

# **CENTRE for GAMBLING RESEARCH at UBC**

## **The gamblers of the future? Migration from video games to gambling among young adults**

Dr Luke Clark

ICRG webinar  
22 Feb 2024



Raymond  
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a place of mind

THE UNIVERSITY OF BRITISH COLUMBIA

**Department of Psychology**

# Disclosures

## Grants / Research Support:

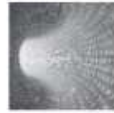
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Article



# Gamblification

## Gamblification: A definition

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new media & society  
1–20

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## Gamblification: risks of digital gambling games to adolescents

[Nerilee Hing](#)  • [Matthew Browne](#) • [Matthew Rockloff](#) • [Lisa Lole](#) • [Alex Myles Thomas Russell](#)

Published: June, 2022 • DOI: [https://doi.org/10.1016/S2352-4642\(22\)00124-9](https://doi.org/10.1016/S2352-4642(22)00124-9)

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## Social Casino Games



Loot Boxes



skins betting +  
eSports betting

## Simulated Gambling 'mini-games'



Images: Slotomania (Playtika), Grand Theft Auto V Online, CS:GO

# The Rise of the Loot Box

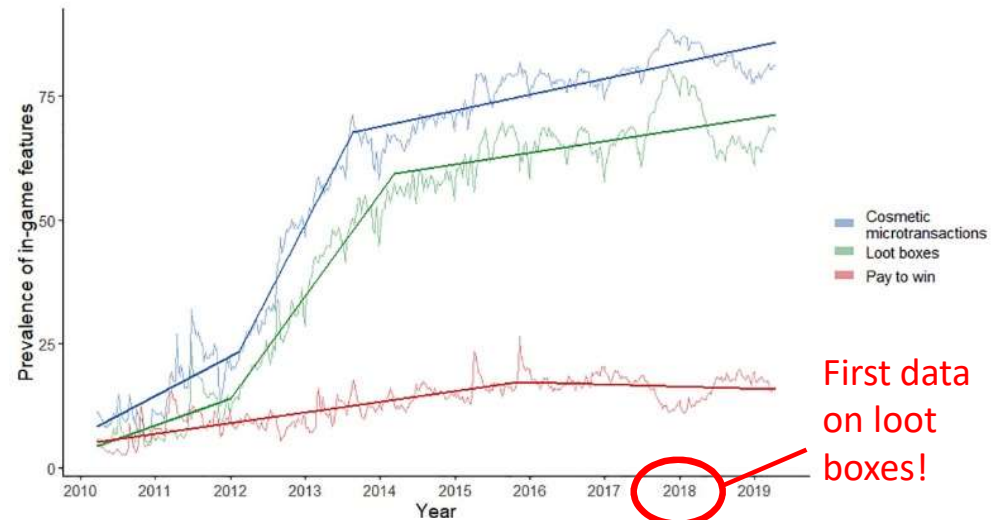


Fig 1. Time series graph showing the percent of the sample playing games with each relevant feature during the period under test. Models produced by three separate joinpoint regression analyses are superimposed on the graph as lines on top of each relevant time series.

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

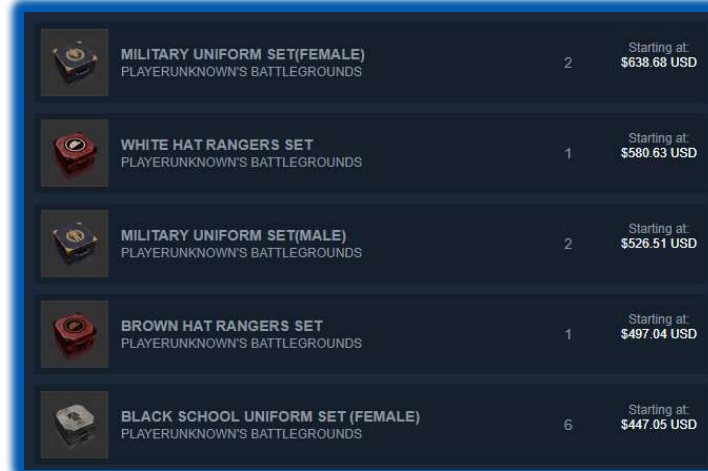
- Loot Boxes are a form of video game 'micro-transaction' involving a randomized reward
- Zendle et al (2020): this represents a sudden shift in the business model of video gaming. Since 2014, most popular games contain loot boxes and (non-randomized) cosmetic micro-transactions






## Where does the value of a virtual prize come from?

A small number of games e.g. CS:GO are linked to marketplaces where you can actually sell or exchange different prizes for cash. In other games (e.g. FIFA), you might be able to sell your account if you hold a very rare item.

But let's assume you can't do that!

