



ADPH
North East

Esport and Video Game Gambling Related Harms Academic Slide Deck 2025



ADPH
North East

Introduction

The purpose of these slides is to provide relevant and up to date literature to aid public health colleagues in evidencing gambling related harms within the sub-topic of esports and videogames as a public health concern.

Please use these slides to support local development of products for gambling harms that focus on the rising issue of gamblification of video games. If other partners locally may benefit from seeing this resource, please share with them as required.

Key Take Home Points



ADPH
North East

These are the key points from this slide deck summarising the academic literature provided:

1. Gambling and gambling features exist within video games and esports. These are becoming a staple element across all devices – whether that be on mobile phones, PC or a console (Xbox or PlayStation). More awareness needs to be drawn to these features to help reduce gambling-related harms.
2. Despite pay-to-win elements being the latest form of gambling included in video gaming, the existing financial spend on these games should not be overlooked as players can spend significant amounts of money for in-game items. The accessibility of gambling features in video games raises concerns especially for parents or carers of young people who participate across these digital spaces.



Key Take Home Points

3. Many parallels can be drawn between gambling in traditional sports and esports. These include topics such as match fixing (illegal betting rings) and gambling sponsors being displayed on player or team clothing. This raises ethical concerns especially for younger audiences who participate in these video game events.
4. The evidence to date suggests that further regulation of gambling in gaming (video games and esports) should be considered to prevent harm and minimise risk of development of addiction. This is particularly important given the overrepresentation of participation in gaming by young people.



ADPH
North East



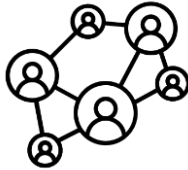


Guidance

- These slides are to be used in parallel with the "Esport Toolkit for Parents and Teachers".
- The slide deck provides public health colleagues with the supplementary academic knowledge to better understand the literature surrounding gambling within videogames.
- There may be terms and phrases that are not familiar to everyone. It's a good idea to review the British Esports pages on key terminology beforehand or have these open on another page while reviewing these slides.
 - [Esports Glossary](#) - covers what is esports, game genres, esports games and gaming terminology.
 - [A - Z Esports and Competitive Gaming Jargon list](#) - covers all text and communication abbreviations and other terminology used in the gaming community.

The Scope of Gambling Related Harms



ADPH
North East

				
Mental Health and Wellbeing	Financial	Relationship: Family, Friends and Partners	Policy and Legislation	Crime, Anti- Social Behaviour and Integrity Issues

Literature will be categorised by the following five categories, encompassing a scope of gambling related harms topics within esports and video games.



ADPH
North East

Note to the Reader

Due to a lack of research articles focusing on gambling publications under the categories of 'education or employment' and 'culture' for esports and video games, these categories will be omitted from this slide deck.

If you wish to access academic literature on these categories, please refer to the [Academic Slide Deck on GRH](#) by clicking on the hyperlink.

The Scope of Gambling Related Harms



ADPH
North East

For this slide pack, gambling related harms have been categorised into five different categories of harms. These are "mental health and wellbeing", "financial", "relationship: family, friends and partners", "policy and regulation" and "crime, anti-social behaviour and integrity issues".

For each of the five gambling harms, content is split into three sections:

- Prevalence
- Lived Experience (including affected others)
- Intervention and or Treatment (if suitable for topic area)

Guidance on Gambling Harms Literature



ADPH
North East

The gambling industry has been known to fund some academic research into gambling, which can influence messaging. This resource has attempted to present as much literature as possible that is free from any conflict of interest (COI).

COI: If academics accepted money or worked for the gambling industry at the time of the publication. This can also be partnerships or indirect funding or speaking at events.

Guidance on Gambling Harms Literature



ADPH
North East

Despite all efforts to avoid COI, to provide as much useful evidence as possible some papers with COI have been included when:

- One or more of the author team has worked for industry in a research/consultancy role, is linked to a GRH charity that accepts industry funding, or works in a GRH treatment service that accepts funding from the gambling industry.

Additionally, some of the international studies referred to will have different laws surrounding gambling compared to the United Kingdom so please note they may not have directly replicable results for creating interventions.

Guidance on Gambling Harms Literature



ADPH
North East

When reading the featured research papers, please be aware of other influencing factors that go into the design of the publication as this can have a bearing on the final outcomes. This can be the sample size, the statistical tests used, the demographics of the population and the research question being asked.

Hierarchy of Evidence



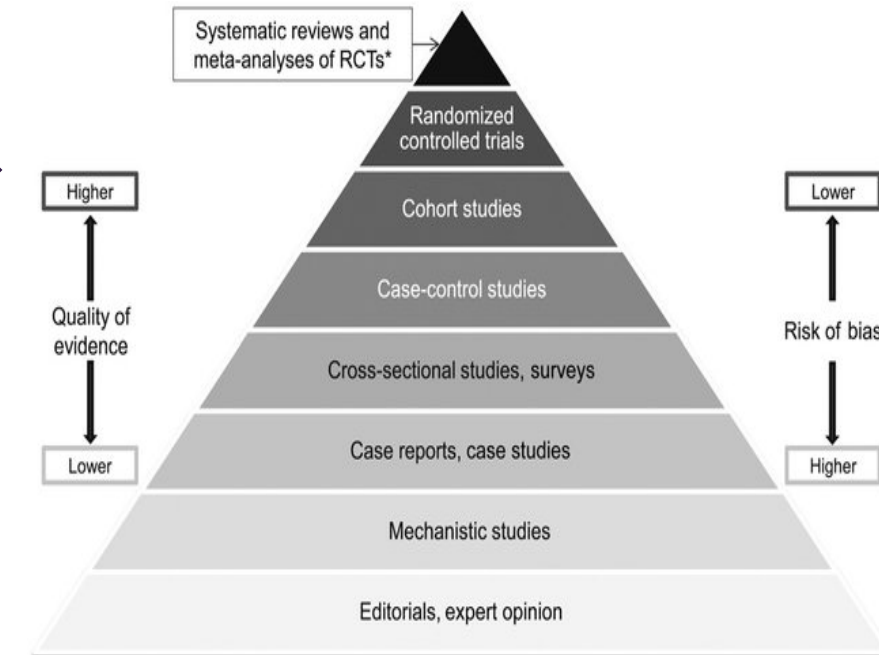
ADPH
North East

As a guide, the quality of evidence found in this slide deck can be graded by using the image here.



Relying solely on policy documents and reviews on GRH's does not factor in the qualitative studies that impact how harm is experienced, described and addressed.

Therefore, there is a blended collection of academic papers from interviews, prevalence studies, frameworks, policy guides and literature reviews to reflect the multifaceted nature of GRH research.



Source: (PDF) [Options for basing Dietary Reference Intakes \(DRIs\) on chronic disease endpoints: report from a joint US-/Canadian-sponsored working group \(researchgate.net\)](#)

Guidance on Gambling Harms Literature



ADPH
North East

As stated and published by the [ADPH North East as part of their 2024 position statement](#), the regional gambling harms programme endeavours to move away from all gambling industry funded sources.

However, this will take time and needs to happen gradually across treatment pathways, educational institutions, health services and local councils.

Therefore, papers which have some ties to the industry but had no influence over the design, write-up or analysis of the results will be included.

On each slide you will find:

- Hyperlinks to the academic text
- Links written in full in the notes sections
- Full references in order of appearance at the end of the slide deck





ADPH
North East

Information on the Literature

- Regarding the international studies, not only is there a difference by nationality there is also a cultural difference. Not all studies can be replicated in another nation due to these cultural differences.
- It is also important to recognise that the slides are split into specific gambling harms. Please remember when reviewing the literature to not only take the individual perspective but also the wider environmental viewpoint as well.
- Placing gambling on the same level as other topics such as tobacco, alcohol and fast-food shows it too has a direct impact upon the commercial determinants of health.
- Finally, the slides have just focused on academic literature and no reports or government briefs relating to gambling or gambling related harms.

