

CENTRE for GAMBLING RESEARCH at UBC

Session: Understanding Emerging Forms of Gambling

1. Testing ‘migration’ from video game loot boxes to conventional gambling

Luke Clark, University of British Columbia

7th March 2023

cgr.psych.ubc.ca twitter [@CGR_UBC](https://twitter.com/CGR_UBC) [@LukeClark01](https://twitter.com/LukeClark01)



Disclosures

The Centre for Gambling Research at UBC is supported by the Province of BC government and the British Columbia Lottery Corporation.

LC holds further grants from the BC Ministry of Finance, and a Discovery Award from the Natural Sciences and Engineering Research Council of Canada (NSERC). He has received travel reimbursements from National Association of Gambling Studies (Australia) and International Center for Responsible Gaming (US), and consulting fees from Gambling Research Exchange Ontario (Canada) and International Center for Responsible Gaming (US).

LP holds the UBC Graduate Fellowship in Gambling Research, a fellowship supported by the BCLC and adjudicated by the UBC Faculty of Arts. ES has held a travel fellowship from the International Center for Responsible Gaming (US). RW has no disclosures.

The Rise of the Loot Box

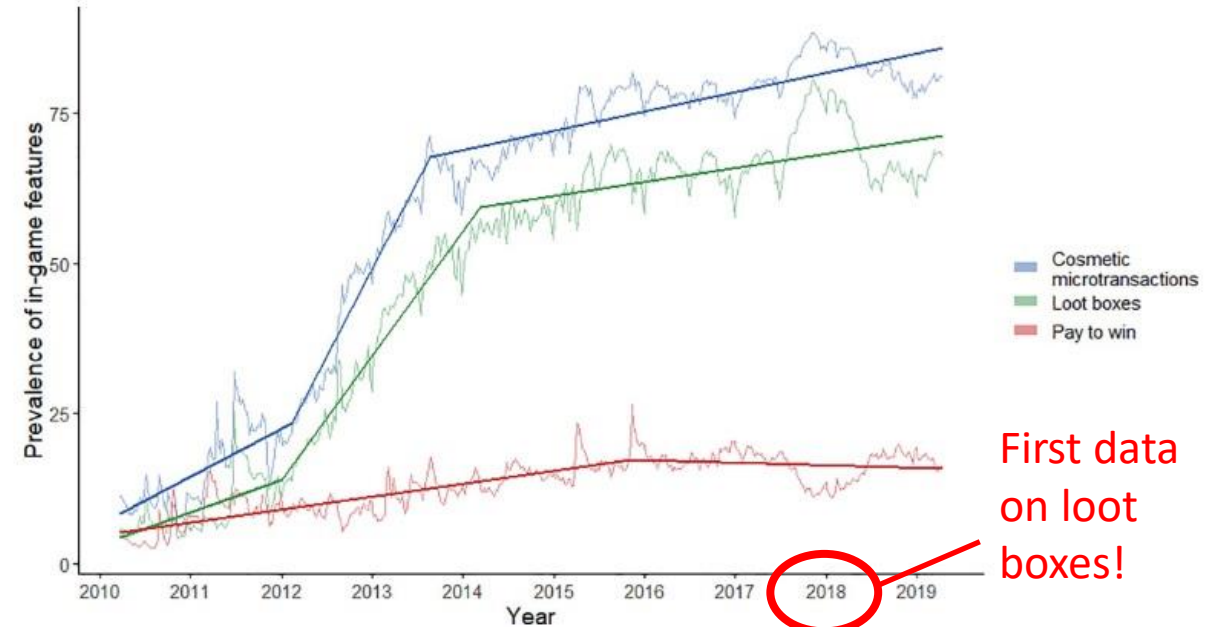
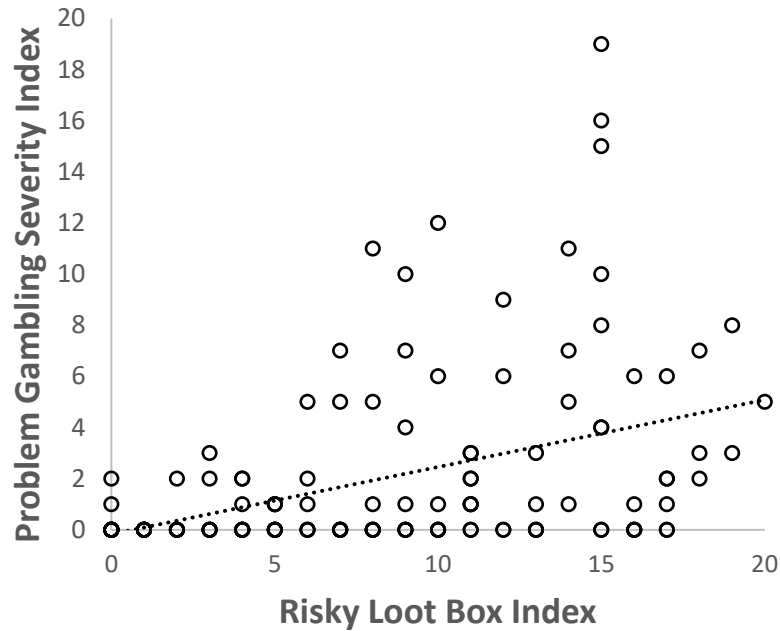


