

# Gaming loot boxes and gambling among adolescents: new perspectives, new understandings



2024

Jeffrey Derevensky, Ph.D.  
William Ivoska, Ph.D.

# Background



King & Delfabbro (2018), Molde et al. (2018), Zendle & Cairns (2018; 2019), Zendle & Meyer (2019), Delfabbro et al (2020), Derevensky et al. (2021), Montiel et al. (2022), Marchica et al. (2022), Spicer et al. (2022),) have all raised concerns about the relationship between gaming and gambling.

The World Health Organization (WHO) has recognized gaming disorder in ICD-11.

Several legislative governments consider loot boxes to be an illegal form of gambling.

Growing number of class action lawsuits against GAMING companies suggesting loot boxes purchases by adolescents results in both additive gaming disorders and gambling disorders.

# Behavioral Health Study



This behavioral health study is completed every two years and is supported by the Wood County Educational Service Center, the Wood County Alcohol, Drug Addiction and Mental Health Services Board (ADAMHS) and the Wood County Prevention Coalition.

A wide diversity of student health and well-being behaviors are examined.

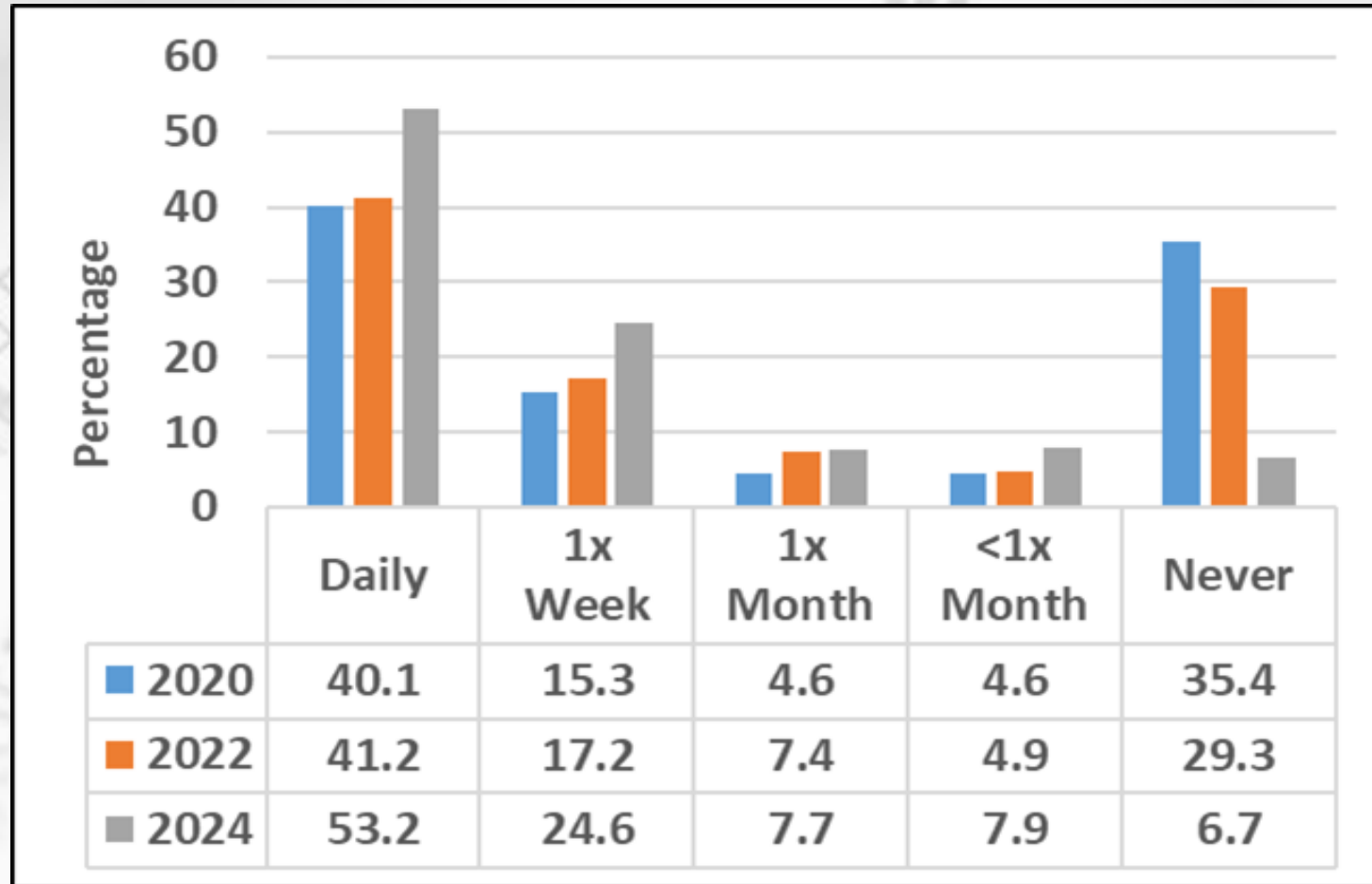
In 2020 *gaming* was added into the survey with some modifications in 2024.