Mental Health and Wellbeing: Literature



ADPH
North East

The risk of harm by gambling has been identified as a public health issue from [Wattanapisit, Wattanapisit and Wongsiri \(2020\)](#) with reference to mental health. Problem gambling and problem video gaming have been associated by adolescents who bet on esports events which can affect mental health ([Marchica et al., 2021](#)). Elements of gambling within video games, such as loot boxes, have been linked to problem gambling and disordered gaming ([Zendle, 2020](#)). Online-gaming and loot box purchasing is linked to depression in adolescents ([Irie et al., 2022](#)). Regarding prevalence rates it is shown in the literature that gambling and mental health appears in the following populations:

1. A Canadian sample found that 10.5% of 466 problem gamblers were also classed as problem video gamers and 24.1% of 203 problem video gamers being classed as problem gamblers as well. Study reports that risk factors of problem gaming and problem gambling are similar. However, one does not predict the involvement of the other or vice versa ([Sanders and Williams, 2019](#)).
2. A Finnish sample (1530) of 18-75 year olds reported on mental health, anxiety gambling and gaming problems during the pandemic. Those gamblers and gamers who are experiencing mental health problems during the pandemic, are more likely to experience gambling and gaming problems ([Savolainen et al., 2022](#)).

The next slide goes into more detail regarding the lived experience of GRH from the perspective of affected others.

Mental Health and Wellbeing: Research Article on Prevalence



ADPH
North East

Title: Not all games are created equal: Adolescents who play and spend money on simulated gambling games show greater risk for gaming disorder ([Hing et al., 2023](#))

Aim: This study examined whether greater engagement and expenditure in three types of simulated gambling were associated with meeting the criteria for gaming disorder (GD) in adolescents. A sample of Australians aged 12–17 years (N = 826) was recruited through an online panel aggregator. It included 646 gamers (57.7% male) with 89 being classified as having past-year GD, as defined and measured by the Internet Gaming Disorder Scale.

Finding: The likelihood of meeting the criteria for GD **increased 3.8 times with expenditure on microtransactions** (95% CI: 2.32; 6.27) and **4.6 times for buying loot boxes**, and each remained significant when both were included in the model.

Conclusion: *Compared to digital games without simulated gambling elements, simulated gambling appears to attract adolescents who report GD.*

Mental Health and Wellbeing: Research Article on Lived Experience



Title: Videogame player experiences with micro-transactions: An interpretative phenomenological analysis ([Gibson et al., 2023](#)).

Aim: To identify player experiences with micro-transactions, using interpretative phenomenological analysis. Eleven participants took part in online semi-structured interviews. Interviews focused on participants' feelings, beliefs and motivations surrounding micro-transaction use.

Findings: Six themes were identified: (i) **self-control vs. impulsivity**, (ii) **motivations for use**, (iii) **obligation to play after purchases**, (iv) **guilt and regret**, (v) **feeling tricked or cheated** and (vi) **comparing micro-transaction use and gambling**.

Conclusion: *Key motivations for micro-transaction use were giving back to or 'rewarding' game developers for their work. Participants who engaged with battle pass micro-transactions often felt a sense of obligation to continue playing the game after purchasing. It is recommended that cognitive behavioural therapy could be used to treat maladaptive cognitive beliefs related to micro-transaction use.*

Mental Health and Wellbeing: Research Article on Interventions and Treatment



ADPH
North East

[Czakó et al., \(2023\)](#) reported on some to help esports players and video gamers when it comes to gambling and their mental health. These are taken from Table 1.0 “Safer esports related issues and suggestions for possible responses”.

Mental Health

1. Providing evidence-based information on specific risk factors, symptoms and treatment option of addiction for esports players and making information on help available within games and during events.
2. Developing measures for the early detection of problematic or addictive use patterns, and measures of intervention, for example by adapting relevant player protection practices of the gambling industry.
3. Preparing minors to navigate age-inappropriate and otherwise potentially harmful content to minimize the adverse effects of videogame playing on their development.
4. Initiating open conversation to raise awareness and decrease stigmatization related to excessive video gaming.

Mental Health & Wellbeing: Academic Resources Prevalence



ADPH
North East

Topic	Target Population	Year of Publication	Author	Journal and Link	Sourced Funding or COI from the Gambling Industry?	Primary Outcome Findings
Gaming Disorder and Gambling	Australians 2 - 17 years old	2023	Hing et al	Journal of Addictive Behaviours	No	Meeting the criteria for GD increased 3.8 times with expenditure on microtransactions & 4.6 times for buying loot boxes.
Global Review of Problematic Gambling	Esport Players	2019	Chung et al	Journal of Behavioural Addictions	No	It is reasonable to expect an increase in problematic gaming and thus increased prevalence of gaming disorder and hazardous gaming
Esports Betting and Mental Health Problems	USA Adolescents	2021	Marchica et al	Journal of Behavioural Addictions	No	The appeal of betting on these events can be significant for adolescents who are already at increased risk of problem video gaming and problem gambling
Gaming and Mental Health: loot Boxes and Depression	Japanese High School Students	2023	Irie et al	Current Psychology	No	those who make unplanned purchases, those who purchase via loot boxes have poorer mental health than those who purchase by other means.
Gambling and Gaming during Covid-19	Finnish Adults	2022	Savolainen et al	Comprehensive Psychiatry	No	Increased pandemic-time mental health issues predict gambling problems and gaming problems. 27% gambled or played online games for social reasons during social isolation.

Mental Health & Wellbeing: Academic Resources Lived Experience



ADPH
North East

Topic	Target Population	Year of Publication	Author	Journal and Link	Sourced Funding or COI from the Gambling Industry?	Primary Outcome Findings
Loot Box Engagement Interviews	UK Gamers	2021	Nicklin et al	Journal of Clinical Medicine	Yes	Loot boxes can be highly valued by purchasers, informing the parallels with gambling.
Loot Boxes and Participants Physiological Arousal	Adult Males	2021	Brady and Prentice	Games and Culture Journal	No	Increases in arousal suggest microtransactions in gaming potentially lead to problematic levels of use, while hyposensitivity could explain the higher gaming addiction relating to lower arousal
Players Perceptions of Loot Boxes	University Students	2020	Sakhapov and Brown	HAL Open Science	No	Showing item drop probabilities directly influences the opinion of players regarding the fairness of loot boxes & can affect further choice whether to open them, which supports the need for regulations on loot boxes
Gamer Perceptions of Loot Box Advertising	18+ Americans	2021	Kelling and Tham	Journal of Interactive Advertising	No	Findings have significant implications for gaming and persuasion theories.
Loot Boxes and Motivations: Interviews (Thesis)	18+ Adults who had spent over SEK 1000 in Loot Boxes	2018	Randau, Nguyen and Mirgolozar	Jönköping University International Business School	No	The findings showed that there are distinct similarities between gambling and loot boxes. Two motivations were clear, value-based motive and collecting purpose which are video-game specific.

Mental Health and Wellbeing: Summary



- There are 15 papers on 'Mental Health and Wellbeing' included in this slide deck.
- The full references are at the end of the slide deck in their own slides for Mental Health and Wellbeing GRH.
- 3 / 15 of the papers mentioned have potential links to the gambling industry either through funding or a conflict of interest.
- From the slides, GRH within the topic of mental health encompasses a number of areas such as Covid-19, depression, problematic gambling, gaming disorder and perceptions of loot box engagement.

Financial: Literature



The next GRH topic is financial which covers sub-topics of spending habits ([Garea et al., 2021](#)), monetisation of mobile games ([Zendle, Meyer and Ballou, 2020](#)), employment status ([Lemmens 2022](#)) and spending predictors ([Garrett et al., 2022](#)). There is also a range of research covering sponsorship and advertising ([Greer et al., 2019](#); [Abarbanel et al., 2020](#); [Bigger, Zendle and Wardle, 2023](#)).

