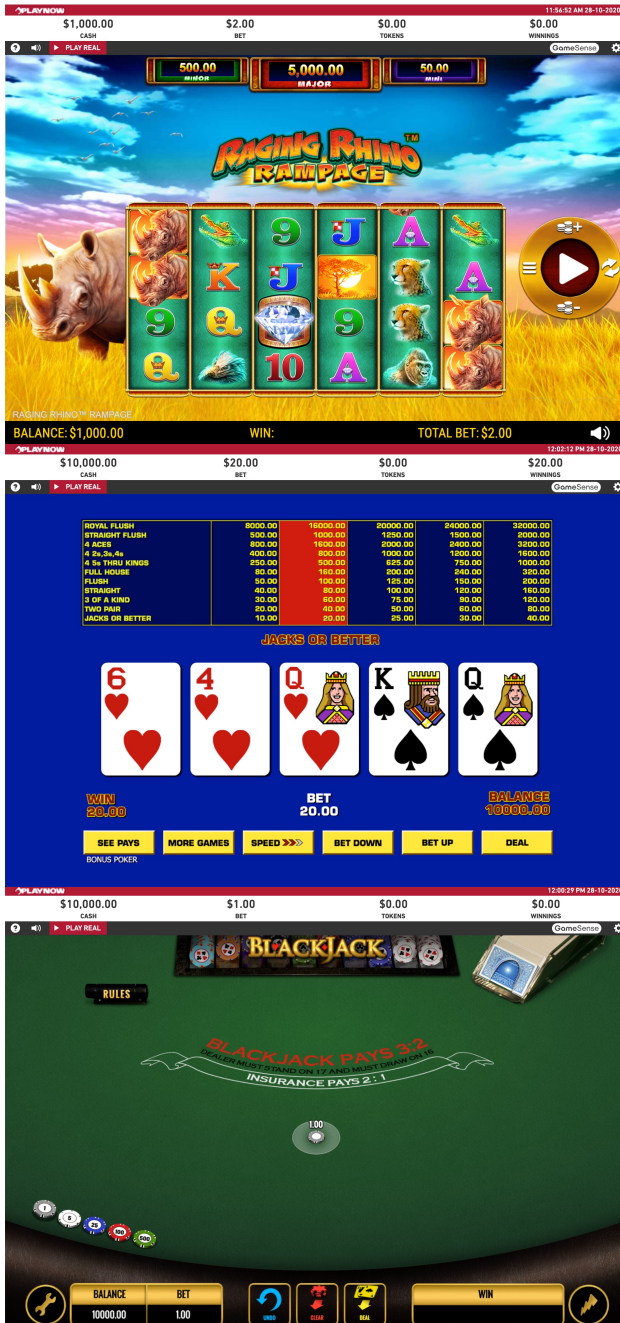# How do gamblers chase losses?

Evidence from online gambling data

Ke Zhang

Loss-chasing in gambling

- Loss-chasing: the tendency to increase betting in order to recover prior losses.

  - **Between-session:** if the gambler returns another day to recoup losses (DSM-V); often the most item in screening tools for gambling disorder (Hodgins et al., 2011).

Online gambling data

- Betting behaviour tracked on the PlayNow.com

- Inclusion criteria:
  - April 2015, BC residents
  - Users must have played >1 session in slots, table games, video poker (No mixed-game session)
  - Users must have played < 200,000 bets (3SD outliers)

- 135,330 gambling sessions from 9,775 unique users
  - 109,230 slots sessions
  - 21,520 table games sessions (e.g., blackjack, roulette)
  - 4,580 video poker sessions
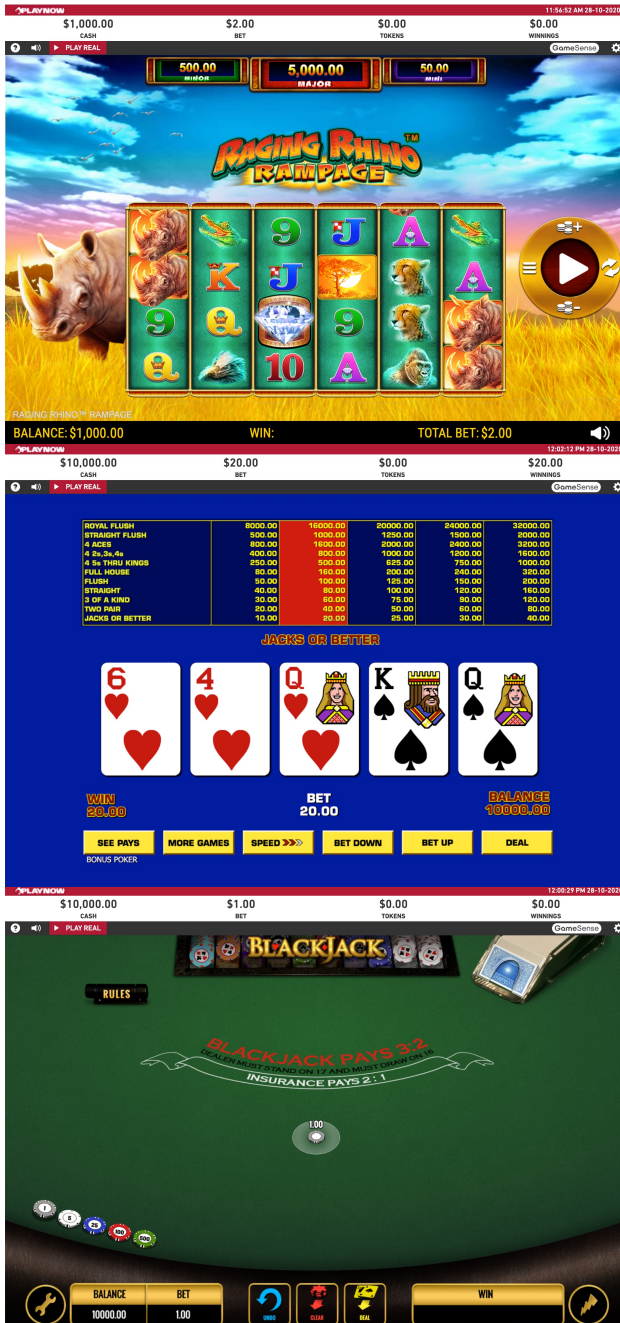
Questions