- **Social value:** in a multi-player game, your friends can see you
- **Cosmetic vs functional value:** some items can give an in-game advantage
- **Nostalgia & sentimentality**



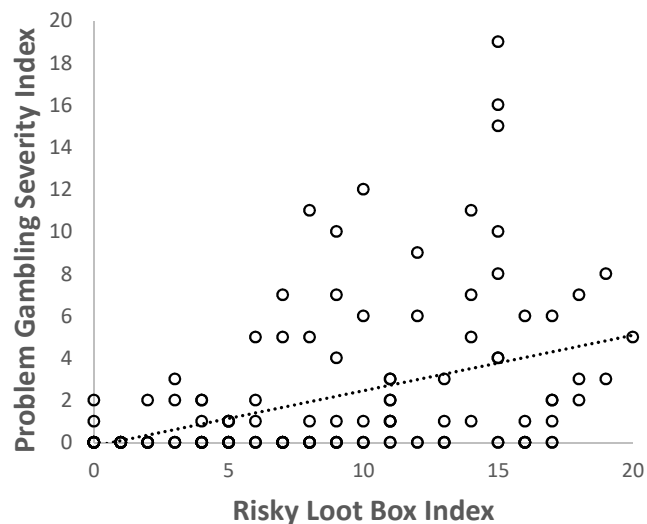
	MILITARY UNIFORM SET(FEMALE) PLAYERUNKNOWN'S BATTLEGROUNDS	2	Starting at: \$638.68 USD
	WHITE HAT RANGERS SET PLAYERUNKNOWN'S BATTLEGROUNDS	1	Starting at: \$580.63 USD
	MILITARY UNIFORM SET(MALE) PLAYERUNKNOWN'S BATTLEGROUNDS	2	Starting at: \$526.51 USD
	BROWN HAT RANGERS SET PLAYERUNKNOWN'S BATTLEGROUNDS	1	Starting at: \$497.04 USD
	BLACK SCHOOL UNIFORM SET (FEMALE) PLAYERUNKNOWN'S BATTLEGROUNDS	6	Starting at: \$447.05 USD



<https://earlygame.com/fifa/fifa-22-best-packs-fut-ultimate-team>

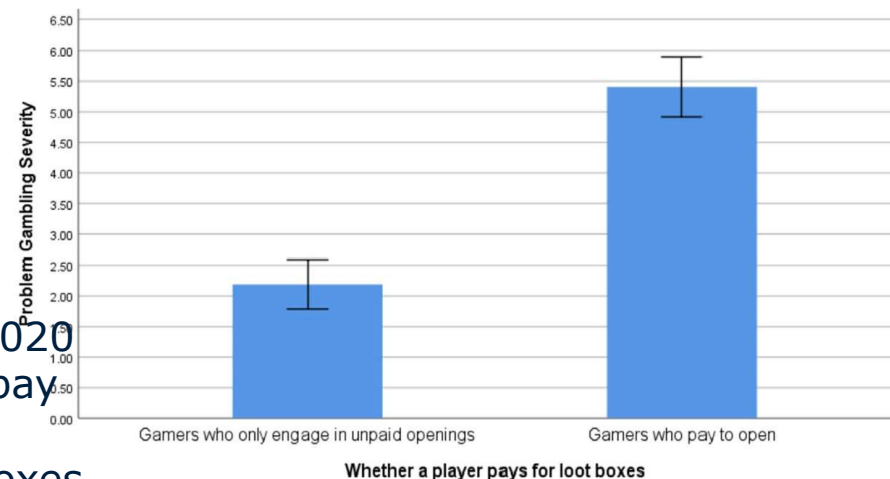
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## Exhibit A: loot box spending linked to problem gambling



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

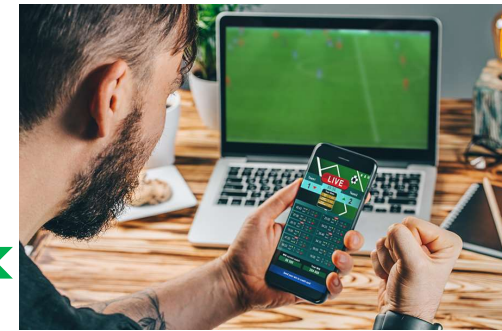
Zendle et al 2020  
Gamers who pay  
(rather than  
'grind') loot boxes  
are at risk