Regarding prevalence rates it is shown in the literature that gambling and finance appears in the following populations:

1. [Wardle, Petrovskaya and Zendle \(2020\)](#) on 3549 people aged 16-24 in the United Kingdom. 53% had a PGSI score of 8 or more, indicative of problem gambling
2. [Gainsbury, Abarbanel and Blaszczynski \(2017\)](#) on 501 people split into esports bettors and sports bettors. Esports bettors had a significantly higher average PGSI score ($M = 9.64$, $SD = 6.65$) than did sports bettors ($M = 3.44$, $SD = 4.90$), of which 160 wager on esports.

The next slide goes into more detail regarding the lived experience of GRH from the perspective of affected others.

Financial: Research Article on Prevalence



ADPH
North East

Title: Meta-analysis of the relationship between problem gambling, excessive gaming and loot box spending ([Garea et al., 2021](#))

Aim: quantitatively summarize two specific research areas regarding loot box spending using meta-analyses. We examined the relationships between loot box spending and (1) problem gambling (15 studies), and (2) excessive gaming (7 studies).

Findings: We found **significant small-to-moderate positive correlations between loot box spending and gambling symptomology**, $r = 0.26$ ($r = 0.37$ using Trim and Fill), and excessive gaming, $r = 0.25$.

Conclusion: *Results suggest a small, but replicable and potentially clinically relevant, relationship between gambling symptomology and loot box spending that is at least as large as the relationship between excessive gaming symptoms and loot box spending. Further research should examine the potential for statistical interactions between these constructs.*

Financial: Research Article on Lived Experience (including affected others)



ADPH
North East

Title: Motivations for Esports Betting and Skin Gambling and Their Association with Gambling Frequency, Problems, and Harm ([Greer et al., 2023](#)).

Aim: This study aimed to examine gambling motivations for esports betting and skin gambling and their association with gambling frequency, problems, and harm.

Findings: **Financial gain and enhancement (i.e., excitement) were the main motivations endorsed for all activities**, whereas skin acquisition was an additional motivation for esports skin betting and skin gambling. Across all three products, **gambling to escape or improve mood was associated with higher levels of problem gambling and harm. Financial gain motivation** was associated with problem gambling only for esports skin betting and skin gambling on games of chance.

Conclusion: *These findings underscore the importance of considering motivational influences on engagement with emerging gambling activities, especially since some motivations may be a contributing factor in harmful gambling outcomes.*

Financial: Research Article on Interventions and Treatment



ADPH
North East

Title: Targeting the next generation of gamblers? Gambling sponsorship of esports teams ([Bigger, Zendle and Wardle, 2023](#))

Aim: The paper seeks to document the level of gambling sponsorship of the world's top esports teams.

Findings: **Half of the esports teams in Dota 2 and CS:GO's world championship events in 2021 were sponsored by gambling companies. Teams sponsored by gambling companies have a combined total of 25 868 912 followers across three major social media channels.** No LoL teams were sponsored by gambling companies, yet sibling teams within the CS:GO and Dota 2 competitions were.

Conclusion: *The relationship between gambling companies' sponsorship in esports should be considered in line with the calls for change in the relationship between football and gambling with gambling as a public health issue at its heart.*

Financial: Academic Resources Prevalence



ADPH
North East

Topic	Target Population	Year of Publication	Author	Journal and Link	Sourced Funding or COI from the Gambling Industry?	Primary Outcome Findings
Meta Analysis on Loot Box Spending, Gaming and Gambling	15 studies review	2021	Garea et al	International Gambling Studies	No	Our results suggest a small, but replicable and potentially clinically relevant, relationship between gambling symptomology and loot box spending.
Relationship of Loot Boxes to Problem Gambling and Gaming	18+ Adult Gamers	2019	Li, Mills and Nower	Journal of Addictive Behaviors	No	Nearly half of the sample (44.2%) spent money on loot box purchases in the past year. Loot box purchasers played video games and gambled online more frequently.
Problem gambling and Income of Loot Box spending Predictors	Cross National Survey - NZ, AUS and USA	2022	Garrett et al	Journal of International Gambling Studies	No	Results evidenced the best model of loot box spending included the combined main effects of income and PGSI, but there was no evidence for an interaction between these factors.
Loot Box purchasing associated with gambling and problem Gambling	Gamers from Universities and Online Forums	2023	Coelho et al	Journal of Addiction Research and Theory	No	In both samples, having purchased loot boxes in the past year was significantly associated with increased likelihood of having gambled in the past year and greater problem gambling severity.
Desktop Video Game Monetisation: Exploring Loot Boxes in 2010-19	463 most-played Steam desktop games	2020	Zendle, Meyer and Ballou	PLOS One	No	By April 2019: 71.2% of the sample played games with loot boxes at this point, and 85.89% played games with cosmetic microtransactions.

Financial: Academic Resources

Lived Experience



ADPH
North East

Topic	Target Population	Year of Publication	Author	Journal and Link	Sourced Funding or COI from the Gambling Industry?	Primary Outcome Findings
Gambling Expenditure by week and Game Type	Finland Problem Gamblers	2018	Salonen et al	BMC Public Health	No	Overall gambling frequency is the strongest indicator of high gambling expenditure
Loot Boxes and FIFA	FIFA gamers	2022	Lemmens	Telematics and Informatics Report	No	Players' employment status and sensitivity for rewards were the strongest predictors of money spent on player packs (i.e., loot boxes) in FIFA Ultimate Team.
Loot Box Engagement from a National Survey	Adolescents 12 - 16	2020	Kristiansen and Severin	Journal of Addictive Behaviors	No	More than half of the young gamers have engaged with loot boxes during the last 12 months and Loot box users are predominantly male
Restitution of money spent on Loot Boxes in Video Games	Legal Framework	2021	Baeck and Claeys	Computer Law and Security Review	No	Two points of invalidity: incapacity (often purchased by minors) & illegality (since, in some jurisdictions, loot boxes violate the national gambling regs & may infringe public order).
Money spent on Simulated Gambling games increases Risk of Gaming Disorder (GD)	Australians 2 - 17 years old	2023	Hing et al	Journal of Addictive Behaviours	No	Meeting the criteria for GD increased 3.8 times with expenditure on microtransactions & 4.6 times for buying loot boxes.



ADPH
North East

Finances: Summary

- There are 16 papers on 'Finances' included in this slidedeck.
- The full references are at the end of the slide deck in their own slides for Finances GRH.
- 3 / 16 of the papers mentioned have potential links to the gambling industry either through funding or a conflict of interest.
- From the slides, GRH within the topic of finances encompasses a number of areas such spending amount, predictors for spending, gaming disorder and loot boxes.

Relationships – Family, Friends, Partners: Literature



ADPH
North East

- The next theme of GRH covers Relationships: Family, Friends and Partners regarding esports and videogames. The work covers the monetisation features causing issues for families ([Mills et al., 2024](#)), parental perspectives of gambling ([Dittmann et al., 2025](#)), setting limits ([Bradt et al., 2023](#)) and healthcare perspectives ([Kiraly et al., 2021](#); [Davidson et al., 2024](#)).
- It also reports on problematic gambling for adolescents ([Marinaci et al., 2021](#)), large scale reporting across EU children and or young people ([Lombardi et al., 2024](#)) and parents being unaware of the risk and or presence of gambling ([Zaman et al., 2021](#)).
- The next slides go into greater detail across prevalence, lived experience and treatment for GRH within relationships for video games and esports.

Relationships – Family, Friends, Partners: Research Article on Prevalence



Title: The cards they're dealt: types of gambling activity, online gambling, and risk of problem gambling in European adolescents ([Lombardi et al., 2024](#))

Aim: This study aims to identify risk factors associated with gambling engagement and the likelihood of problem behavior using 85,420 students aged 16 from 33 countries

Findings: Certain groups, **such as males and those with a history of school difficulties, exhibit a higher likelihood of problematic gambling behavior. Online gaming significantly influences adolescent gambling behavior, with slot machines demonstrating the highest predicted probabilities of risky behavior** when combined with online gaming.

Conclusion: *It is crucial to foster policies and interventions that address the risks associated with online gambling for this age group.*

Relationships – Family, Friends, Partners: Research Article on Lived Experience



Title: Lived Experiences of Gaming and Gambling Related Harm and Implications for Healthcare Services ([Davidson et al., 2024](#))

Aim: To gain insights from individuals with previous lived experience of gaming and/or gambling-related harm in the context of Children and Young People (CYP) and healthcare systems (5 participants with previous lived experience).

