

# research snapshot

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## The link between buying loot boxes in video games, problem video gaming, and problem gambling

### What this research is about

Problem video gaming occurs when an individual's gaming habits harm or disrupt their ability to function properly in their daily life. Problem video gaming has similar symptoms to problem gambling, such as being preoccupied, withdrawal, and loss of control. The International Classification of Diseases (ICD-11) classifies both Gambling Disorder (GD) and Video Gaming Disorder as addictions. The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) includes Internet Gaming Disorder (IGD) as a condition for further study.

Loot boxes have recently become a common feature in video games. Players can buy loot boxes which contain valuable in-game items. These items may increase a player's competitiveness, which could encourage them to play more intensely. Intensive video game playing increases the chance of developing problem video gaming. Additionally, about half of the video games with loot boxes have ones with gambling features. For example, players can use real-world money to purchase loot boxes and the outcome of the loot box is unknown to them. In some video games players can exchange the contents of loot boxes for real-world money.

The researchers wanted to know if buying loot boxes encouraged intense video gaming, and if this led to mental distress. This study had two main goals: (i) to understand gamers' experiences with loot boxes, and (ii) to understand the link between buying loot boxes, playing video games, gambling, and mental distress.

### What the researchers did

The researchers advertised the survey to the general public through gaming and research forums and an

### What you need to know

Loot boxes are features in many video games that contain in-game items. Video game players can buy loot boxes for a chance to win valuable items to enhance play and increase their status. Some games also allow players to exchange in-game items from loot boxes for real-world money. In this way, loot boxes resemble gambling. This study aimed to understand the link between loot boxes, problem video gaming, gambling, and mental distress. Participants filled out an online survey about their loot box purchases, video gaming, gambling, and mental state. Participants who bought loot boxes played video games and gambled more often and for longer duration than participants who did not buy loot boxes. They were also more likely to experience problem video gaming and problem gambling, which led to higher levels of mental distress. Therefore, buying loot boxes could indirectly increase mental distress.

internet-based research panel (FindParticipants.com), and to university students who were members of video game organizations. Individuals who were 18+ years old and played video games were included in the study. This resulted in 618 participants with an average age of 27 years old. Approximately two-thirds of participants were male and 41% were university students.

The survey asked questions about participants' experiences with loot boxes, video games and gambling. For example:

- Did they spend money on loot boxes?
- Did loot boxes improve their gaming experience?

- How often did they play video games or gamble?
- How long did they play video games or gamble in a single session?

The survey also assessed participants' problem video gaming, problem gambling and mental distress. The researchers used questions from the DSM-5 about Internet Gaming Disorder to see if participants met the criteria for problem video gaming. They used the Problem Gambling Severity Index (PGSI) to measure if participants were experiencing problem gambling. They used the 18-item Brief Symptom Inventory (BSI-18) to assess participants' levels of mental distress.

The researchers looked for links between loot box purchasing, video gaming, gambling, and mental distress. They also determined the effects of loot boxes by comparing the answers between participants who purchased loot boxes and those who did not.

### What the researchers found

#### *Experiences with loot boxes, video gaming, and gambling*

In the past year almost half of the participants (44%) bought loot boxes, and 40% of participants gambled online. About 48% of the participants who bought loot boxes said that loot boxes increased their gaming experience, while 18% said loot boxes decreased their experience. Participants who bought loot boxes played video games more often and were more likely to play for seven or more hours in a single session. They also gambled online more often and were more likely to gamble online for seven hours or more in a single session.

#### *Problem video gaming, problem gambling and mental distress*

Participants who bought loot boxes had more severe problem video gaming and were more likely to meet the criteria for Internet Gaming Disorder. They also had more severe problem gambling. Problem video gaming and problem gambling behaviours were associated with increased mental distress. Therefore, buying loot boxes was indirectly related to higher levels of mental distress.

### How you can use this research

This study shows that buying loot boxes is linked to problem gambling and problem video gaming. In order to reduce harms from video gaming and gambling, policy makers could consider regulating certain features of loot boxes. For example, they could ban loot boxes from being bought with real-world money. Regulations could also prohibit the sale of video games with loot boxes to individuals under a certain age.

### About the researchers

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### Gambling Research Exchange (GREO)

Gambling Research Exchange (GREO) has partnered with the Knowledge Mobilization Unit at York University to produce Research Snapshots. GREO is an independent knowledge translation and exchange organization that aims to eliminate harm from gambling. Our goal is to support evidence-informed decision making in responsible gambling policies, standards and practices. The work we do is intended for researchers, policy makers, gambling regulators and operators, and treatment and prevention service providers. Learn more about GREO by visiting [greo.ca](http://greo.ca) or emailing [info@greo.ca](mailto:info@greo.ca).