- 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**

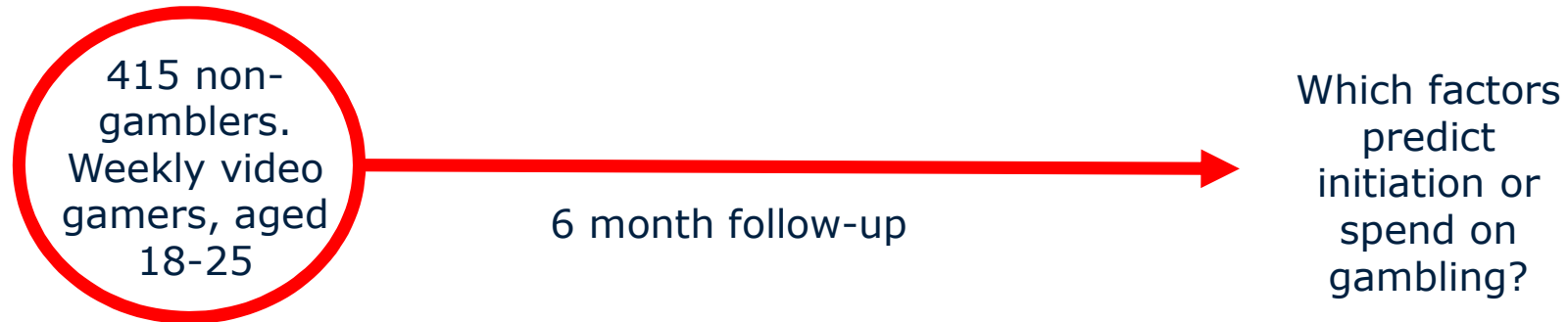
Nb. these 2 causal pathways have very different regulatory implications: age restrictions & protections directed to youth; versus harm reduction measures directed to existing gamblers.

Image credit: <https://www.theguardian.com/society/2022/jul/17/uk-will-not-ban-video-games-loot-boxes-despite-problem-gambling-findings>  
<https://focusgn.com/louisiana-approves-first-licence-for-fantasy-sports-betting>

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# Prospective Study



- Pre-registered hypotheses: does loot box spending and Risky Loot Box Index predict **initiation** of gambling (i.e. yes / no) or gambling **spend** (linear regression) 6 months later?
- Crowdsourced online sample (Prolific) from Canada, US, UK
- We also recruited 221 gamblers at baseline
- Data collection: baseline Dec 2020, follow-up June 2021



Gabriel Brooks

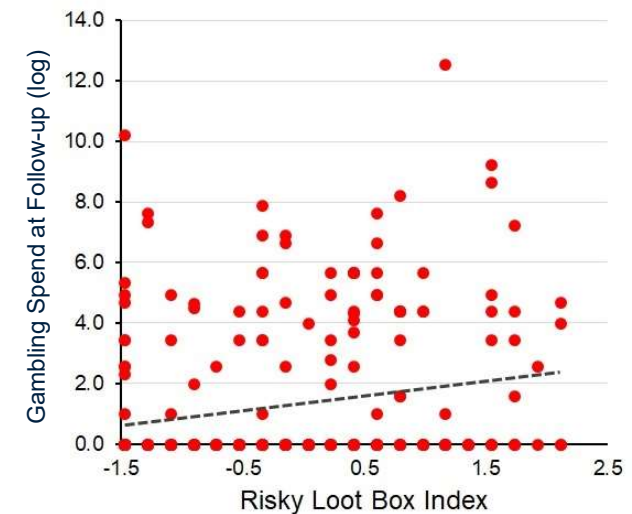
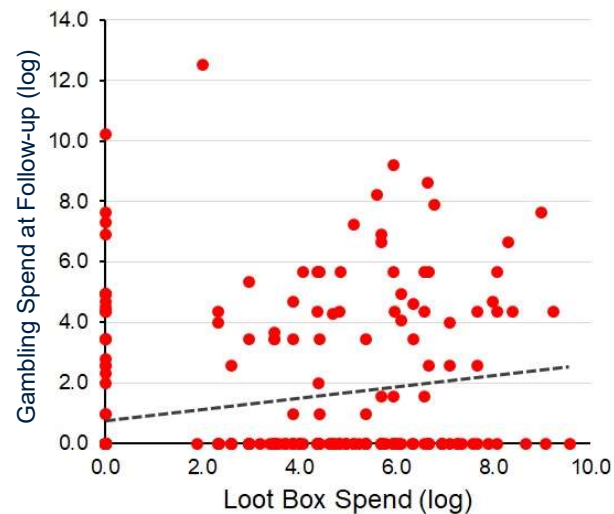
# Baseline Assessment

	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\$13.40	US\$33.50 *
12 m spend on DPMs	US\$35.60	US\$50.00 *

These group differences support the established cross-sectional correlation between loot box use and gambling