Findings: Results suggested a **convergence of gaming and gambling-related harm in terms of patterns of experiences of escapism and internalising harm with identity**, highlighting the need for safer environments and preventative approaches to protect CYP.

Conclusion: *Implications for practitioners, services, policy makers, and regulators seeking to protect CYP from the risks of gaming and gambling-related harm are discussed.*

Relationships – Family, Friends, Partners: Research Article on Interventions and Treatment



Title: Gambling Features and Monetization in Video Games Create Challenges for Young People, Families, and Clinicians ([Kiraly et al., 2021](#))

Aim: Short Commentary discussing the Risk that Microtransactions and the Monetization of Video Games poses to Children and wider effects and considerations.

Findings: Unfortunately, we have good reason to believe **that the gaming industry is intentionally using predatory techniques to increase profits.** When it comes to in-app purchases, **the gaming industry appears to target individuals with lower self-regulation, making children especially vulnerable children.**

Conclusion: *Given that the family context plays a fundamental role in helping children to develop self-regulation, clinical strategies will necessarily be family centered.*

Relationships – Family, Friends, Partners: Academic Resources Prevalence



Topic	Target Population	Year of Publication	Author	Journal and Link	Sourced Funding or COI from the Gambling Industry?	Primary Outcome Findings
Parents and Setting Limits	Parents and Children	2023	Bradt et al	Wiley	No	Associations between the parental profiles and gaming outcomes were theoretically meaningful, yet small in terms of effect size
Parental Perspectives on Gambling	Parents and Adolescents	2025	Dittman et al	International Journal of MH & A	No	The risks and harms of adolescent gambling, should be a central component of public health strategies to prevent adolescent gambling and later adult gambling harm.
Gambling and Gaming	Youth and Parents Canada	2021	Stark et al	Journal of Gambling Issues	Yes	In summary, we found that playing games that combine gambling and gaming was associated with increased risk across youth age groups.
Escapism Family Friends and Esports	Indonesian Gamers	2024	Huda and Salehudin	JMDPJ	No	There is a positive, but not significant, relationship between the direct effect variable watching intention and consumers' desire to buy virtual products in games.
Psychosocial Context of Problem Gambling	Italian High School students	2021	Marinaci et al	Heliyon	No	There is a need to look more closely at the way adolescents gaming and gambling activities and their impact on adolescents' well-being

Relationships – Family, Friends, Partners: Academic Resources Lived Experience



ADPH
North East

Topic	Target Population	Year of Publication	Author	Journal and Link	Sourced Funding or COI from the Gambling Industry?	Primary Outcome Findings
Lived Experiences of Gaming and Gambling	Children and Young People	2024	Davidson et al	Journal of Gambling Issues	Yes	Results suggested a convergence of gaming and gambling-related harm in terms of patterns of experiences of escapism and internalising harm with identity, highlighting the need for safer environments and preventative approaches.
Parenting Practices on Gaming and Gambling	Parents and Children	2024	Mills et al	Children's Geographies	No	This paper challenges current understandings by examining how parents make sense of gambling-related harms and demonstrates the spatial and temporal dynamics of purchasing decisions and rules.
Exposure to Games of Chance and Gambling	Parents and Preadolescents	2021	Zaman et al	Journal of Gambling Issues	No	The parents were not fully aware of the first gambling and games of chance activities of the preadolescents or of some of their in-game micropayments.
Lived Experience of Gaming and Gambling	Children and Young People	2022	Davidson	BU PhD Thesis	Yes	These findings carry implications for practitioners seeking to support CYP and also for policy makers and regulators who are seeking to address this issue, including a range of recommendations within a whole-systems public health approach.

Relationships – Family, Friends, Partners: Summary



ADPH
North East

- There are 11 papers on 'Relationships – Family, Friends, Partners' included in this slidedeck.
- The full references are at the end of the slide deck in their own slides for relationships regarding video gaming and GRH.
- 3 / 11 of the papers mentioned have potential links to the gambling industry either through funding or a conflict of interest.
- From the slides, GRH within the topic of relationships encompassing a number of areas such as children, young people, parents, schools and adolescents.

Policy and Legislation: Literature



ADPH
North East

- The next GRH section of the slides includes the areas of policy, legislation and frameworks ([Games Industry Bizz, 2022](#); [2023](#); [2024](#)) for gambling within esports and videogames ([Xiao and Henderson, 2024](#)) .
- The topic of policy and legislation is already a large field within the research and is still growing with many nations and governments producing their own rules to combat the growing gambling elements of the video game industries.
- Finally, the topic of gambling policy covers a wide variety of issues such as policy ([McCaffery, 2020](#)), legislation and laws ([Xiao, 2023](#)), frameworks ([Brewer, 2020](#)), self-regulation and consumer protection ([Derrington, Star and Kelly, 2021](#); [Xiao, 2021](#); [Xiao, 2022](#)), online platforms ([Xiao and Henderson, 2024](#)), micropayments ([Czerska and Majerska, 2023](#)) risks to children ([Uddin, 2022](#)) and loot boxes ([Lui, Thompson and Rich, 2020](#)).
- The next slides go into more detail regarding specific policies and or frameworks recommending to reduce harm from these gambling elements within video games and or esports.

Policy and Legislation: Research Article on UK Government Ethical Loot Box Design



ADPH
North East

Title: Loot Boxes and Digital Gaming: A Rapid Evidence Assessment (2021)
Summary

Aim: The Department for Digital, Culture, Media and Sport (DCMS) recognise this and launched an open call for evidence on the impact of loot boxes.

In addition, they commissioned this Rapid Evidence Assessment (REA) to explore whether loot boxes encourage problematic play behaviours, with particular focus on the key characteristics of the loot box market nationally and internationally, and to further understand if and how loot boxes are associated with harms and what the drivers of harm may be.

Continued



ADPH
North East

Findings: Monetisation can sometimes be a downstream consideration in free-to-play games, with loot boxes having the ability to stabilise existing user numbers through incentivising re-engagement, pacing the development and release of new content, and other potential benefits for developers.

However, the use of 'sticky' design techniques and the randomisation of rewards combined with microtransactions has led to comparisons to gambling (particularly where third-party sites allow trading of loot box rewards beyond the intentions of developers).

There is very little reliable information about the size and scale of the loot box market both internationally and within the UK.

There are many different types of loot boxes available within digital games, that are used in different ways. Better understanding of the range and circumstances in which loot boxes are used by game designers and players is needed.

The Drivers of Problematic Play search found 15 studies which empirically correlated loot box use with problem gambling. These studies showed a stable and consistent association between use of loot box use and problem gambling.

ADPH
North East

Continued

There is also emerging evidence of a dose response relationship, whereby greater loot box spending is related to greater problem gambling severity. However, this empirical work is emerging and has tended to concentrate on replicating findings rather than exploring and understanding the drivers of this association. There are a range of plausible explanations that could underpin this association.

These include that loot box purchases are heavily engaged in a range of gambling activities; that other factors, like impulsivity, drive this association; that loot box purchases exhibit maladaptive motives for their use; or that loot box purchase itself leads to gambling-related harms.



ADPH
North East

Continued

Evidence exploring the boundaries of this association is in its infancy. Only two studies identified took into account a range of other measures; one found that broader gambling behaviours explained the relationship between loot box purchasing and problem gambling, and one found that the relationship persistent even after broader gambling and impulsivity were taken into account.

