



# THE LASTING IMPACTS OF COVID ON GAMBLING

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# Disclosures

- **Funding:** This research was funded in part by the AGRI National Project (ANP) from AGRI, the Canadian Consortium for Gambling Research, the Canadian Centre for Substance Abuse and Addiction, and the Gambling Research Exchange of Ontario (baseline data); an Alberta Gambling Research Institute (AGRI) Major Grant awarded to Carrie A. Shaw and David Hodgins (COVID ANP COVID Supplementary Study Waves 1 & 2) and two additional Major Grants awarded to Carrie A Shaw and Robert J Williams from the Alberta Gambling Research Institute (AGRI) for COVID Waves, 3, 4 and 5.
- **Conflicts of Interest:** There are no potential conflicts of interest for this presentation or research.
- **Prior dissemination:** Results for Wave 1 & 2 of the ANP COVID Supplementary study have been published

# The Natural Experiment

- In early 2020, the novel COVID-19 virus was declared a worldwide pandemic and each country began formalizing responses to the virus. By March 25<sup>th</sup>, 2020, most commercial land-based gambling venues in Canada had closed as they are deemed non-essential services (AGRI, n.d.; Stevens, 2020). This unprecedented closure of commercial gambling venues provided the natural experimental conditions to examine gambling engagement, motivations, harms, and treatment seeking in the absence of most legal face-to-face gambling opportunities.
- Across two years, pandemic response measures included the iterative relaxation and reinstatement of pandemic related restrictions on non-essential businesses.
- In the Fall of 2022, non-essential businesses were re-opened without pandemic related response measures.

# Related Research

## Cross sectional

- Pandemic related changes such as changes by game type, platform, etc. (e.g., Brown & Hickman, 2020; Gainsbury et al., 2020; International Gambling Business, 2020; Moraine, 2020, Price, 2022)

## Longitudinal

- Player data (Auer et al. 2020; Auer et al., 2023) – all gamblers, sports bettors
- Harmed Individuals (Gunstrone et al. (2020) – sample of previously impacted gamblers/significant others report increased gambling
- Health Survey (Emond et al 2022) – UK youth increase in online during lockdown and alcohol w/ gambling
- Others since land-based restrictions (e.g., Australia: Black et al 2021, Hing et al. 2024; ; Sweden: Mansson et al 2021, etc.).

## Other

- Reviews (e.g., Quinn et al., 2022, etc.)
- Calls for safe strategies for returning to land-based gambling (Stark e& Robinson, 2021)

# Research Aims

## Describe

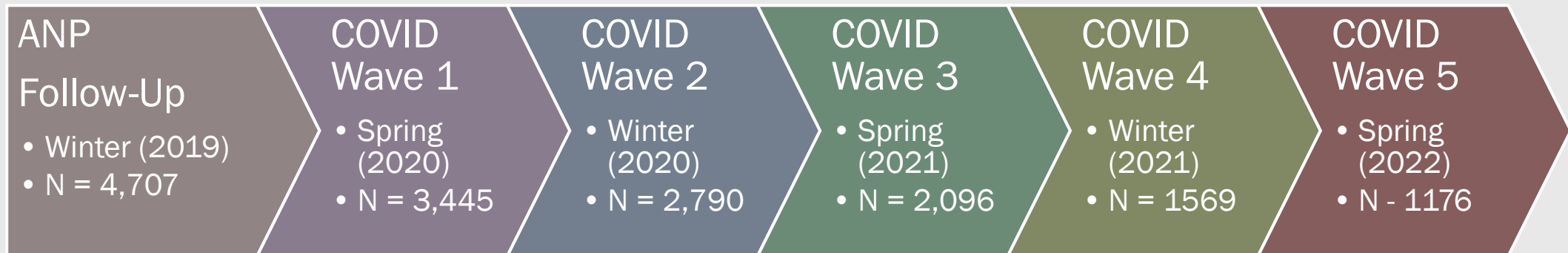
Describe changes in Canadian gambling across time

- Identify if gambling returned to pre-pandemic levels

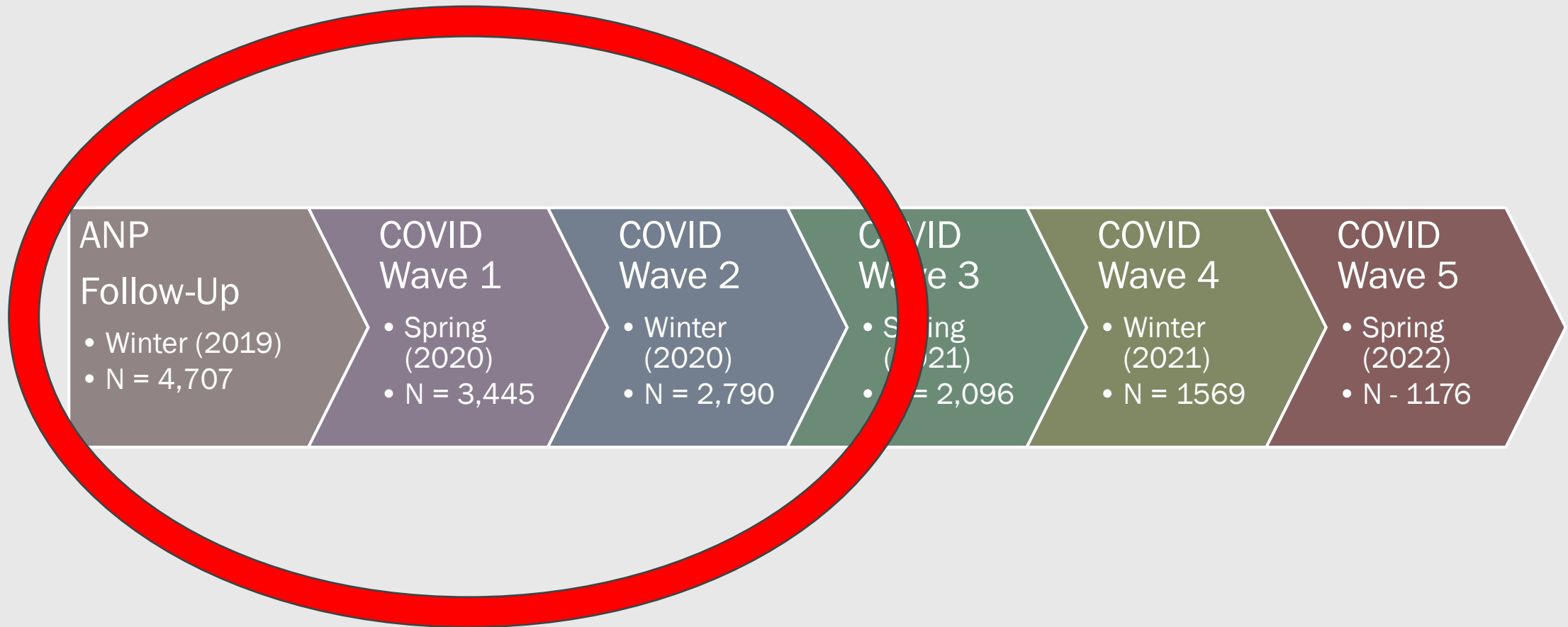
## Examine

Examine the impact of pandemic related variables on problem gambling when the 'new normal' had been established