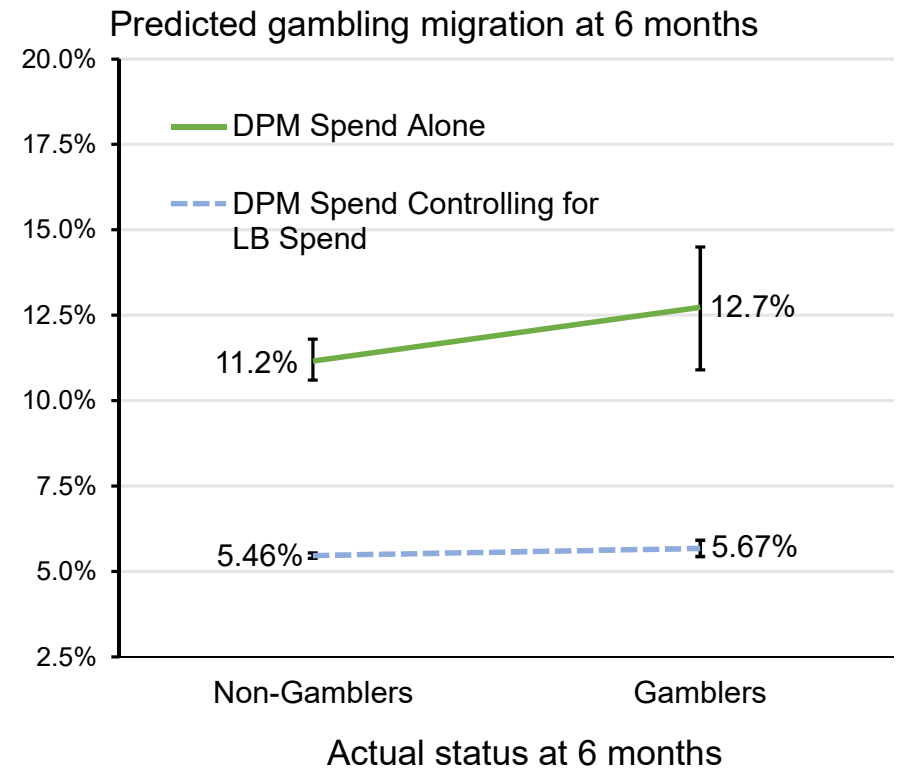
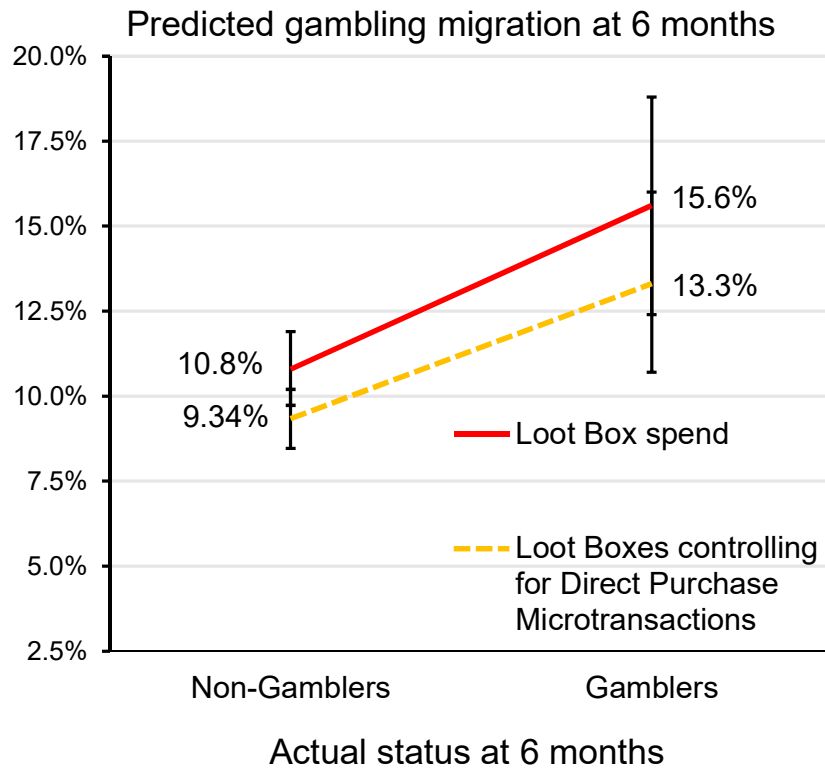
# Evidence for Migration

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



- Of participants who initiated gambling at Time 2, a disproportionate number purchased loot boxes at Time 1.
- Higher levels of spending on loot boxes ( $p = .001$ ), and higher scores on the Risky Loot Box Index ( $p = .001$ ), both predicted self-reported gambling spend 6 months later.

# Effects are driven by random-reward microtransactions



## Loot boxes – summary!

- This study provides the first evidence that greater loot box use predicts future gambling
  - Link appears to be driven by randomized reward (LBs vs DPMs)
  - supports age restrictions and stricter age enforcement
  - further research needed to establish any link with harmful gambling, and to test reverse pathway
- The potential for excessive spending / financial harm in video games is distinct from legal question “Is this gambling?” e.g. implications for service provision & public awareness



Image credit:

<https://www.thelancet.com/journals/lanchi/article/PIIS2352-4642%2822%2900124-9/fulltext>

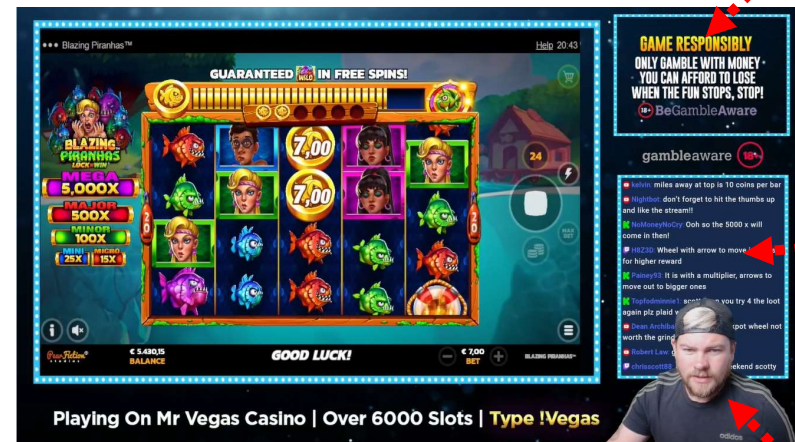
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# Gamification of Gambling!