The 2024 survey includes 9,322 students in grades 5-12 (49.5% M; 46.8% F; 1.9% non-binary; 1.8% refused to answer gender)

# Adolescent Gaming



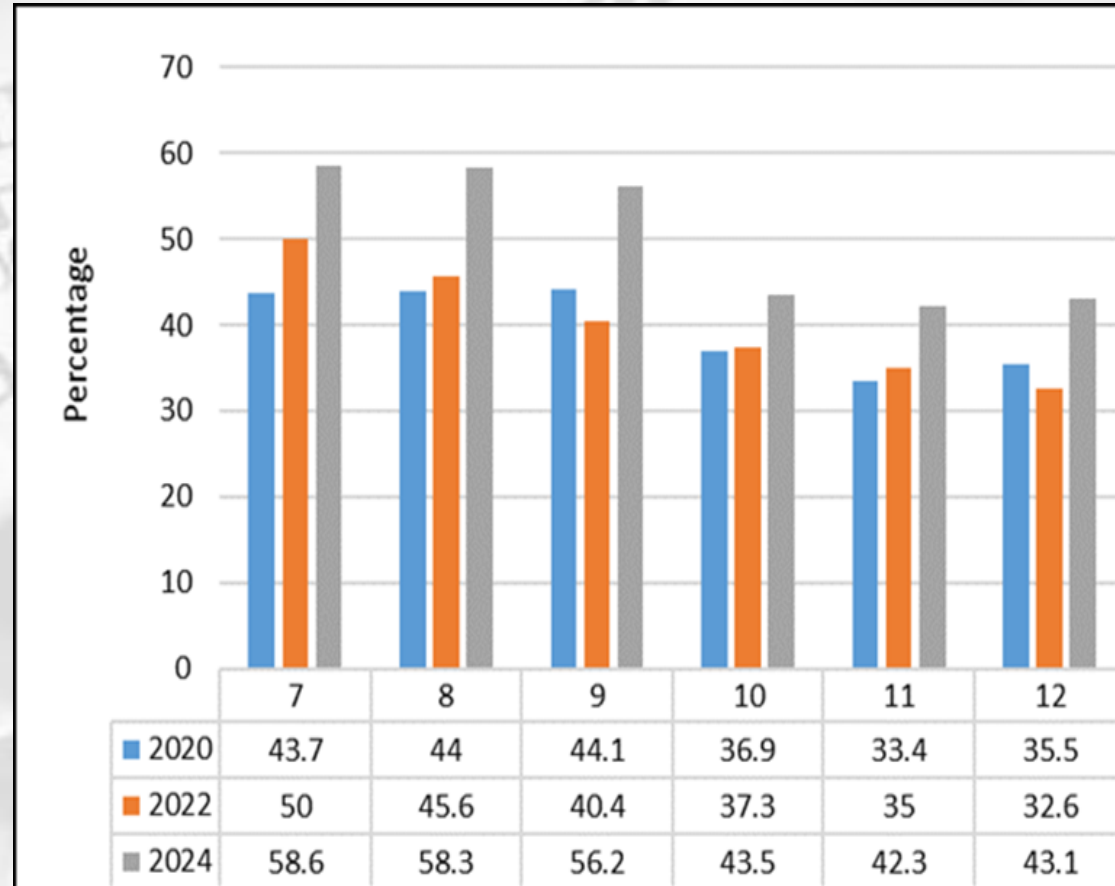
## Gaming Frequency



# Adolescent Gaming



## 'Daily' Gaming

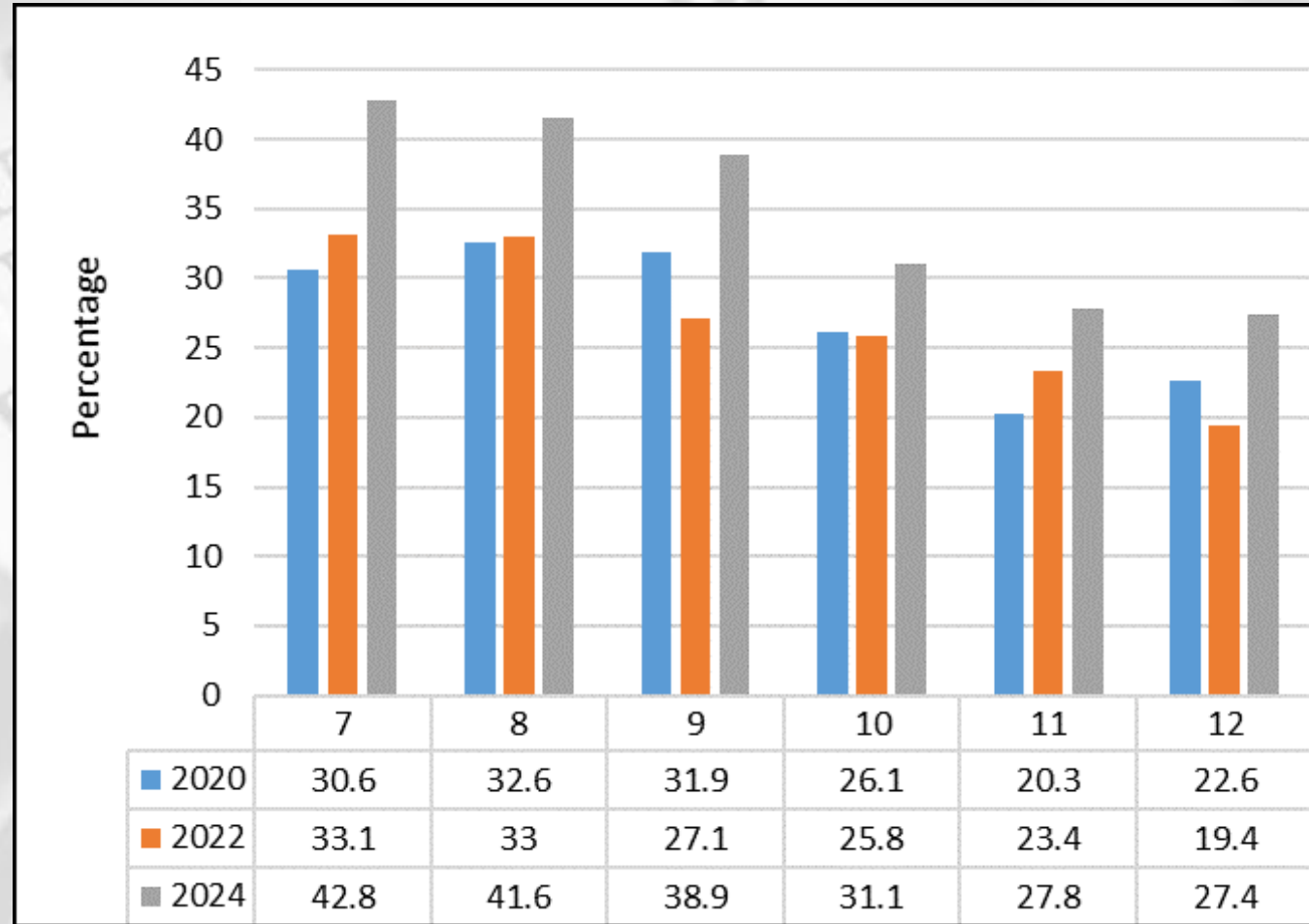