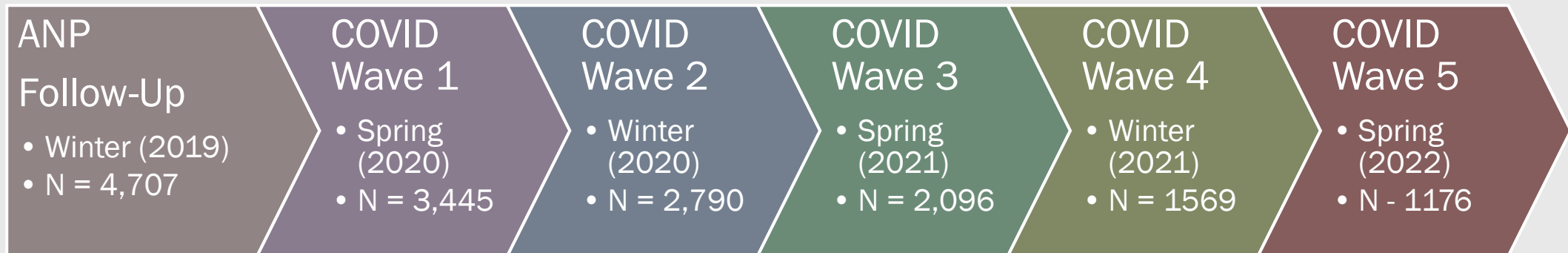
# Data Collection



# Data Collection



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# Research Method

- Comorbidities
  - (DSM Criteria)
- Gambling Variables
  - Gambling Engagement (frequency, # of games, time/session, total losses, platform) (Williams et al. 2017)
  - PGSI (Ferris & Wynne, 2001)
  - Gambling Fallacies Measure (Leonard, Williams, & Vokey, 2015)
- Demographics
- Personality (Impulsivity - NEO-PI-R, Costa & McCrae, 1992)
- Covid Specific Experience (Grasso et al., 2020)
  - Employment
  - Health (self & others)

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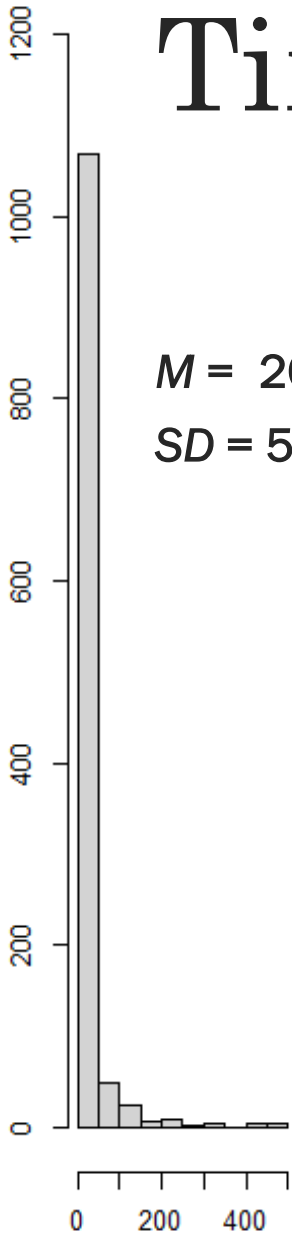
COVID  
Waves