There is an evidence base starting to emerge looking at other harms associated with loot box use. This includes associations with problem gaming (broadly consistent evidence from the few studies identified); associations with wellbeing, anxiety and depression; and perceptions from young people that loot boxes themselves are addictive

Policy and Legislation: UK Government Ethical Loot Box Design Recommendations



ADPH
North East

1. **A minimum age informed by science, government and industry should be established for engaging in games involving loot boxes.**
2. **Games involving loot boxes clearly and unambiguously inform players that loot boxes involving microtransactions are included in the game but are NOT an essential requirement for playing these games.** Players may decline to use them without penalty.
3. **It should be made clear at the point of purchase that loot box items do not guarantee a direct path to success in a game.**
4. **It should also be made clear the extent to which the delivery of loot box items is random in nature,** and that loot boxes are prominently labelled with content ranges and % chances clearly displayed.
5. **Loot box contents, or chances are not pre-determined or targeted based on player behaviour.**
6. **After a set number of purchases (e.g., after every fourth), players are informed via an on-screen message** that this is their fourth, eighth, etc. purchase and that they should pause to consider how much they have spent at that point and if they wish to continue.

Policy and Legislation: UK Government Ethical Loot Box Design Recommendations



1. **Players are informed via an on-screen message when sudden spikes in spending activity occur**, encouraging them to pause to consider if they wish to continue.
2. **Players should be advised to take regular breaks** and that this message appears on screen after each hour (or appropriate session length) of play.
3. **Developers and publishers should operate generous refund policies** (e.g. all spend for the last n days), and players have a clear path to obtain this and to self-exclude.
4. **Developers should allow access to a tally of recent spend in the user's profile** to allow players to make more informed decisions about their spending.
5. **Players should be able to view estimated average spend amounts** to level up or max out a character (or similar upgradable item), in order to make better value judgements and manage expectations.
6. **Games companies should ensure that their likely first point of contact with players experiencing distress due to loot boxes or other spends are appropriately trained to offer support and informed as to possible methods for redress/refund.** As the precise division of roles varies between studios, key personnel should be identified who can lead on this.

Policy and Legislation: Research Article on FIFA and Micropayments in Poland



Title: Micropayments in Games using the FIFA series as an Example - Fun or E-Gambling Accessible to Children? Discussion around Controversy and Regulation ([Czerska and Majerska, 2023](#))

Aim: The study's main objective was to identify the risks associated with game developers' mechanisms to define the micropayment system, using the example of EA Sports' practices in the FIFA series of games

Findings: Micropayments are an essential source of additional revenue for game developers. **Not only do they effectively engage players, but the value of additional in-game purchases often exceeds the product's original price** (i.e. the full-priced game). **The term micropayments, in this case, is already used conventionally - it is widespread for some in-game purchases to be as much as hundreds of zlotys**

Conclusion: *Due to mechanisms using microtransactions, companies can profit significantly from selling complementary content after the revenue from product sales has already been generated. Loot boxes engage players, but they also raise a lot of controversy and doubts due to their disturbing resemblance to gambling*

Policy and Legislation: Research Article on Loot Box Regulation



ADPH
North East

Title: The Case for Uniform Loot Box Regulation: A New Classification & Typology & Reform Agenda ([Derrington, Star and Kelly, 2021](#)).

Aim: Recognizing that the legal definition of gambling is a policy matter for different legislatures, this paper proposes a new classification framework for loot boxes and microtransactions that could be adopted as a guide by regulators.

Findings: **The framework is designed to assist policy makers to achieve consumer welfare goals** while also not unduly restricting the ability of adult consumers to make informed decisions as to when they participate in gambling-like activities (see next slide).

Conclusion: *This paper advances nascent commentary in relation to the growing integration of microtransactions and loot boxes in the structure and content of video games and outlines a reform agenda informed by regulatory global responses to the issue.*

Continued



ADPH
North East

Part 1: **Gambling:** *“A “gambling” classification should apply to all games which satisfy a jurisdiction’s specific legal definition of gambling” (page 318-319).*

Part 2: **Known External Market for In-Game Items:** *“A unique challenge in the regulation of loot boxes is the creation of markets for in-game items by third parties and on external sites, even when the trading of in-game items is technically prohibited by a developer’s terms of service” (page 319-320).*

Part 3: **Simulated Gambling:** *“A “simulated gambling” classification should apply to those games which do not meet the legal definition of gambling, but which exploit the same psychological elements as traditional gambling” (page 320-321)*

Part 4: **In-game Microtransactions:** *“Should be introduced to warn consumers and parents of the presence of potentially hidden microtransactions within a game. Introduction of such a classification would address a number of the concerns relating to the possibility of players unintentionally or unknowingly spending money within a game” (page 321-323).*

Policy and Legislation: Academic Resources on Loot Boxes



ADPH
North East

Topic	Target Population	Year of Publication	Author	Journal and Link	Sourced Funding or COI from the Gambling Industry?	Primary Outcome Findings
Children and Loot Box Regulation	Legal for Family Court	2021	Uddin	Family Court Review	No	2 main counter arguments against loot box regulation. First, it is a matter of parental awareness and responsibility and second, no legislative interest in regulating loot boxes.
Video Game Loot Box Regulation	Law and Policy	2022	Xiao	Information and Communication Technology Law	Yes	Looks at UK Law and the People's Republic of China when it comes to consumer protection and probability disclosures then looks at self-regulation.
Uniform Loot Box Regulation	Law and Policy	2021	Derrington, Star and Kelly	Journal of Gambling Issues	No	The framework is designed to assist policy makers to achieve consumer welfare goals while also not unduly restricting the ability of adult consumers to make informed decisions.
Approach to Public Policy and Loot Box Regulation	Policy and Regulation	2020	McCaffrey	Journal of Addictive Behaviours	No	Several challenges: (1) demonstrating the existence of serious public harm, (2) showing the failure of non-governmental solutions to that harm, and (3) providing evidence that a policy is not counterproductive.
Loot Boxes and Closed Loop Mechanics	Policy and Regulation	2020	Lui, Thompson and Rich	HEINOnline	No	More proportionate solutions must be pursued including strategies to introduce the provision of education to allow parents and other stakeholders to become more aware of the current topic.

Policy and Legislation: Academic Resources on Loot Boxes



ADPH
North East

Topic	Target Population	Year of Publication	Author	Journal and Link	Sourced Funding or COI from the Gambling Industry?	Primary Outcome Findings
Belgium's Ineffective Gambling Law of Loot Boxes	Law and Policy	2023	Xiao	Collabra Psychology	Yes	Unenforced 'ban' has many negative consequences, including (i) giving consumers, parents, and policymakers a false sense of security.
Illegal Loot Boxes and Steam: Non-compliance and non-enforcement of gambling Law	Law and Policy	2024	Xiao and Henderson	Journal of International Gambling Studies	Yes	State of noncompliance by game companies & non-enforcement by gambling regulators leaves consumers unprotected & at risk of encountering illegal content & experiencing harm.
Regulating Loot Boxes as Gambling? Legal and Self-Regulatory Approach	Law and Policy	2021	Xiao	Elagr Online	No	This article recommends a combined legal and self-regulatory approach: the law should set out a minimum acceptable standard of consumer protection and industry self-regulation
Proposed Solutions to regulate Loot Boxes	Law and Policy	2020	Brewer	HEINONLINE	No	Taken from the american perspective regarding what Congress should do regarding loot boxes. Section C "A Carefully Crafted Loot Box Ban" is informative.
FIFA Series and Micropayments: Controversy and Regulation	Law and Policy	2023	Czerska and Majerska	Technology Publishing House	No	Discuss what other academics state around regulation suggestions and bring it back to their own country of Poland and what they do to inform the consumer.

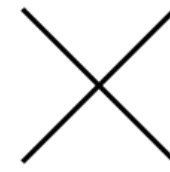
Policy and Legislation: Summary



ADPH
North East

- There are 12 papers on 'Policy and Legislation' included in this slidedeck.
- The full references are at the end of the slide deck in their own slides for GRH across policy and legislation.
- 4 / 12 of the papers mentioned have potential links to the gambling industry either through funding or a conflict of interest.
- From the slides, GRH within the topic of policy and legislation for esports and videogames is an ever-growing area. Topics cover loot boxes, frameworks, specific game titles, children and young people, links and parallels to gambling.