# Adolescent Gaming



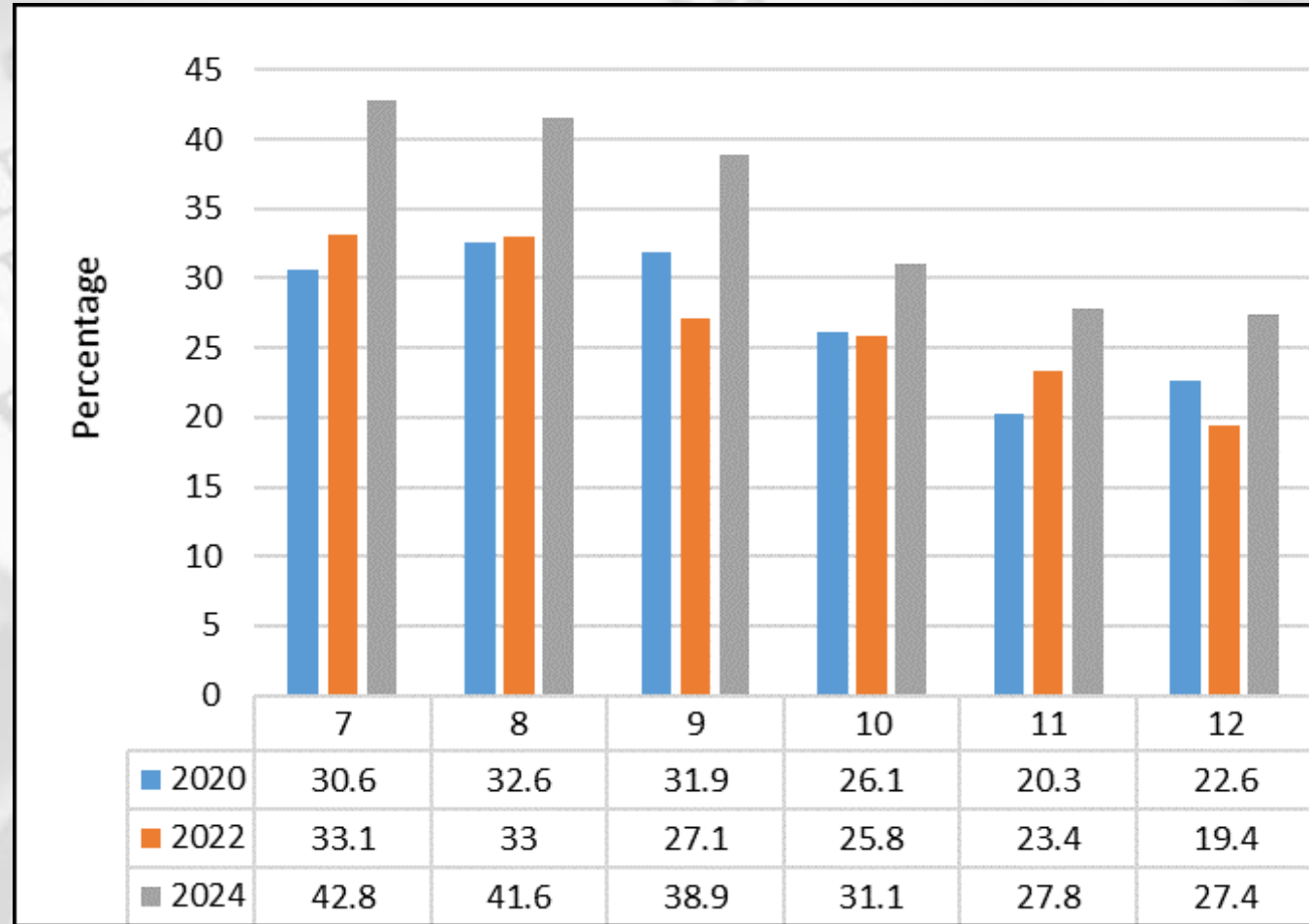
**'Daily' Gaming Two or More Hours per Day**