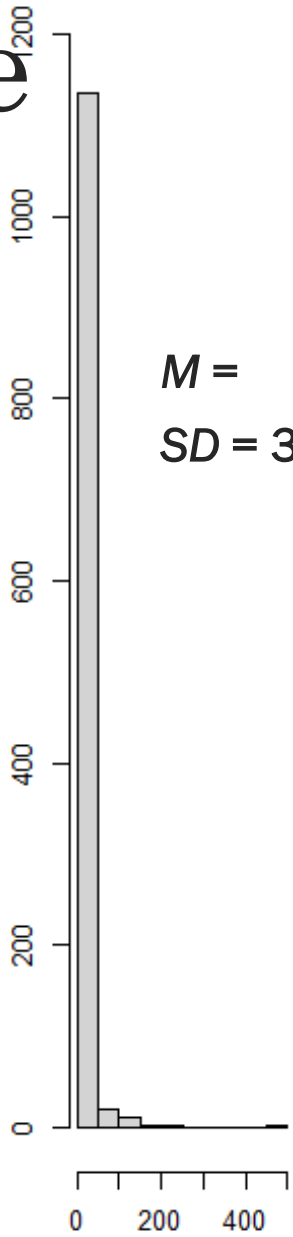
# RESULTS

AIM 1

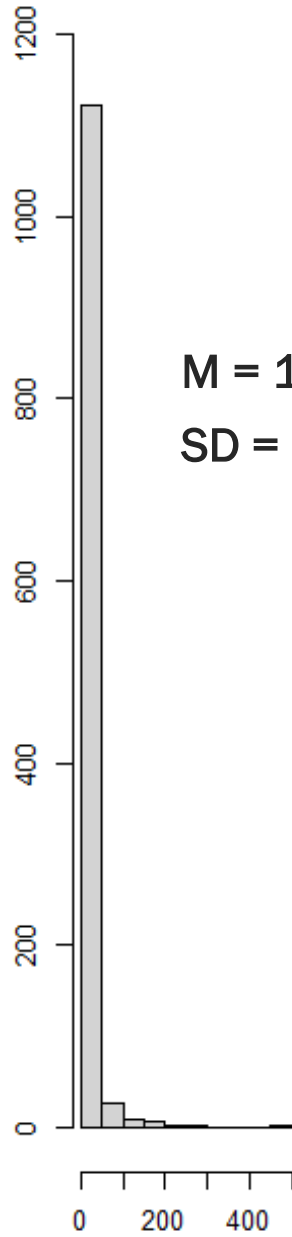
# Time



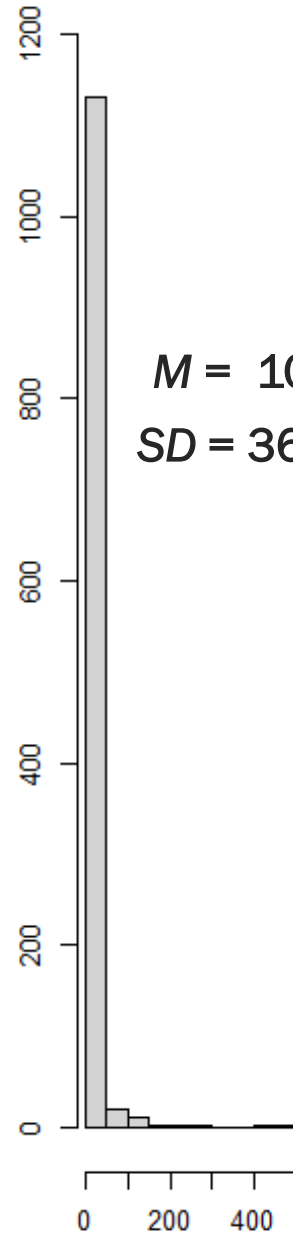
Winter 2019



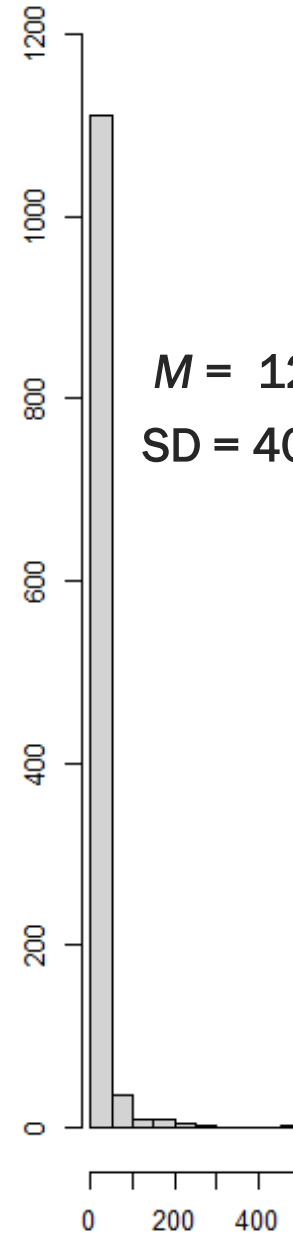
Spring 2020



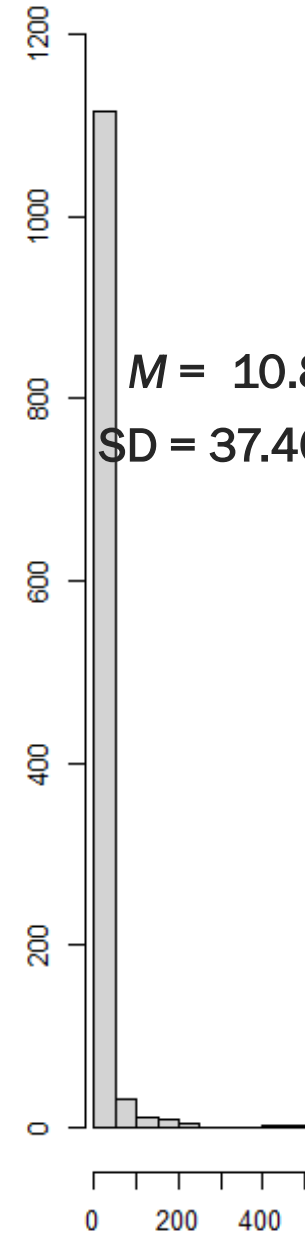