Crime, Anti-social Behaviour and Integrity: Literature



ADPH
North East

- The next GRH section of the slides includes the areas of crime, anti-social behaviour and integrity matters regarding gambling within esports and videogames ([Brickell, 2017](#); [Toomey, 2019](#); [Shinohara, 2024](#)).
- The topic of crime and integrity matters within esports and video games is a large matter due to topics of match fixing ([Abarbanel and Johnson, 2021](#); [Schöber and Stadtmann, 2022](#); [Zohn and Bleakley, 2023](#)).
- Finally, the topic of gambling policy covers a wide range of topics including corruption ([Holden, Rodenberg and Kaburakis, 2017](#); [Lu, 2022](#)) and sponsorships ([Freitas et al., 2021](#)).

The next slides go into more detail regarding specific research articles on corruption, policies, match-fixing and or ways to reduce crime across esports and video game gambling.

Crime, Anti-social Behaviour and Integrity: Research Article on Governance



ADPH
North East

Title: Esports Corruption: Gambling, Doping and Global Governance ([Holden, Rodenberg and Kaburkis, 2017](#))

Aim: This paper examines esports growth and the evolving integrity challenges being faced by players, tournament organizers, gamblers, sponsors, politicians, and fans.

Findings: Examples of scandals highlight issues of lack of transparency on the part of gambling sites as well as conflicts of interests. **CS:GO player “MoE” was sponsored by casino style skin-betting site CS:GO Diamonds and in exchange for compensation, MoE would broadcast his gambling on the site. Another scandal involving CS:GO Lotto, was embroiled in a scandal when it was revealed that 2 popular esports professionals had a stake in the site and was not disclosed in videos showing the players winning on the site.**

Conclusion: *Success of an overarching esports governance structure will likely require a large number of organizations coming together while delegating some rule making authority from their respective organizations. However, the most important role that a regulatory body may have is its advocacy to governments. In addition to demonstrating to lawmakers a sense of legitimacy, a respected governing body with regulatory teeth may be able to assert to lawmakers that the industry is capable of self-regulation and does not require governmental intervention.*

Crime, Anti-social Behaviour and Integrity: Research Article on Lived Experience



Title: Esports consumer perspectives on match-fixing: implications for gambling awareness and game integrity ([Abarbanel and Johnson, 2019](#))

Aim: Drawing on extensive qualitative data collected from esports fans around the world, this article examines perceptions of gambling awareness, integrity and esports gambling to assess esports consumers' awareness of and attitudes towards gambling-related match-fixing.

Findings: Results indicate that **esports viewers are not deeply concerned by match-fixing**. In addition, **spectators typically view gambling as a cause of corruption among competitors but also understand and accept some elements of the practice**. Further, **spectators tend to rely on rules to determine their assessment of what is 'wrong', rather than assessments based on ethics**.

Conclusion: *We propose a need for education among esports spectators, extending existing anti-cheating programmes beyond just athletes to include the broader esports community.*

Crime, Anti-social Behaviour and Integrity: Research Article on Interventions and Treatment



Title: Esports Enforcement: How Criminal Sentencing Philosophy Can Stop Match Fixing ([Lu, 2022](#)).

Aim: This Comment takes the position that developers and governments must take a stronger stance against match-fixing in esports through increasing punishments and fines levied against wrongdoers.

Findings: To be sure, legalized gambling in esports generates new sources of revenue and attention to the industry that can be beneficial when properly regulated. **But it seems disappointing when large tournament organizers such as Dreamhack and ESL allow the IBUYPOWER (Team) players to compete after match-fixing. This sends the message that match-fixers who irreparably harm the industry can be allowed to return to competitive play after a short time-out.** Tournament organizers, developers, and governments must be more inclined to press harsher charges to protect their interests as match-fixing has severe negative consequences to the industry.

Conclusion: *This Comment argues that the industry and governments have failed to take the necessary steps to prevent and punish match-fixing and recommends utilizing basic criminal-sentencing philosophy as a foundation for creating stricter punishments for match-fixers.*

Crime, Anti-social Behaviour and Integrity: Academic Resources Policy



ADPH
North East

Topic	Target Population	Year of Publication	Author	Journal and Link	Sourced Funding or COI from the Gambling Industry?	Primary Outcome Findings
Upholding Esports Integrity	Esports Organisations	2019	Toomey	Gambling Law Review	No	This growing industry must overcome many hurdles if it hopes to have casinos, sportsbooks, and regulators engage in business and invest in its untapped potential.
National Esports Federations and Integrity Issues	Esport Organisations	2024	Shinohara	Gaming Law Journal	No	Due to its rapid economic growth, the esports society now faces integrity issues, much like those seen in traditional sports, including doping, match-fixing, and corruption. Therefore, the esports society must take immediate and comprehensive measures to address these urgent issues to maintain the "integrity of sport
Esports Corruption and Gambling	Esport Organisations	2017	Holden et al	Maryland Journal of International Law	No	Internal threats facing competitive video gaming include the use of performance-enhancing drugs and match-fixing. The industry also faces external pressure from a large gambling industry that exists in both regulated and unregulated markets.
Integrity and Regulatory Risks	Esports Organisations	2017	Brickell	Gaming Law Review and Economics	No	The potential reputational and commercial damage which can result from neglecting integrity and regulation can take a huge amount of time and money to fix, and forward thinking strategists will want to ensure they are ahead of the game
Skins Betting and Wire Fraud Vulnerability	Esports Organisations	2017	Holden and Ehrlich	Gaming Law Review and Economics	No	The law governing this area has become a "Wild West" where governance and regulation requires a wide interpretation of laws designed well before any of this technology was even thought to be possible. Consequently, prosecutors may have found it difficult thus far to apply most federal and state gambling laws to skins.

Crime, Anti-social Behaviour and Integrity: Academic Resources on Lived Experience and Match Fixing



ADPH
North East

Topic	Target Population	Year of Publication	Author	Journal and Link	Sourced Funding or COI from the Gambling Industry?	Primary Outcome Findings
Consumer Perspectives on Match Fixing	Esport Competitors	2018	Abarbanel and Johnson	International Gambling Studies	No	That esports viewers are not deeply concerned by match-fixing. In addition, spectators typically view gambling as a cause of corruption among competitors, but also understand and accept some elements of the practice
Threats to Esports Sponsors	Esport Fans	2021	Freitas et al	Contemporary Management Research	No	Results showed that illegal and unregulated gambling was a high-risk threat to esports sponsors; toxic behavior, match-fixing, and cheating were labeled as medium-risk threats; and sexism, cyberattacks, and doping were found to be low-risk threats.
Match-Fixing and Skins-Betting	Scoping Review	2023	Zohn and Bleakley	Journal of Gambling Issues	No	The risk of criminal exploitation in esports is embedded in the anonymity skin-betting provides in virtual spaces for potential offenders
Esports Enforcement to stop Match Fixing	Comment Piece	2022	Lu	Houston Law Review	No	That the industry and governments have failed to take the necessary steps to prevent and punish match-fixing and recommends utilizing basic criminal-sentencing philosophy as a foundation for creating stricter punishments for match-fixers.
Dark side of Esports: Analysis of Match Fixing Activities	Review Paper	2022	Schober and Stadtmann	International Journal of Esports	No	In 2020, the volume of esports bets were thus around 107 times higher than the volume of prize money. Accordingly, it is reasonable to assume that there are players and teams betting against themselves in order to achieve higher profits through match-fixing.

Crime, Anti-social Behaviour and Integrity: Summary



ADPH
North East

- There are 10 papers on 'Crime, Anti-social Behaviour and Integrity' included in this slidedeck.
- The full references are at the end of the slide deck in their own slides for Crime and Anti - Social Behaviour and Integrity topics regarding GRH in video games and esports.
- 0 / 10 of the papers mentioned have potential links to the gambling industry either through funding or a conflict of interest.
- From the slides, GRH within the topics of crime and antisocial behaviour encompassing a number of areas such as legislation, policy, corruption, player perspectives and laws.