# Adolescent Gaming



**'Daily' Gaming Two or More Hours per Day**



# Adolescent Gambling within the Game



## Have you ever spent money on Mystery boxes in a game?

Currency: ‘How often have you done the following gaming activities:

*“spent money to get a mystery box in a game”*  
*“spent money on coins (apex or jewels, etc.)”*

Grades 7-12	buy loot boxes (2022)/mystery box (2024)				
	Daily	Weekly	Monthly	Few x Year	Never
2022	2.3	1.5	4.1	10.4	81.6
2024	5.4	2.5	7.3	23.2	61.6
Use Currency 24	6.5	3.4	11.4	38.1	40.6

Grade in School	Percentage Buying Mystery Boxes		Use Currency
	2022	2024	2024
7	19	39.8	65.2
8	17	41.2	64.8
9	19	40	63.7
10	19	35.9	55.5
11	19	35.3	50.6
12	17	36.7	47.1



# Adolescent Gambling within the Game



## Risky Loot Box Inventory (RLI) Indicators?

*Play games longer than I intended to, so I can earn mystery boxes (**control**)*

*Bought more mystery boxes after failing to get valuable items (**chasing losses**)*

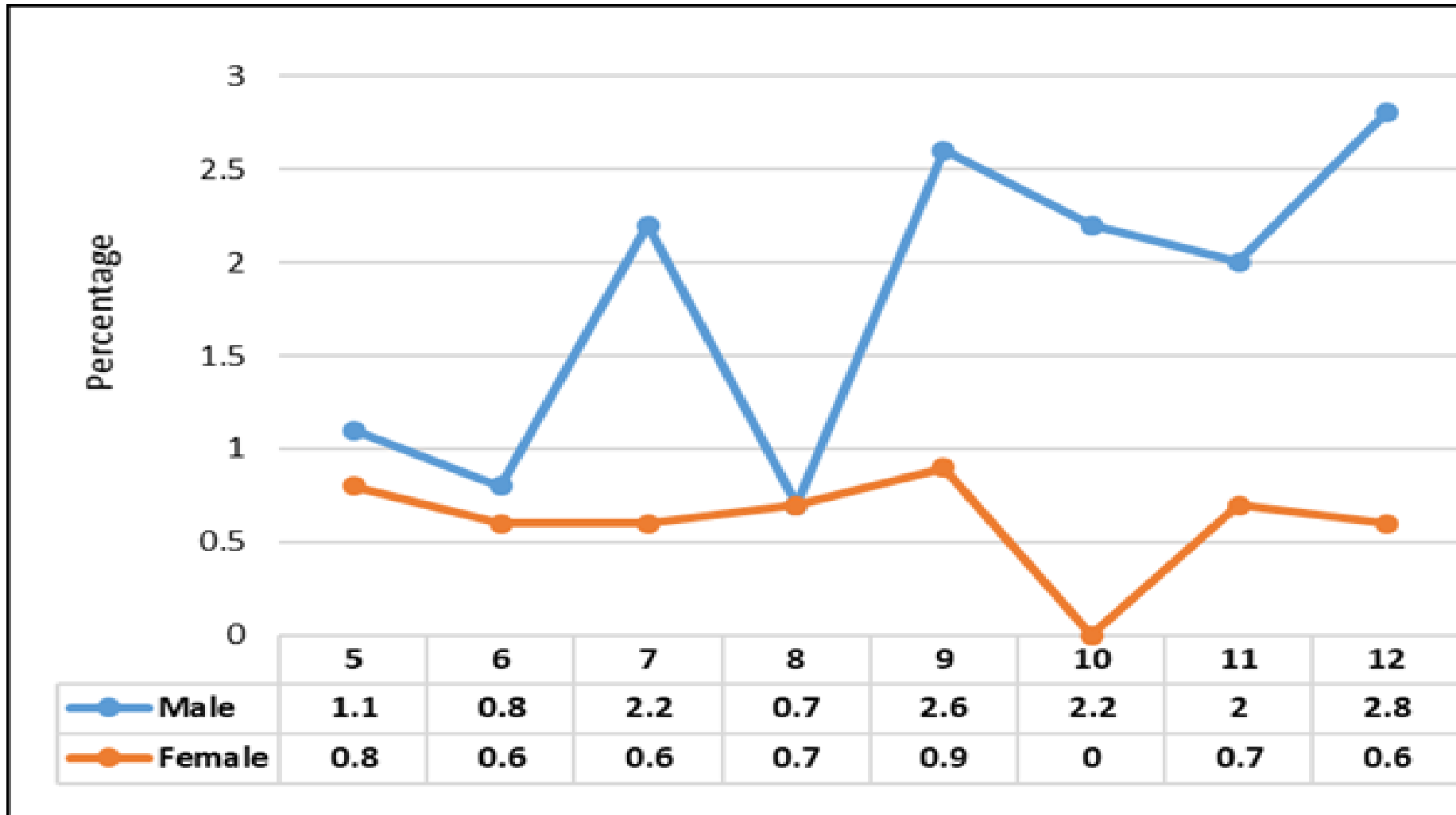
*The thrill of opening mystery boxes has encouraged me to buy more (**impulse, emotional regulation**)*