Skill-based EGMs



Gambling live-streams



Some RG messaging

The chat

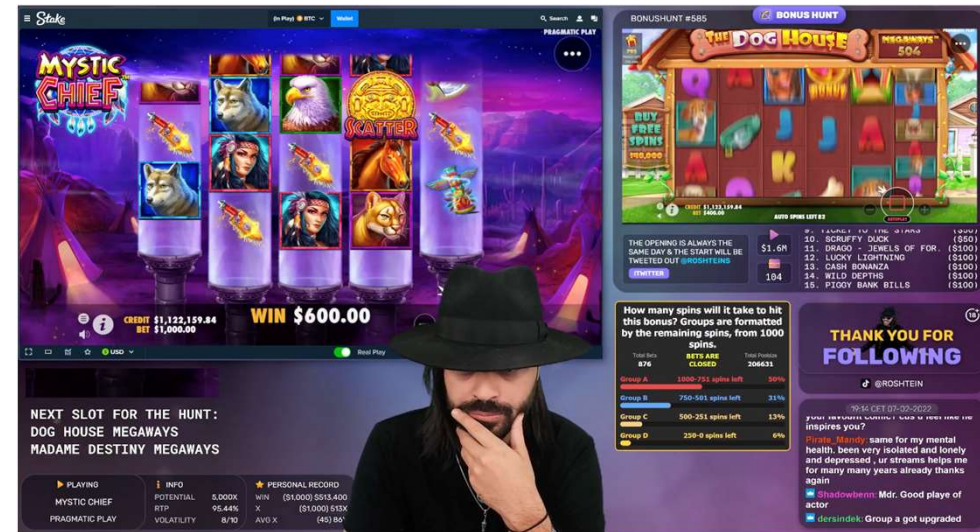
The streamer: live webcam

Image: <https://calvinayre.com/2017/09/26/casino/gamblit-gaming-real-money-pac-man-battle-casino/>  
FruitySlots (UK) on Twitch, 16 June 2023

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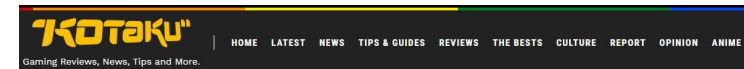
# The streams and the streamers

- Streamers have disclosed developing gambling problems as a result of their streaming (xQc on Twitch)
- Some streamers gamble on unlicensed / illegal websites (e.g. Slovakia e-poker); cryptocurrencies
- Sponsorship contracts appear ubiquitous, not always disclosed, to provide regular balance top-ups on the sponsor's website



# Limited Research on Gambling Streams

- Limited data at the current time: Zendle (2020, UK sample) shows 4% rate of past-year involvement and correlated with PGSI
- Abarbanel & Johnson (2021): side-games in the chat often borrow raffle mechanics (e.g. prize give-aways)
- Twitch has been through a series of regulatory 'crackdowns' to curb gambling, but meanwhile, other platforms emerge (Kick)
- Concerns for youth exposure: limited age gating, influencers, intense forms of gambling (Hoebanx & French 2023)



## Twitch Makes Useless Attempt To Limit Gambling Streams

Gambling streamers can no longer share referral codes or links, but is that enough?

By Mike Fahey Published August 13, 2021 | Comments (31)



Aug 2021 (and Oct 2022)

Forbes

## Kick Just Stole xQc And Amouranth, Twitch's Top Male And Female Streamers, Within 48 Hours

Paul Tassi Senior Contributor @  
News and opinion about video games, television,  
movies and the internet.

Follow

5

Jun 19, 2023, 08:57am EDT

June 2023

See Abarbanel, Avramidis, Clark & Johnson 2021  
*The Conversation*

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# Regulation Motives vs Evoked Craving: an ironic effect?

