications were differentially effective for problem gamblers versus non-problem gamblers.

**Key Findings:**

- In this study, probable problem gamblers were found to wager amounts in excess of \$1 compared to non-problem gamblers.
- Gamblers on EGMS with a higher max bet (\$10) were found to spend more time on the machines, place more individual bets and sustain greater losses compared with gamblers on EGMs with a modified lower max bet (\$1).

- Twice as many probable problem gamblers used higher denomination note acceptors (\$20+) compared with non problem gamblers although the subsequent patterns of play were relatively similar for both groups.
- Reducing the maximum bet size to one dollar by reducing the number of credits wagered is likely to be effective in reducing losses and persistence associated with gambling. In the context of this study, this would be a particularly effective measure given that it was primarily probable problem gamblers that wagered in excess of one dollar per bet.

## Notes

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<sup>1</sup> These control machines were standard configuration and included a maximum bet of \$10, a wager cycle speed set at 3.5 seconds, continuous play capability and accepted notes of denominations to the value of \$100. The remaining seven machines were modified to cover all possible combinations of design changes: max bet \$1, reel spin 3.5 s, all notes accepted; max bet \$1, reel spin 5 s, all notes accepted; max bet \$1, reel spin 3.5 s, \$20 max note accepted; max bet \$1, reel spin 5 s, \$20 max note accepted; max bet \$10, reel spin 5 s, all denomination notes accepted; max bet \$10, reel spin 3.5 s, \$20 max note accepted; and max bet \$10, reel spin 5 s, \$20 max note accepted.