Fig 1. Time series graph showing the percent of the sample playing games with each relevant feature during the period under test. Models produced by three separate joinpoint regression analyses are superimposed on the graph as lines on top of each relevant time series.

<https://doi.org/10.1371/journal.pone.0232780.g001>

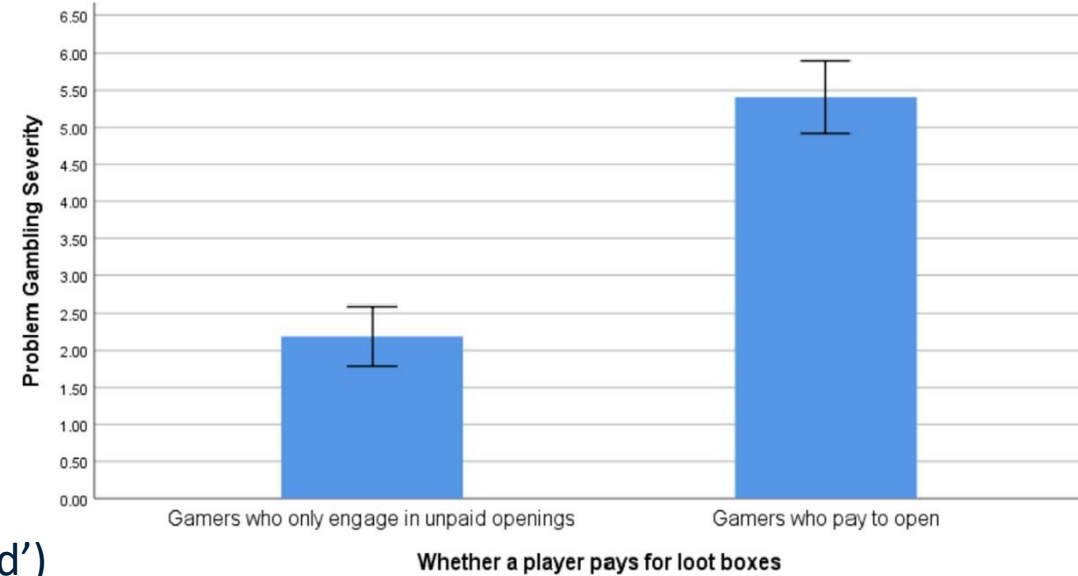
- Loot Boxes are a form of video game ‘micro-transaction’ involving a randomized reward
- Zendle et al (2020): this represents a sudden shift in the business model of video gaming. Since 2014, most popular games contain loot boxes and (non-randomized) cosmetic micro-transactions

Exhibit A: loot box spending linked to problem gambling



Brooks & Clark 2019
Risky Loot Box Index
e.g. “I have bought
more Loot Boxes after
failing to receive
valuable items”

Zendle et al 2020
Gamers who pay
(rather than ‘grind’)
loot boxes are at risk



- Garea et al 2021 meta-analysis of 15 studies found a robust ‘small to moderate’ effect between gambling symptoms and LB spending ($r = 0.26$), “at least as large as the relationship between excessive *gaming* symptoms and loot box spending”

Psyc 101: Correlation does not mean causation!