Watching gambling  
to regulate cravings



*"I intentionally watch gambling streams to help myself cope with my cravings to gamble"*



Cravings triggered by  
watching gambling



*"When I watch gambling online, it seems to increase my urge to gamble for real money"*

Adapted from Hollingshead, Wohl et al (2020) for Social Casino Games

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# Dataset and Participants

- Data collected from Prolific (UK, US, Canada, Australia, Ireland, NZ) in 2022
- Study 1: among people with past 3 m gambling ( $n = 965$  after cleaning), compare gambling stream **viewers** vs **non-viewers** ( $n = 221$  vs  $642$ )
- Study 2: among gambling stream viewers ( $n = 271$  after cleaning), do people report watching streams to **regulate** their desire to gamble and/or that streams **evoke** a craving to gamble?
  - relationships with PGSI



Raymond  
Wu

# Study 1: among gamblers, who watches gambling streams?

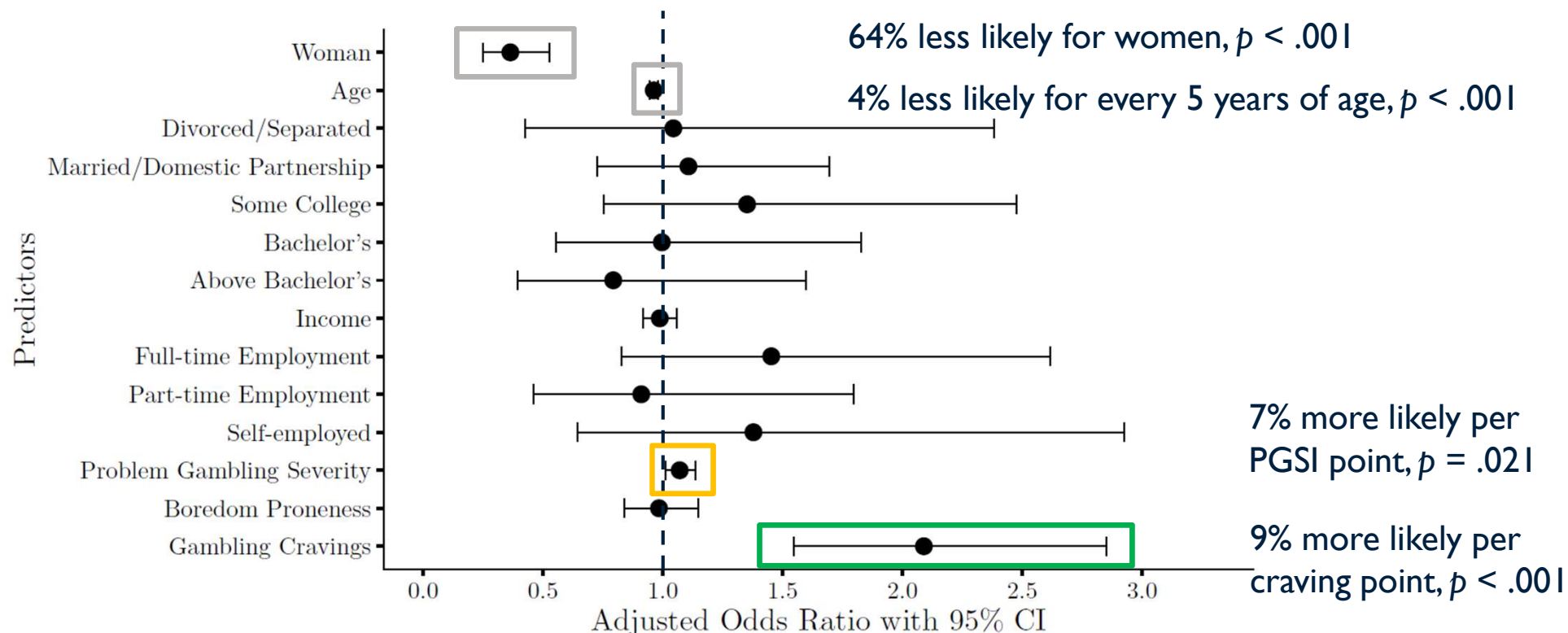
	Viewers	Non-viewers
N	221 (23%)	642 (66%)
Age	36.8 (11.0)*	42.1 (12.5)
Gender	45.2% men*	29.6% men
Employment (% full time)	65.6%*	49.9%
Watched non-gambling content	90%	78.5%
Gambled before watching	76%	-
PGSI	4.5 (5.0)*	1.6 (3.0)
Gambling cravings (GUS)	11.1 (5.9)*	7.5 (3.3)
Boredom Proneness Scale	3.5 (1.3)*	3.0 (1.3)

nb 11% "I have done this but not in the past year" and excluded from group comparisons