ADPH
North East

Conclusion

- The slides not only highlight the different types of GRH's research across the topics of esports and video games. It also demonstrates that gambling in video games is a growing area that needs attention to so public health teams, researchers and teachers can be made aware of the potential harm the hidden gambling elements pose to children and young people.
- The slide deck also provides context to how GRHs can affect not only the person who engages with gambling but the affected other such as family, parents, children and friends. It also provides the reader on different approaches from interventions to policy and legislation frameworks to help reduce risk and harm.
- Feel free to disseminate to reference academic literature for GRH from video games and esports.



ADPH
North East

Appendices



ADPH
North East

Links to Additional Material

- [GRH Slide Deck](#)
- [GRH Language Guide](#)
- [Statement of Funding from ADPH](#)
- [Newsletter](#)
- [Academic Slide Deck on GRH](#)
- [Regional Health Needs Assessment](#)

Reference List: GRH Mental Health and Wellbeing in Video Games



ADPH
North East

1. Wattanapisit, A., Wattanapisit, S., & Wongsiri, S. (2020). Public health perspectives on eSports. *Public Health Reports*, 135(3), 295-298.
2. Marchica, L., Richard, J., Mills, D., Ivoska, W., & Derevensky, J. (2021). Between two worlds: Exploring esports betting in relation to problem gambling, gaming, and mental health problems. *Journal of Behavioral Addictions*, 10(3), 447-455.
3. Zendle, D. (2020). Beyond loot boxes: A variety of gambling-like practices in video games are linked to both problem gambling and disordered gaming. *PeerJ*, 8, e9466.
4. Irie, T., Shinkawa, H., Tanaka, M., & Yokomitsu, K. (2023). Online-gaming and mental health: Loot boxes and in-game purchases are related to problematic online gaming and depression in adolescents. *Current Psychology*, 42(24), 20515-20526.
5. Sanders, J., & Williams, R. (2019). The relationship between video gaming, gambling, and problematic levels of video gaming and gambling. *Journal of gambling studies*, 35, 559-569.
6. Savolainen, I., Vuorinen, I., Sirola, A., & Oksanen, A. (2022). Gambling and gaming during COVID-19: The role of mental health and social motives in gambling and gaming problems. *Comprehensive Psychiatry*, 117, 152331.
7. Hing, N., Russell, A. M., King, D. L., Rockloff, M., Browne, M., Newall, P., & Greer, N. (2023). Not all games are created equal: Adolescents who play and spend money on simulated gambling games show greater risk for gaming disorder. *Addictive Behaviors*, 137, 107525.
8. Czakó, A., Király, O., Koncz, P., Yu, S. M., Mangat, H. S., Glynn, J. A., ... & Demetrovics, Z. (2023). Safer esports for players, spectators, and bettors: Issues, challenges, and policy recommendations. *Journal of Behavioral Addictions*, 12(1), 1-8.
9. Gibson, E., Griffiths, M. D., Calado, F., & Harris, A. (2023). Videogame player experiences with micro-transactions: An interpretative phenomenological analysis. *Computers in Human Behavior*, 145.
10. Chung, T., Sum, S., Chan, M., Lai, E., & Cheng, N. (2019). Will esports result in a higher prevalence of problematic gaming? A review of the global situation. *Journal of behavioral addictions*, 8(3), 384-394.
11. Nicklin, L. L., Spicer, S. G., Close, J., Parke, J., Smith, O., Raymen, T., ... & Lloyd, J. (2021). "It's the attraction of winning that draws you in"—A qualitative investigation of reasons and facilitators for videogame loot box engagement in UK gamers. *Journal of Clinical Medicine*, 10(10), 2103.
12. Brady, A., & Prentice, G. (2021). Are loot boxes addictive? Analyzing participant's physiological arousal while opening a loot box. *Games and Culture*, 16(4), 419-433.
13. Sakhapov, A., & Brown, J. A. (2020). Players Perception of Loot Boxes. In *Entertainment Computing—ICEC 2020: 19th IFIP TC 14 International Conference, ICEC 2020, Xi'an, China, November 10–13, 2020, Proceedings 19* (pp. 134-141). Springer International Publishing.
14. Kelling, K., & Tham, S. (2021). "Role" of the dice: An Exploratory analysis of gamer perceptions and interpretations of loot box Advertising. *Journal of Interactive Advertising*, 21(1), 68-74.
15. Nguyen, A., Randau, D., & Mirgolozar, A. (2018). Loot boxes: gambling in disguise?: A qualitative study on the motivations behind purchasing loot boxes. (Student Thesis 2018)

Reference List: GRH and Finances in Video Games



ADPH
North East

1. Garea, S. S., Drummond, A., Sauer, J. D., Hall, L. C., & Williams, M. N. (2021). Meta-analysis of the relationship between problem gambling, excessive gaming and loot box spending. *International Gambling Studies*, 21(3), 460-479.
2. Zendle, D., Meyer, R., & Ballou, N. (2020). The changing face of desktop video game monetisation: An exploration of exposure to loot boxes, pay to win, and cosmetic microtransactions in the most-played Steam games of 2010-2019. *PloS one*, 15(5), e0232780.
3. Lemmens, J. S. (2022). Play or pay to win: Loot boxes and gaming disorder in FIFA ultimate team. *Telematics and Informatics Reports*, 8, 100023.
4. Garrett, E. P., Sauer, J. D., Drummond, A., & Lowe-Calverley, E. (2022). Problem gambling and income as predictors of loot box spending. *International Gambling Studies*, 22(3), 432-443.
5. Greer, N., Rockloff, M., Browne, M., Hing, N., & King, D. L. (2019). Esports betting and skin gambling: A brief history. *Journal of Gambling Issues*, 43.
6. Abarbanel, B., Macey, J., Hamari, J., & Melton, R. (2020). Gamers who gamble: Examining the relationship between esports spectatorship and event wagering. *Journal of Emerging Sports Studies*, 3(1).
7. Biggar, B., Zendle, D., & Wardle, H. (2023). Targeting the next generation of gamblers? Gambling sponsorship of esports teams. *Journal of public health*, 45(3), 636-644.
8. Wardle, H., Petrovskaya, E., & Zendle, D. (2020). Defining the esports bettor: Evidence from an online panel survey of emerging adults. *International Gambling Studies*, 20(3), 487-499.
9. Gainsbury, S. M., Abarbanel, B., & Blaszczyński, A. (2017). Intensity and gambling harms: Exploring breadth of gambling involvement among esports bettors. *Gaming Law Review*, 21(8), 610-615.
10. Greer, N., Hing, N., Rockloff, M., Browne, M., & King, D. L. (2023). Motivations for esports betting and skin gambling and their association with gambling frequency, problems, and harm. *Journal of Gambling Studies*, 39(1), 339-362.
11. Li, W., Mills, D., & Nower, L. (2019). The relationship of loot box purchases to problem video gaming and problem gambling. *Addictive behaviors*, 97, 27-34.
12. Coelho, S. G., Keough, M. T., Hodgins, D. C., Shead, N. W., Parmar, P. K., & Kim, H. S. (2023). Loot box purchasing is associated with gambling and problem gambling when controlling for known psychological risk factors of gambling. *Addiction Research & Theory*, 31(4), 260-269.
13. Salonen, A. H., Kontto, J., Perhoniemi, R., Alho, H., & Castrén, S. (2018). Gambling expenditure by game type among weekly gamblers in Finland. *BMC Public Health*, 18, 1-12.
14. Kristiansen, S., & Severin, M. C. (2020). Loot box engagement and problem gambling among adolescent gamers: Findings from a national survey. *Addictive behaviors*, 103, 106254.
15. Baeck, J., & Claeys, I. (2021). Restitution of money spent on loot boxes in video games?. *Computer Law & Security Review*, 41, 105566.
16. Hing, N., Russell, A. M., King, D. L., Rockloff, M., Browne, M., Newall, P., & Greer, N. (2023). Not all games are created equal: Adolescents who play and spend money on simulated gambling games show greater risk for gaming disorder. *Addictive Behaviors*, 137, 107525.