Winter 2020



Spring 2021

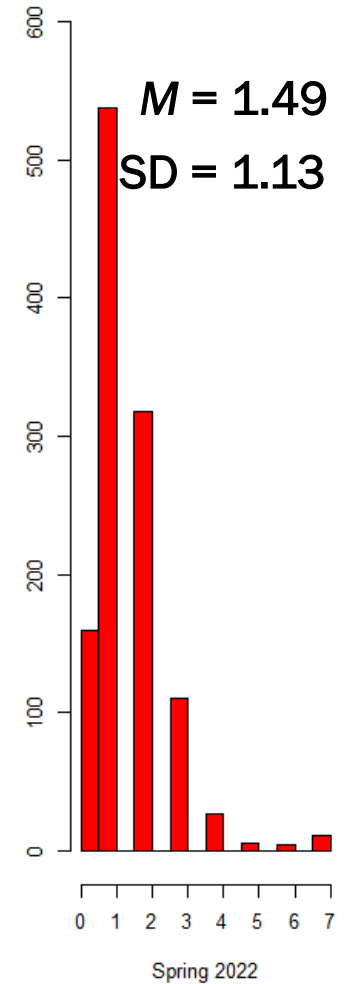
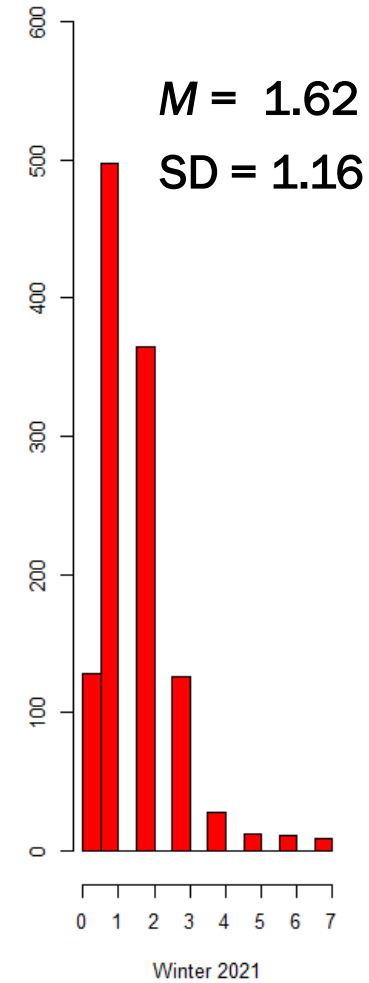
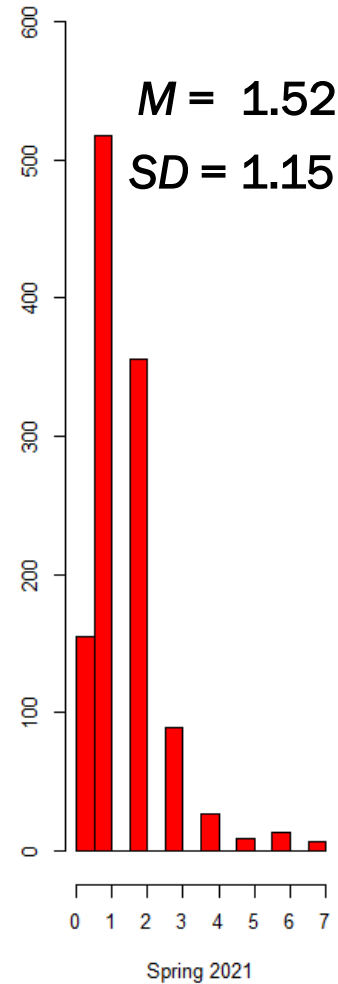
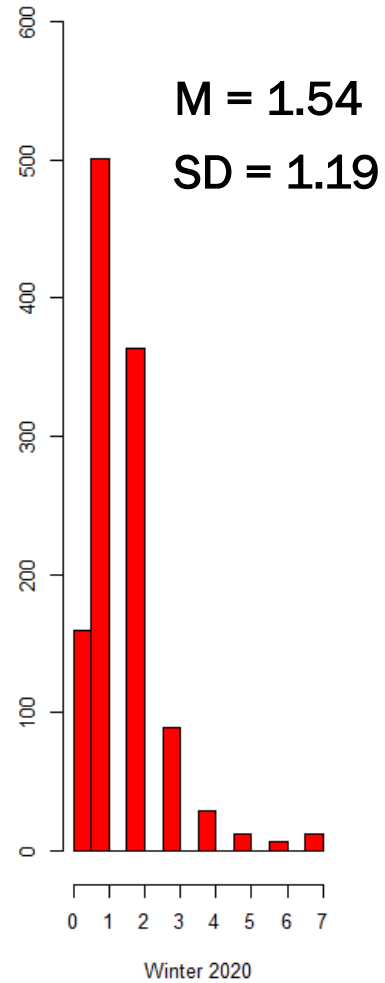
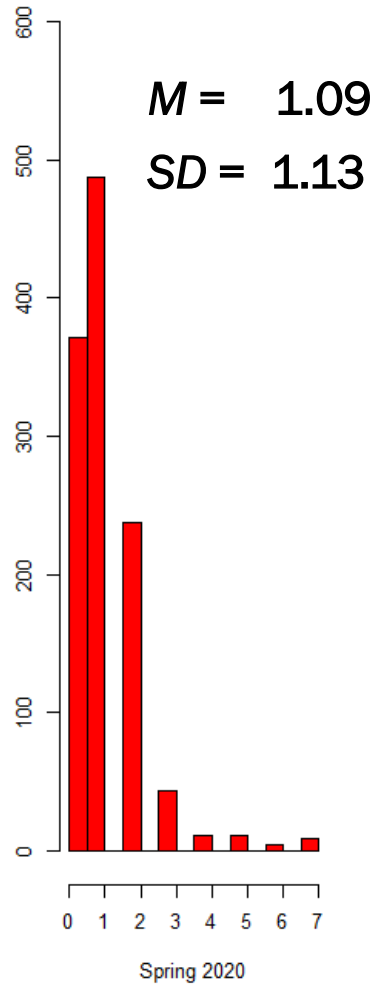
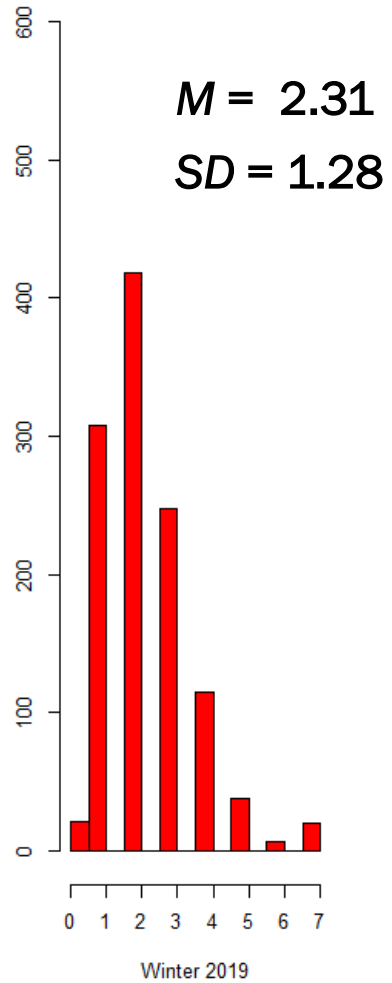