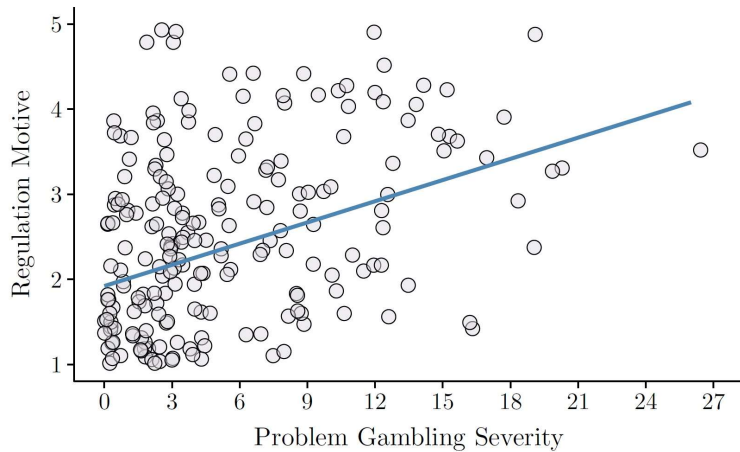
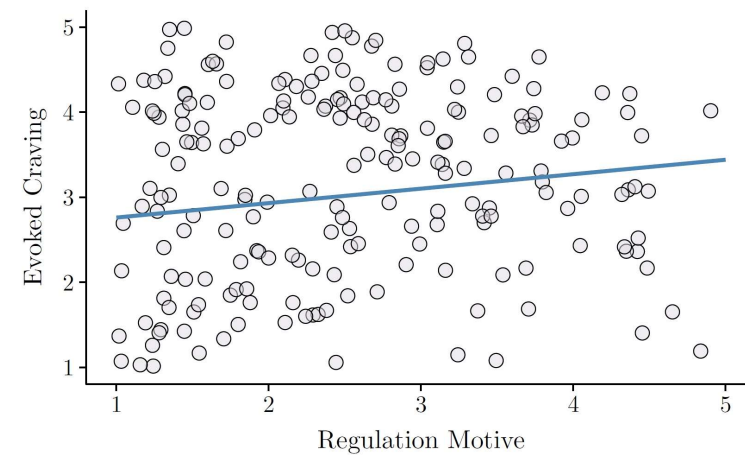
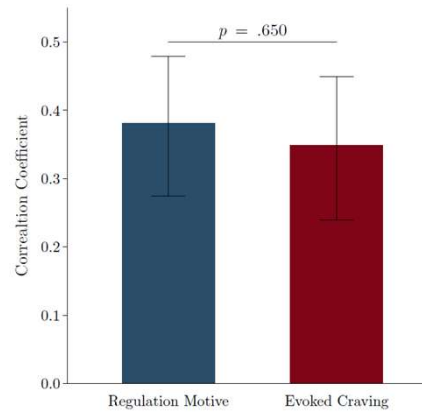
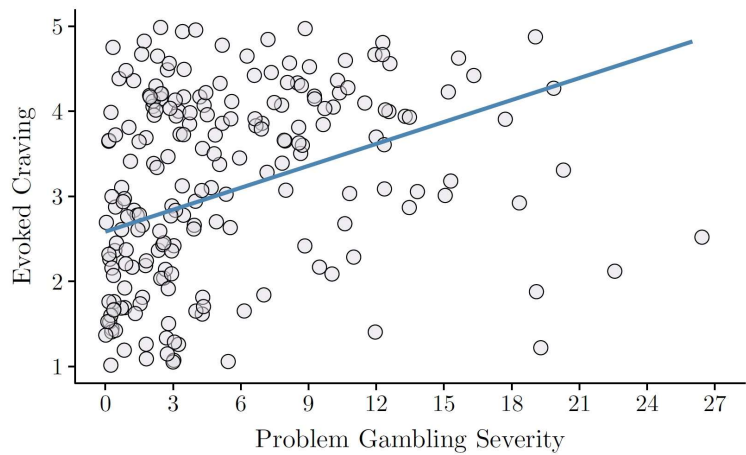
\* p<.05