1. Does the magnitude of total losses in the prior session predict the time interval between gambling sessions?

2. How does this loss-chasing tendency vary by slots, video poker, table games?
   - Slots and video poker: play continuously at a fast pace and accumulate loss quickly
   - Table games: require intentional moves (e.g., count cards, placing bets on numbers)

Analysis

Data structure

user id

|

Sessional data:
- Prior total loss
- Time interval
- Game

Multilevel Modeling clustering users:

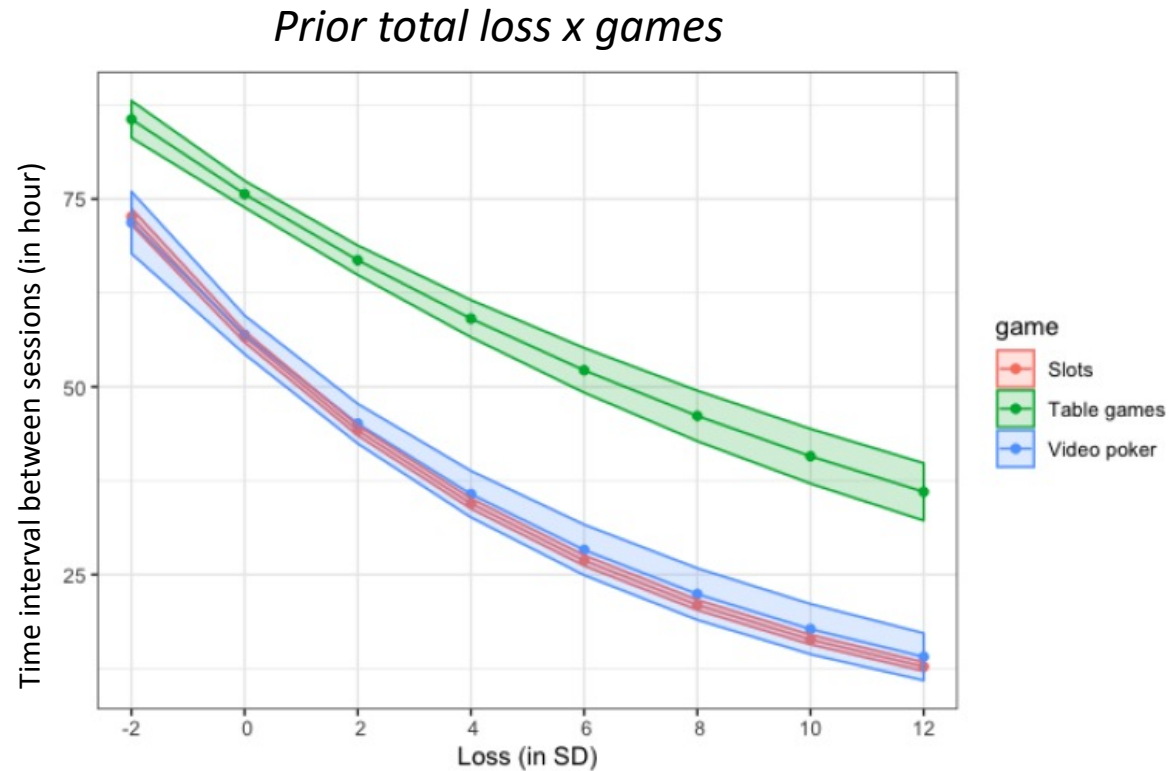IVs = Prior total loss, Game, Interaction

DV = Time interval

(Generalized Linear Mixed Model)

Descriptive sessional data

	Slots (S) session n = 109,230	Table games (T) n = 21,520	Video poker (V) n = 4,580	*Chi-square*	*p-value*	*Pairwise*
Unique user	7,991	2,416	472			
Loss (dollar)	64.24 (1915.42)	54.00 (3037.04)	48.00 (1957.55)	64.82	< 0.001	S > T, V
Time interval (hr)	12.68 (151.41)	13.00 (271.89)	10.55 (174.12)	62.27	< 0.001	T > S > V

Table 1. Median (SD). Kruskal-Wallis test was used to exam the differences of *loss* and *time interval* between slots, table games,

Results

Prior total loss x games

- Loss-chasing pattern occurred across all three games.

- This tendency varied by games
  - Slots ~ video poker > Table games (*significant interaction*)

Conclusion

- **Does the prior total loss predict the time interval between sessions?**
  - Typical loss-chasing pattern across all three games; increased prior total loss shortened the time interval to the next session.
- **How does this loss-chasing tendency vary by games?**
  - Between-session loss-chasing was less urgent in table games than slots and video poker
  - Slots and video poker: fast-pacing games - are more addictive.
  - Land slots gambling is the most addictive gambling game, but no data compared e-casino slots and video poker.