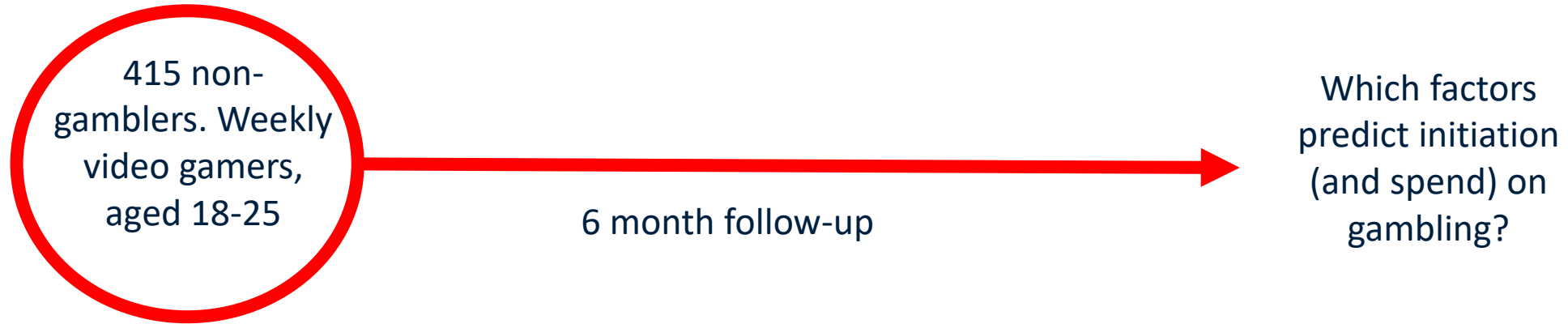
Pathway 1 'Migration': loot boxes expose young adults to randomized rewards, priming a subsequent interest in gambling



Pathway 2: when experienced gamblers play video games, they are attracted to randomized rewards within the game

Nb. these 2 causal pathways have very different regulatory implications: age restrictions & protections directed to youth; versus harm reduction measures directed to existing gamblers.

Prospective Study



- Crowdsourced online sample (Prolific) from Canada, US, UK
- We also recruited 221 gamblers, to explore reverse pathway
- Data collection: baseline Dec 2020, follow-up June 2021
- Pre-registered hypotheses: does loot box spending and Risky Loot Box Index predict initiation of gambling (logistic regression) or gambling spend (linear regression) at 6m?