Winter 2021

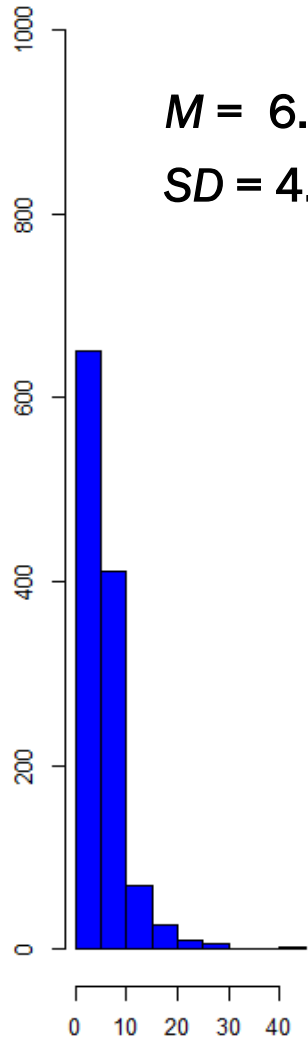


Spring 2022

# Number of games

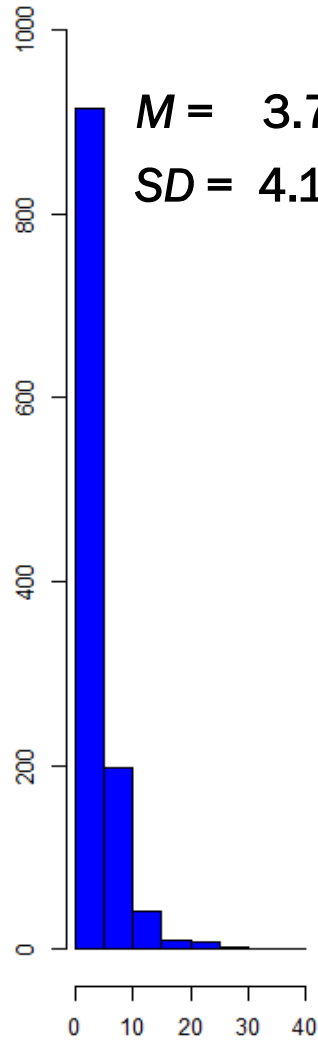


# Frequency



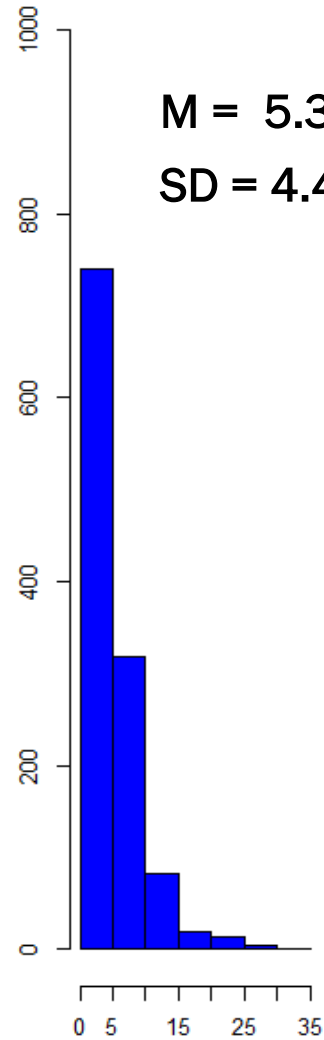
$M = 6.03$   
 $SD = 4.47$

Winter 2019



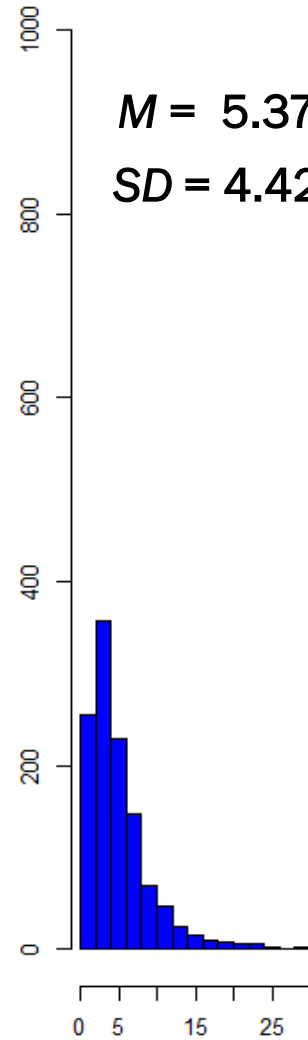
$M = 3.72$   
 $SD = 4.17$

Spring 2020



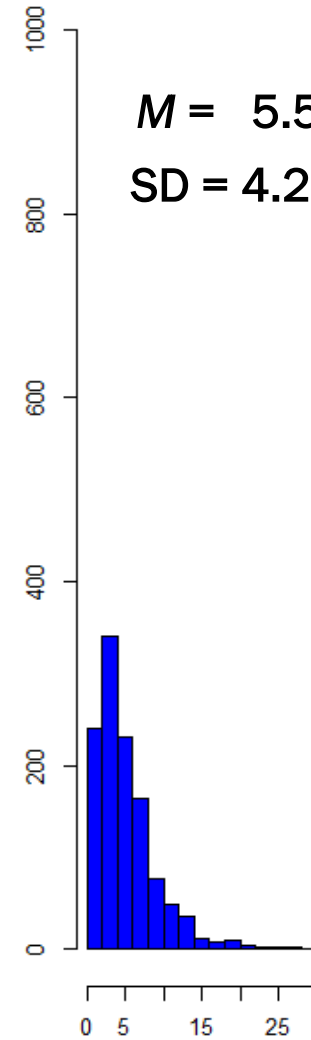
