



## Validating a Swedish version of the Risky Loot Box Index as a measure of problematic loot box use

### What this research is about

Loot boxes are becoming a common feature of many video games. Loot boxes contain items that can be used in the game and are earned through gameplay or by purchasing with real money. The items in the loot boxes are unknown until after earning or purchasing them. As such, there are concerns that loot boxes are a form of gambling.

Research has found that people who buy loot boxes tend to play video games in a problematic way. Research has also found that buying loot boxes is associated with problem gambling. There is a need for a valid instrument to measure problematic loot box use. The Risky Loot Box Index (RLI) is a measure that assesses problematic loot box use/purchase, as well as problematic behaviours to acquire loot boxes. The original version of the RLI has 12 items. The aim of this study was to examine the psychometric properties of a Swedish version of the RLI, and its relationship with problem gambling.

### What the researchers did

The researchers recruited the first group of participants from the gambling site Unibet. Participants were customers of Unibet who had gambled on sports or e-sports. All customers who fit these requirements were sent an email inviting them to participate in an online survey.

In the survey, the Problem Gambling Severity Index (PGSI) assessed symptoms related to problem gambling. The Patient Health Questionnaire-9 measured depressive symptoms. The General Anxiety Disorder-7 Scale assessed symptoms related to generalized anxiety disorder. The Alcohol Use Disorders Identification Test and the Drug Use

### What you need to know

Loot boxes are a feature of video games, where in-game items are acquired through game play or by purchasing with money. There are concerns that loot boxes are a form of gambling, as their content is unknown until after purchase. The aim of this study was to examine the psychometric properties of an instrument that assesses risky loot box behaviours, the Risky Loot Box Index (RLI). The researchers recruited Swedish adults who had gambled on sports or e-sports, or were members of an e-sports forum on Facebook. Participants completed an online survey that included the RLI and the Problem Gambling Severity Index. The researchers' analyses showed that a revised version of the RLI fit the data best. Their revised version of the RLI included seven items that were captured by two overarching factors. The two factors were time spent acquiring loot boxes and money spent on loot boxes. People who spent more money on loot boxes also had more symptoms of problematic gambling.

Disorders Identification Test measured alcohol use and substance use disorders, respectively. The RLI examined problematic loot box behaviours. There were also questions about demographic information (e.g., age, gender) and e-sports.

The researchers recruited the second group of participants through Facebook. Participants were members of an online forum dedicated to e-sports in Sweden. These participants completed the RLI and answered questions about their demographics (i.e., age, gender, education).

### What the researchers found

A total of 383 participants completed the surveys, but 19 participants were excluded because they were under the age of 18. The final sample included 364 participants, with the majority being men (96%). In this study, risky use of loot boxes referred to behaviours to acquire loot boxes that result in negative consequences. When analyzing survey responses to the RLI, the researchers found that the RLI could be described by two overarching factors. These factors grouped together similar items that described the same idea, or construct.

The researchers removed five of the 12 items from the RLI. Their analyses showed that that one item was too similar to the other items and one item was not statistically related enough to the other items to be included. The other three items were removed because they were related to both factors. In the analyses that the researchers did, each item should clearly be related to one factor.

The researchers found that the remaining seven items were described by two factors. The first factor included items related to excessive time spent acquiring loot boxes. The second factor included items related to spending money on loot boxes.

Finally, the researchers examined whether there was an association between scores on the RLI and the PGSI. In other words, they examined if there was a relationship between problematic loot box purchasing and problematic gambling. They found a significant positive association between the two. In particular, people who spent more money on loot boxes also showed more symptoms of problematic gambling.

### How you can use this research

This research could be useful to researchers interested in risky use of loot boxes. The researchers of this study demonstrated that one measure of problematic loot box use, the RLI, is valid to use with Swedish-speaking individuals. They found that a seven-item version, described by two overarching factors, captures the idea of risky loot box use. Their revised RLI can be used to measure risky loot box use in future research.

### About the researchers

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