Grade in School	Scored Positive on RLI among males	
	2022	2024
7	2.2	6.7
8	3.1	6.6
9	2.7	7.1
10	5.1	6.6
11	4.4	7.8
12	3.2	6.4

# Disordered Gamer (Pontes et al., 2019) by Grade Level and Year



# Disordered Gamer (Pontes, 2019) by Grade Level and Gender, 2024



## Problematic Online Behaviors Among Gamers: the Links Between Problematic Gaming, Gambling, Shopping, Pornography Use, and Social Networking (an international online sample; N = 4,416)

Variable	Descriptive statistics		Correlations				
	Mean	S.D	1	2	3	4	5
1. Problematic online gaming	10.77	3.76					
2. Problematic online gambling	7.45	3.74	0.299***				
3. Problematic online shopping	5.77	2.64	0.269***	0.231***			
4. Problematic online pornography	6.91	3.30	0.318***	0.193***	0.317***		
5. Problematic online social networking	8.00	3.59	0.389***	0.226***	0.358***	0.333***	
6. Age	23.31	6.72	-0.044*	-0.087***	0.040*	-0.008	-0.157***

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ . Abbreviation: S.D., standard deviation. Theoretically possible range for each problematic online behavior scale was from 4 to 20. Age range 12-80; 94% males

Rozgonjuk, D., Schivinski, B., Pontes, H. M., & Montag, C. (2021). Problematic online behaviors among gamers: The links between problematic gaming, gambling, shopping, pornography use, and social networking. *International Journal of Mental Health and Addiction*, 1-18.

# Take Home Messages



- While gambling prevalence has remained generally constant, *gaming* amongst youth is dramatically increasing (ease of access and availability on consoles, computers, tablets, smartphones).
- Purchasing of loot boxes/mystery boxes has significantly increased
- There is ample evidence from the current research and international research that there is a positive relationship between gaming, gambling and problem gambling
- 7<sup>th</sup> graders report a 40% increase in gaming 2+ hours daily
- 42% of 5<sup>th</sup> & 6<sup>th</sup> (ages 11 & 12) graders game for 2+ hours daily



# Take Home Messages



- Parents are desperately searching for strategies to limit their children's gaming – need for greater awareness, prevention and treatment programs
- We will continue to see an increase in gaming disorder among youth
- This is quickly becoming a serious public health issue