Reference List: GRH and Relationships in Video Games



ADPH
North East

1. Lombardi, G., Molinaro, S., Cotichini, R., Cerrai, S., Scalese, M., & Benedetti, E. (2024). The cards they're dealt: types of gambling activity, online gambling, and risk of problem gambling in European adolescents. *Social Science & Medicine*, 363, 117482.
2. Király, O., Zhang, J., Demetrovics, Z., & Browne, D. T. (2022). Gambling features and monetization in video games create challenges for young people, families, and clinicians. *Journal of the American Academy of Child and Adolescent Psychiatry*, 1-3.
3. Bradt, L., Grosemans, E., De Cock, R., Dupont, B., Vansteenkiste, M., & Soenens, B. (2024). Does parents' perceived style of setting limits to gaming matter? The interplay between profiles of parental mediation and BIS/BAS sensitivity in problematic gaming and online gambling. *Journal of adolescence*, 96(3), 580-597.
4. Dittman, C. K., Gossner, M., Browne, M., Hing, N., Rockloff, M., Russell, A. M., & Lole, L. (2025). Sure they Gamble—But At Least They're Not Being Bullied! A Survey of Parental Perspectives of Adolescent Gambling. *International Journal of Mental Health and Addiction*, 1-20.
5. Stark, S., Reynolds, J., & Wiebe, J. (2020). Gambling and Gaming in an Ontario Sample of Youth and Parents. *Journal of Gambling Issues*.
6. Huda, I. N., & Salehudin, I. (2024). Escapism, family and friends, and social interactions: How watching esports increases gaming and in-game purchase intentions. *Jurnal Manajemen dan Pemasaran Jasa*, 17(1), 1-22.
7. Marinaci, T., Venuleo, C., Ferrante, L., & Della Bona, S. (2021). What game we are playing: the psychosocial context of problem gambling, problem gaming and poor well-being among Italian high school students. *Heliyon*, 7(8).
8. Davidson, K., Hodge, S. E., Panourgia, K., Hutchings, M., & Clelland, K. (2024). Lived experiences of gaming and gambling related harm and implications for healthcare services. *Journal of Gambling Issues*.
9. Mills, S., Ash, J., & Gordon, R. (2024). Digital geographies of home: parenting practices in the space between gaming and gambling. *Children's Geographies*, 22(5), 778-794.
10. Zaman, B., Van Mechelen, M., De Cock, R., & Huyghe, J. (2021). Perceptions of and exposure to games of chance, gambling, and video gaming: self-reports of preadolescents and parents. *Journal of Gambling Issues*, 46, 242-278.
11. Davidson, K. (2022). The lived experience of gaming and gambling: guiding practitioners' understanding for supporting children and young people (Doctoral dissertation, Bournemouth University).

Reference List: Education and Employment in Video Games



ADPH
North East

1. Casu, M., Belfiore, C. I., & Caponnetto, P. (2023). Rolling the dice: A Comprehensive Review of the New forms of Gambling and Psychological Clinical recommendations. *Psychiatry International*, 4(2), 105-125.
2. Wang, Y., Zhao, L., Wan, K., & Zeng, X. (2024). Reducing Problematic Loot-box Use with Self-control Intervention: A Randomized Controlled Trial. *International Journal of Mental Health and Addiction*, 1-21.
3. Kolandai-Matchett, K., & Wenden Abbott, M. (2022). Gaming-gambling convergence: Trends, emerging risks, and legislative responses. *International Journal of Mental Health and Addiction*, 20(4), 2024-2056.
4. Giménez Lozano, J. M., & Morales Rodríguez, F. M. (2022). Systematic review: Preventive intervention to curb the youth online gambling problem. *Sustainability*, 14(11), 6402

Reference List: Policy and Legislation in Video Games



ADPH
North East

1. Xiao, L. Y., & Henderson, L. L. (2024). Illegal video game loot boxes with transferable content on steam: a longitudinal study on their presence and non-compliance with and non-enforcement of gambling law. *International Gambling Studies*, 24(3), 498-524.
2. Jayemanne, D., Chillias, S., Moir, J., Rocha, A., Simpson, F., & Wardle, H. (2021). Loot boxes and digital gaming: a rapid evidence assessment.
3. Uddin, S. (2021). Loot the children: The need to regulate predatory loot box mechanics in video games that target young audiences. *Family Court Review*, 59(4), 870-885.
4. Xiao, L. Y. (2022). Drafting video game loot box regulation for dummies: a Chinese lesson. *Information & Communications Technology Law*, 31(3), 343-381.
5. Derrington, S., Star, S., & Kelly, S. (2021). The case for uniform loot box regulation: A new classification typology and reform agenda. *Journal of Gambling Issues*, 46, 302-332.
6. McCaffrey, M. (2019). A cautious approach to public policy and loot box regulation. *Addictive Behaviors*, Forthcoming.
7. Lui, D., Thompson, B., & Rich, C. (2020). Blurring lines: Loot boxes and gambling in the video game industry. *York L. Rev.*, 1, 7.
8. Xiao, L. Y. (2023). Breaking Ban: Belgium's ineffective gambling law regulation of video game loot boxes. *Collabra: Psychology*, 9(1), 57641.
9. Xiao, L. Y., & Henderson, L. L. (2024). Illegal video game loot boxes with transferable content on steam: a longitudinal study on their presence and non-compliance with and non-enforcement of gambling law. *International Gambling Studies*, 24(3), 498-524.
10. Xiao, L. Y. (2021). Regulating loot boxes as gambling? Towards a combined legal and self-regulatory consumer protection approach. *Interactive Entertainment Law Review*, 4(1), 27-47.
11. Brewer, A. (2020). The Hunt for Loot: Proposed Solutions to More Effectively Regulate Addictive Gambling Mechanics in Video Games. *JL & Pol'y*, 29, 158.
12. Czerska, I., & Majerska, A. (2023). Micropayments in games using the FIFA series as an example—fun or e-gambling accessible to children? Discussion around controversy and regulation. *Zeszyty Naukowe Politechniki Śląskiej. Organizacja i Zarządzanie*, (172).

Reference List: GRH within Crime and Antisocial Behaviour in Video Games



ADPH
North East

1. Toomey, R. P. (2019). Upholding the integrity of esports to successfully and safely legitimize esports wagering. *Gaming Law Review*, 23(1), 12-18.
2. Shinohara, T. (2024). The Rule of the National Esports Federation for Integrity Issues in Esports. *UNLV Gaming Law Journal*, 15(1), 89.
3. Holden, J. T., Rodenberg, R. M., & Kaburakis, A. (2017). Esports corruption: Gambling, doping, and global governance. *Md. J. Int'l L.*, 32, 236.
4. Brickell, A. (2017). Addressing integrity and regulatory risks in esports: The responsibility of the whole esports community. *Gaming Law Review*, 21(8), 603-609.
5. Holden, J. T., & Ehrlich, S. C. (2017). Esports, skins betting, and wire fraud vulnerability. *Gaming Law Review*, 21(8), 566-574.
6. Abarbanel, B., & Johnson, M. R. (2019). Esports consumer perspectives on match-fixing: Implications for gambling awareness and game integrity. *International Gambling Studies*, 19(2), 296-311.
7. Abreu Freitas, B. D., Contreras, R. S., & Pereira Correia, P. Á. (2021). A model of the threats that disreputable behavior present to esports sponsors.
8. Zohn, A., & Bleakley, P. (2023). Match-fixing in esports: A scoping review of skin-betting. *Journal of Gambling Issues*.
9. Lu, G. (2021). Esports enforcement: How criminal sentencing philosophy can stop esports match-fixing. *Hous. L. Rev.*, 59, 945.
10. Schöber, T., & Stadtmann, G. (2022). The dark side of e-sports: An analysis of cheating, doping & match-fixing activities and their countermeasures. *International Journal of Esports*, 1(1).

Please take a couple of minutes to fill out the following feedback form via the QR code below.



ADPH
North East

To access the short feedback form, please scan the QR code using your phone's camera.

Open your camera app and hover the camera over the square it will bring up a link for you to select.

Please select the link and the feedback form will open.

Thank you for providing feedback, it helps us improve the resources.