$M = 5.32$   
 $SD = 4.40$

Winter 2020



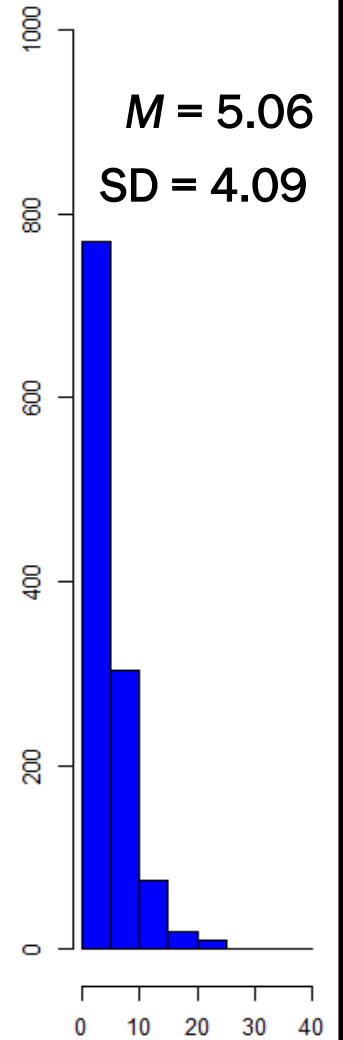
$M = 5.37$   
 $SD = 4.42$

Spring 2021



$M = 5.54$   
 $SD = 4.27$

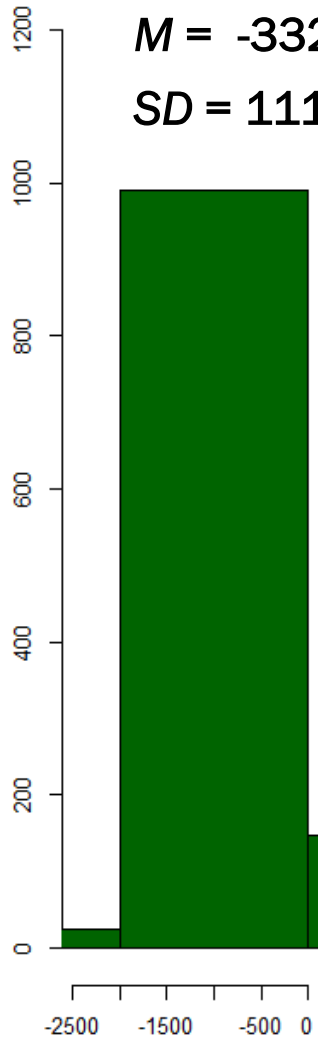
Winter 2021



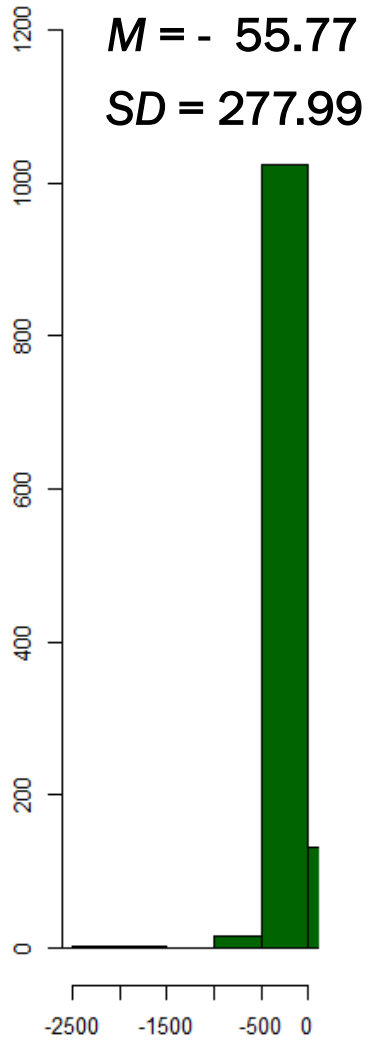
$M = 5.06$   
 $SD = 4.09$

Spring 2022

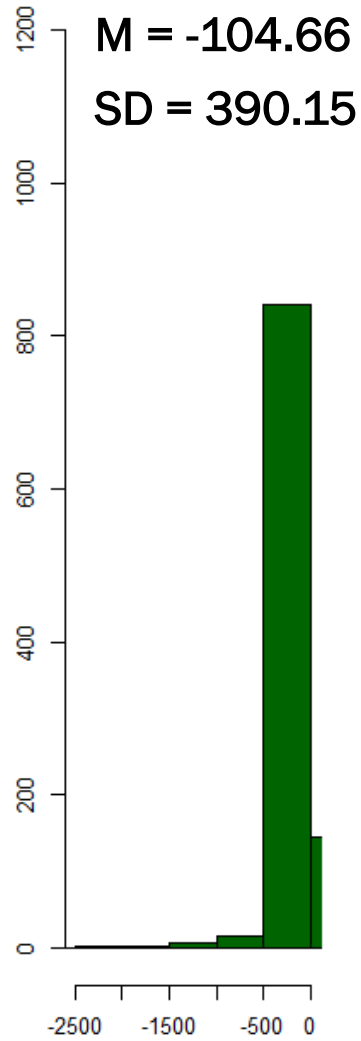
# Gambling losses (\$)