No diffs on education, relationship status, income

# Study 1: Viewers vs non-viewers - multivariate model

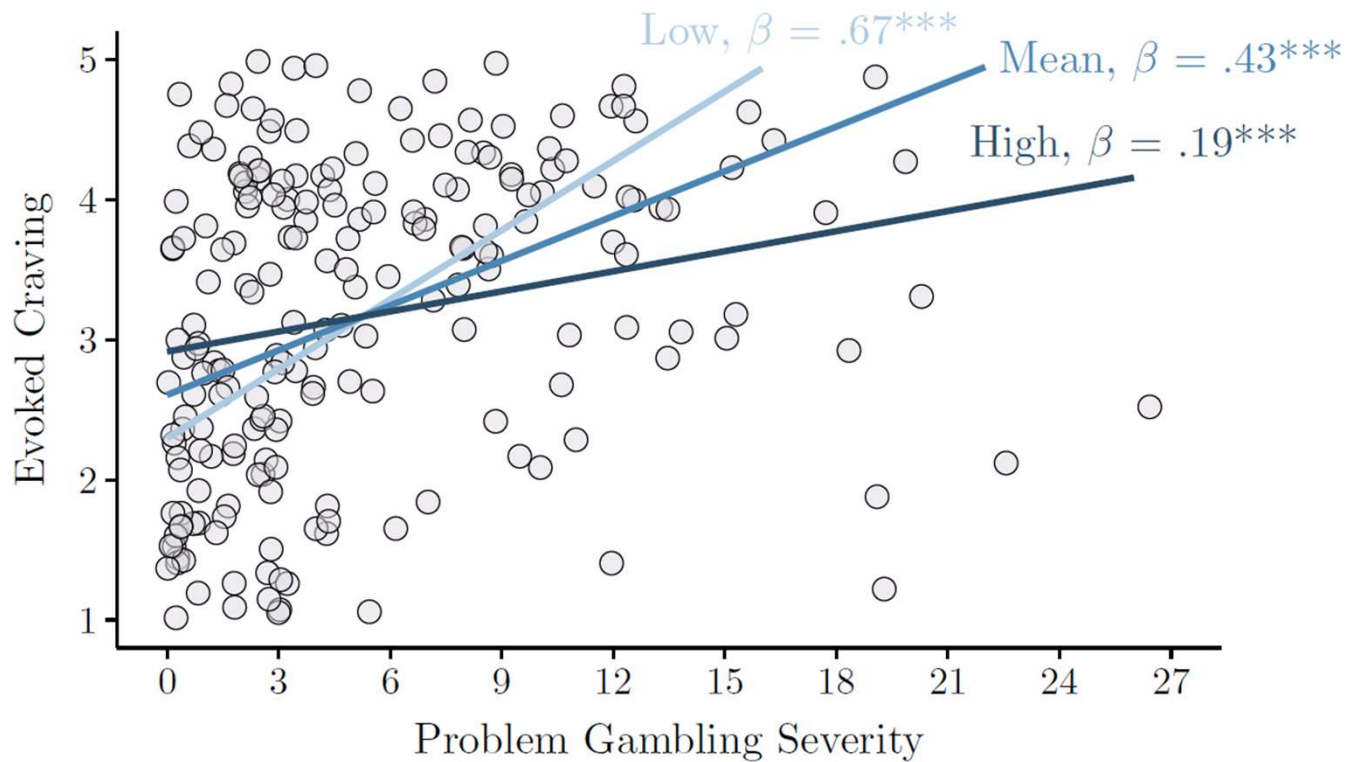


Reference groups: Men, Single, High School Education, Unemployed



- Study 2,  $n = 271$ : 92% reported past 3 m gambling, mean PGSI = 4.6
- Are higher PGSI gamblers drawn to gambling streams to regulate their cravings but, *ironically*, experience more cravings as a result?

# The effect of PGSI on evoked cravings depends on regulation motives



For high PGSI, the predicted mean evoked craving was 3.38 when regulation motives were high, but 3.91 when regulation motives were low,  $d = -.46$

## Gamblification - what can parents do?

### WHAT CAN I DO TO HELP MY CHILD?



- Talk to your teen about loot boxes and the connection to gambling. (4,2,7,11)
- Many teens believe it is more cost effective to buy loot boxes than to pay directly for a character upgrade. Explain to your teen this is not true and help them set a budget for upgrade purchases. (4,11)
- Consider reasonable time limits for online gaming. Research suggests excessive gaming (more than 30 hours per week) is associated with an increased risk of problem gambling. (7)
- Encourage your teen to come to you if they are struggling with loot boxes. Research from teen media use suggests that warm and engaging parenting (rather than strict controls) encourages teens to self-disclose when they have a problem. (8)

International Journal of Mental Health and Addiction (2022) 20:398–425  
<https://doi.org/10.1007/s11469-020-00370-5>

ORIGINAL ARTICLE

### An Exploratory Study of Individual and Parental Techniques for Limiting Loot Box Consumption

Liurun Gong<sup>1</sup> · Simone N. Rodda<sup>1</sup> 

Published online: 17 July 2020

 Springer Science+Business Media, LLC, part of Springer Nature 2020



<https://gamblingresearch.sites.olt.ubc.ca/files/2023/06/PSYC-319-Instagram-Monica-Hinch-68455807.pdf>

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# Take-home messages

- The worlds of gambling and video gaming are moving closer together
- We see cases of gamblification where the video gaming sector incorporates:
  - Direct opportunities to gamble (eSports, skins betting)
  - Cosmetic aspects of gambling (e.g. mini-games)
  - Underlying randomized reward structure
  - Loot boxes borrow both cosmetic and structural aspects of gambling
- We also see instances where gambling is borrowing elements from the video gaming landscape
- While youth are a vulnerable group, we need to also consider impacts on adults who play video games, and potential for financial harms



# Centre for Gambling Research

## Graduate Students



Raymond Wu

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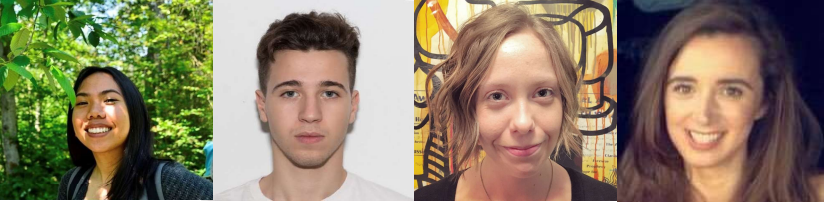
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