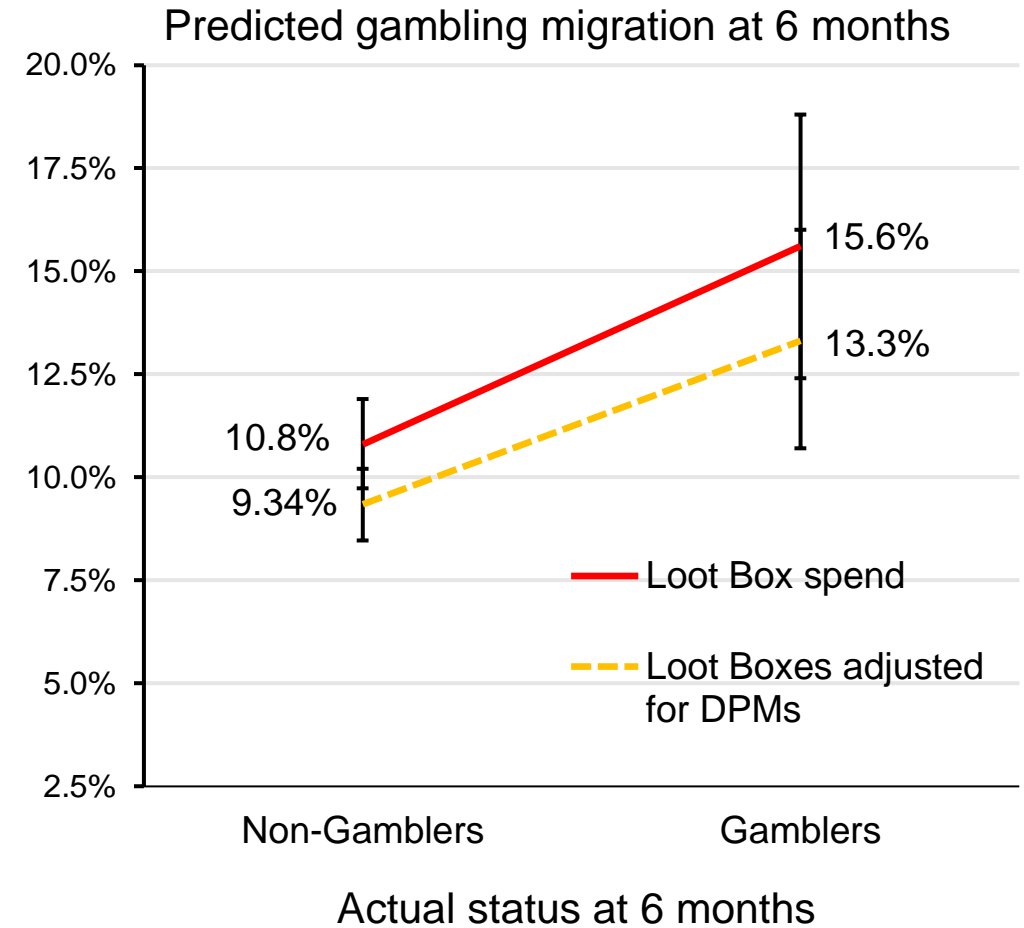
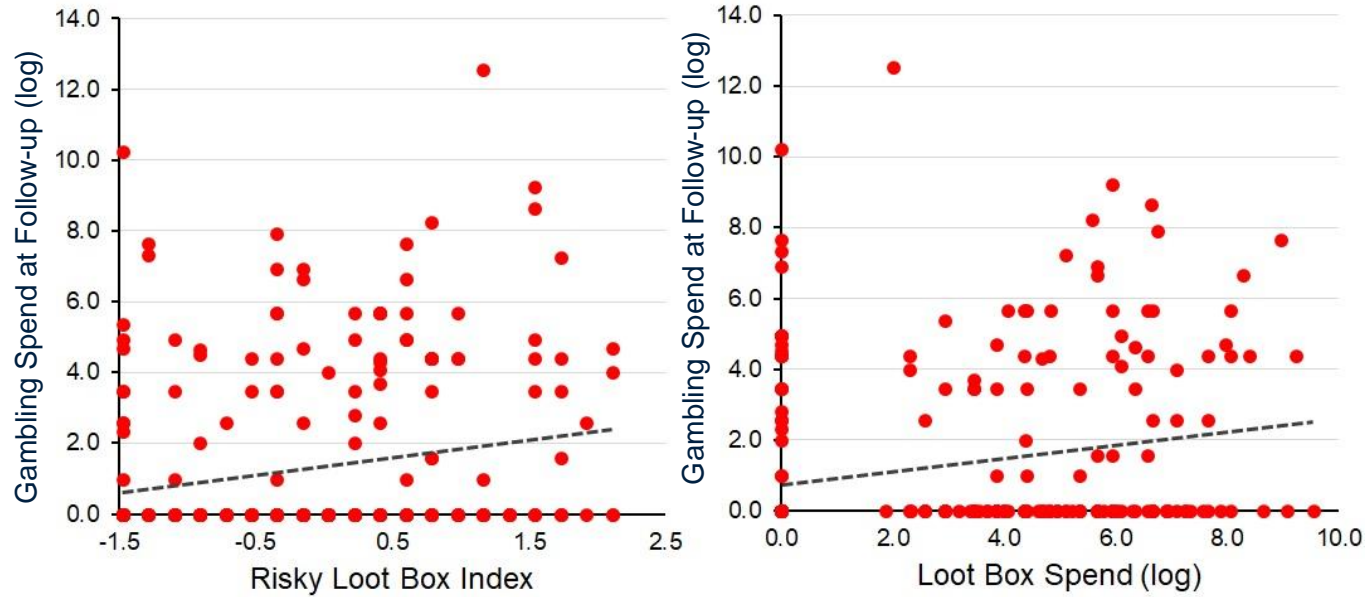
Baseline Assessment

	Non-Gamblers	Gamblers
N	415	221
N at follow-up	291 (70%)	155 (70%)
Age	22.3	22.7
Gender	62.4% men	76.9% men
Age started gaming	6.75	6.60
Gaming hours / week	16-20 hrs	16-20 hrs
Familiar with loot boxes	99.8%	99.5%
Purchased a loot box	61.0%	71.5% *
Sold an item from loot box	35.2%	45.7% *
12 m spend on loot boxes	US\$13.4	US\$33.5 *

Results corroborate the established link between loot box use and gambling, and are in line with the reverse pathway

Evidence for Migration

	Gambler f/up: no	Gambler f/up: yes
LB baseline: no	113	8
LB baseline: yes	145	25*
	258	33



So what?

- This study provides the first evidence that greater loot box use predicts future gambling
 - supports stricter enforcement of age restrictions, either of loot boxes within games, or of games containing loot boxes
 - Further research with longer follow-up needed to test link to harmful gambling
- The potential for excessive spending and financial harm in video games is independent of any legal discussion around ‘Is this gambling?’ e.g. implication for service provision
- Microtransactions are a fast moving sectors with high potential for predatory practices and need for consumer protection, with much to learn from RG



**CENTRE for
GAMBLING RESEARCH
at UBC**



a place of mind

THE UNIVERSITY OF BRITISH COLUMBIA

Department of Psychology