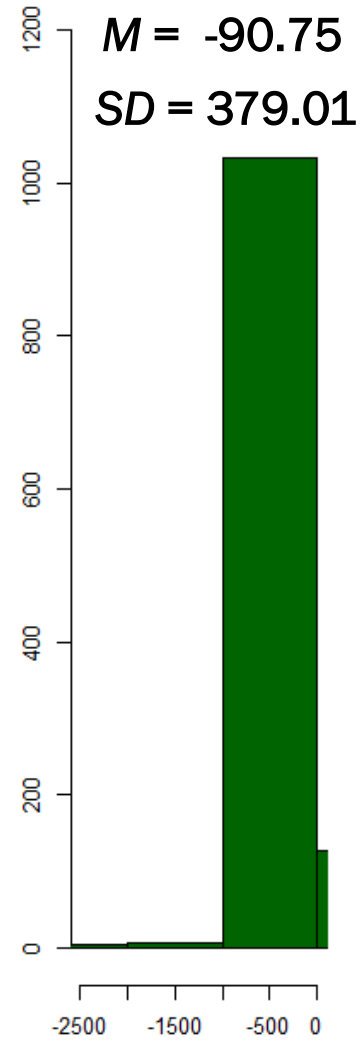
Winter 2019



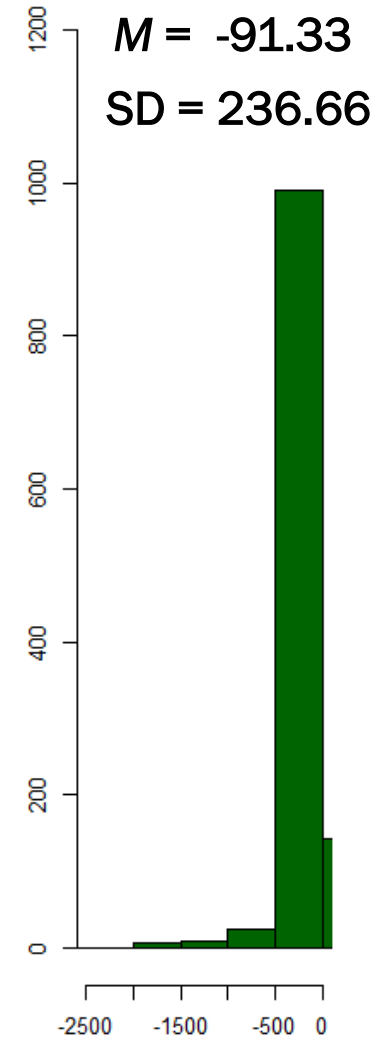
Spring 2020



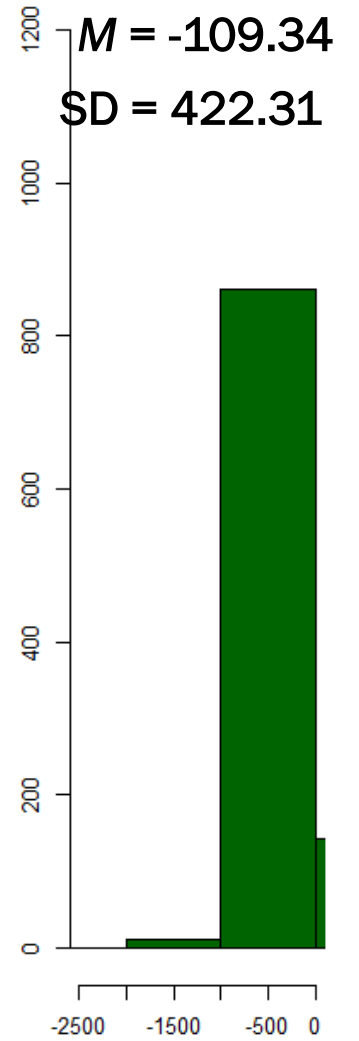
Winter 2020



Spring 2021



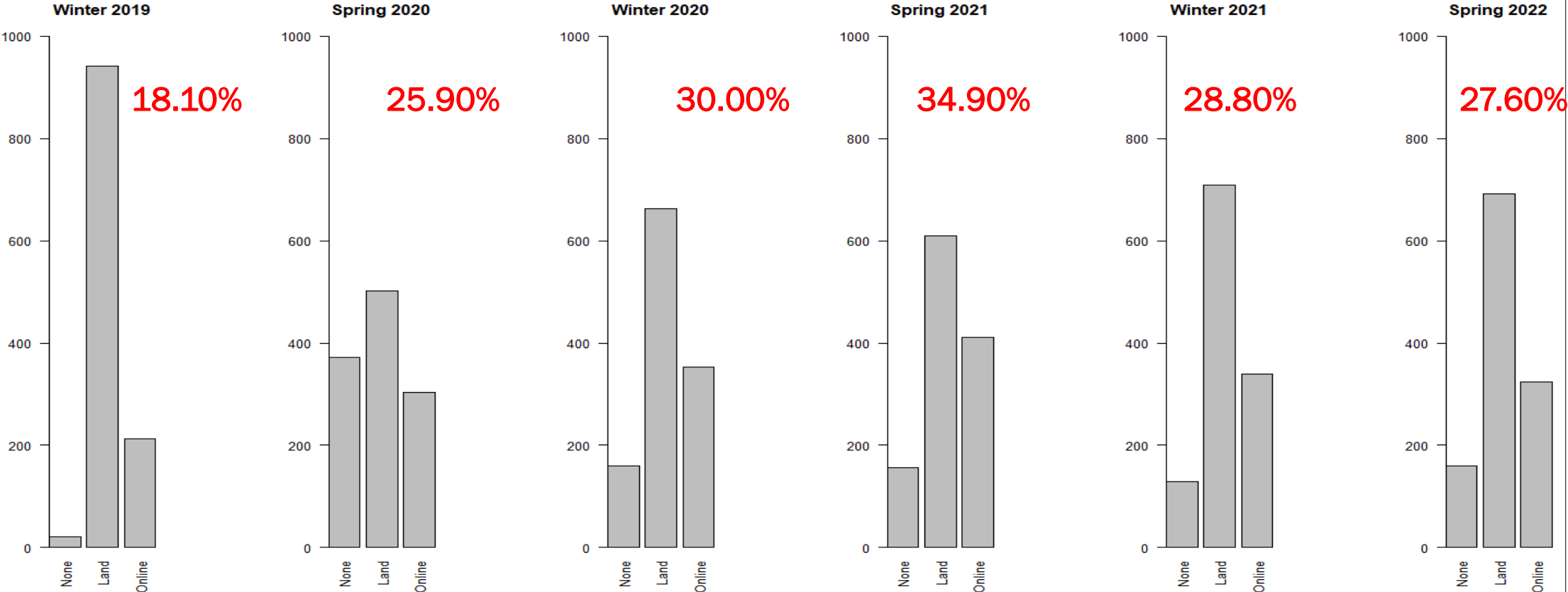
Winter 2021



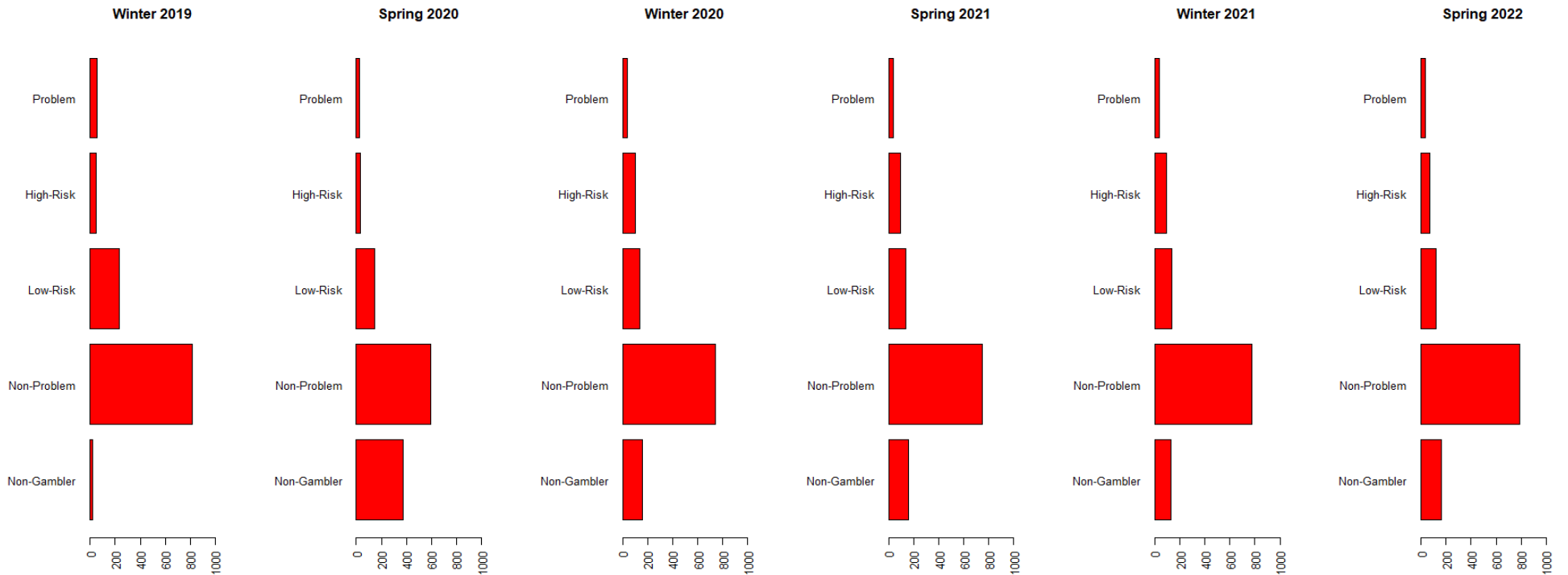
Spring 2022



# Platform



# Gambling Category



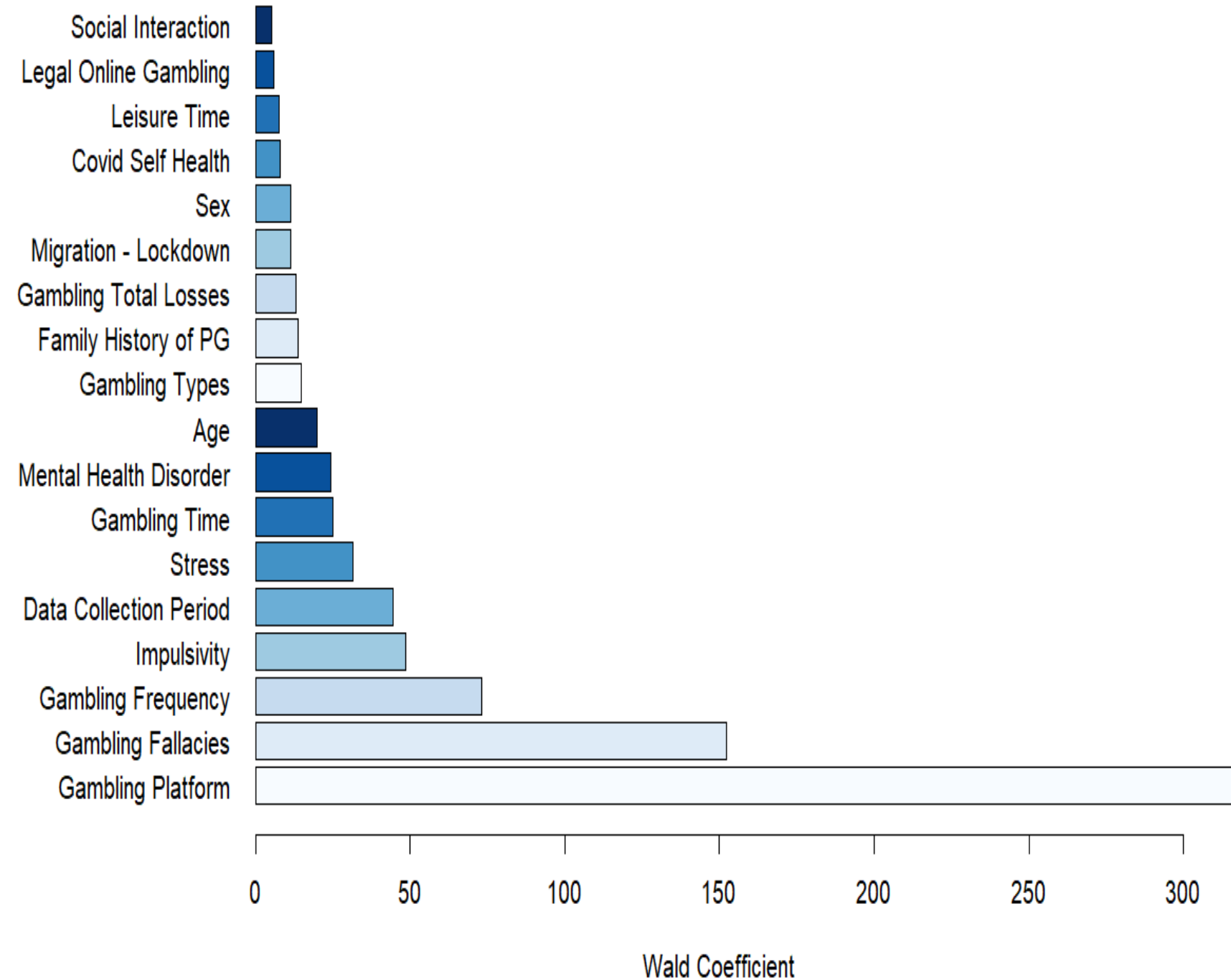
	Winter 2019	Spring 2020	Winter 2020	Spring 2021	Winter 2021	Spring 2022
<b>Problem</b>	<b>4.80%</b>	<b>2.50%</b>	<b>3.40%</b>	<b>2.90%</b>	<b>3.10%</b>	<b>3.10%</b>
<b>Moderate Risk</b>	<b>4.20%</b>	<b>3.00%</b>	<b>8.50%</b>	<b>8.10%</b>	<b>8.00%</b>	<b>6.20%</b>
<b>Low Risk</b>	<b>20.00%</b>	<b>12.60%</b>	<b>11.50%</b>	<b>11.90%</b>	<b>11.80%</b>	<b>10.10%</b>
<b>Non-Problem</b>	<b>69.30%</b>	<b>50.40%</b>	<b>63.00%</b>	<b>63.90%</b>	<b>66.20%</b>	<b>67.00%</b>
<b>Non-Gambler</b>	<b>1.80%</b>	<b>31.50%</b>	<b>13.60%</b>	<b>13.30%</b>	<b>10.90%</b>	<b>13.60%</b>



# RESULTS

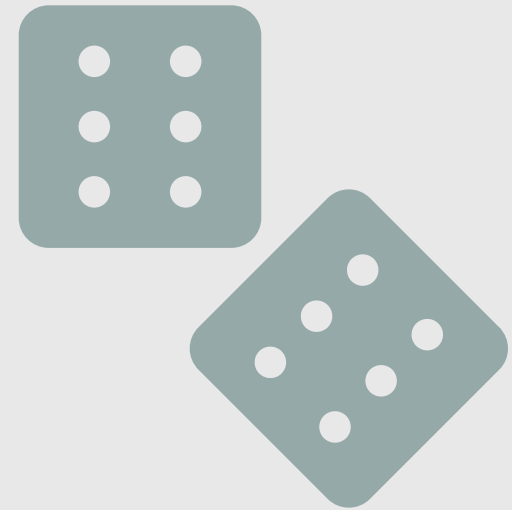
AIM 2

# PREDICTING GAMBLING SEVERITY CATEGORY



# Conclusions

- Gambling engagement declined during lockdown but began to increase post-lockdown
  - Engagement did not return to pre-pandemic levels
- A significant minority migrated to online gambling with most returning to land-based engagement post-lockdown
  - Rises in online did not return to pre-pandemic levels but considerable fluctuation is evidenced
- The return to land-based venues was a strong predictor for PG category
- COVID specific variables were significant in the prediction of PG scores two years after lockdown



A night sky filled with stars and a meteor streak, with a dark mountain range silhouette in the foreground. The text "THANK YOU!" is centered in white serif font.

THANK YOU!