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Lived Experiences of Gaming and Gambling Related Harm and Implications for Healthcare Services

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Abstract: Children and young people (CYP) are high consumers of loot boxes, raising concerns about the impact of a convergence of gaming and gambling-related harms and their potential negative developmental outcomes in adulthood. Especially, given evidence that practitioners and parents/carers are lacking awareness of the risks of converging gaming-gambling environments. Addressing these risks necessitates understanding the experiences of gaming and gambling-related harm within healthcare systems. This study aimed to gain insights from individuals with previous lived experience of gaming and/or gambling-related harm in the context of CYP and healthcare systems. A qualitative design was adopted using two semi-structured online focus groups, involving five participants with previous lived experience of gaming and/or gambling-related harm. Focus groups explored their experiences of healthcare services and barriers to support in the journey through harm and recovery. Thematic analysis of the data revealed five key themes: i) Escapism; ii) Identity; iii) Preventative Education; iv) Safer Environments; v) Health-based Narratives. 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 against novel risks of harm through healthcare systems. The results suggest that preventative approaches need to understand the virtual worlds of CYP and the importance of digital resilience. Implications for practitioners, services, policy makers, and regulators seeking to protect CYP from the risks of gaming and gambling-related harm are discussed.

Keywords: Loot Boxes, Gambling-related Harm, Children, Young People, Healthcare, Behavioural Addiction.

Introduction

Convergence of Gaming and Gambling

Gaming and gambling have historically been seen as separate activities. However, recent video gaming developments such as loot boxes, described as virtual lucky dips (Hodge et al., 2022) which use Random Reward Mechanics (Nielsen & Grabarczyk, 2019), imply a gaming-gambling convergence (Xiao, 2021). Loot boxes' random chance elements have suggested to elicit parallels with gambling among users (Hodge et al., 2022; Rolando & Wardle, 2023; von Meduna et al, 2020), alongside their experiential/psychological resemblances to gambling (Drummond & Sauer, 2018). Therefore, gambling-like content appears in video games (e.g. Macey & Hamari, 2019) and the introduction of game-like elements into gambling products (King & Delfabbro, 2020) which blur the distinction between gambling and gaming activities (Kim & King, 2020).

In the UK, 24% of 11-16 year olds have paid money or virtual currency to open loot boxes, of whom 74% have done so in the last 12 months (UK Gambling Commission, 2022). Evidently, loot boxes are more appealing to young people than traditional forms of gambling; only 7% of those aged 11 and 16 have participated in traditional online gambling, 23% have paid real-world money on loot boxes (UK Gambling Commission, 2019). This may be in part due to gambling activities in the UK having an 18 age restriction (Gambling Act, 2005), whereas loot boxes are accessible in video games rated below 18 (Zendle, et al., 2020). Gaming is a popular activity among UK Children and Young People (CYP); with 93% of children gaming and 20% of video game players being under 18 (Children's Commission, 2019; Entertainment Software Association (ESA), 2021). While popular with those under 18 (making up 24% of players), gaming remains popular in adulthood among individuals aged 18-65 and older (ESA, 2022).

In light of the gaming-gambling convergence, the notion arises that gambling-like elements such as loot boxes may act as a gateway towards gambling-type behaviour (Kim & King, 2020). Both cross-sectional (Brooks & Clark, 2023), longitudinal (González-Cabrera et al., 2023) designs have suggested that loot boxes could act as a gateway into gambling. Equally it has been suggested this gateway could be reversed; problem gambling could be related to problem gaming/loot box spending behaviours (Spicer et al., 2022). A recent meta-analysis (Garea, et al., 2021) have found higher loot box spend and problem gaming behaviours have a relationship to higher scores on problem gambling measures (von Meduna et al., 2020). These relationships have been found with both adolescent (e.g., Zendle, Meyer & Over, 2019; González-Cabrera et al., 2023) and adult (e.g., Brooks & Clark, 2023; Spicer et al., 2022) populations. The

randomised nature of loot boxes is suggested to lead to gambling-like behaviours, fostering emotional and financial commitment to escalating expenditures (DCMS 2019; King & Delfabbro, 2018). As such purchasing loot boxes is described as an emergent gambling behaviour, potentially fostering a positive image of gambling among CYP (Macey & Hamari, 2019). For example, previous research exploring the experience and motivations of buying loot boxes have been suggested to be for in-game advantages as well as for the gambling like elements such as random chance elements (Zendle et al., 2019; Hodge et al., 2022). These findings underscore the importance of understanding video game features as potential precursors to problematic gambling behaviour, while also raising concerns about the normalisation of gambling among CYP, for whom gaming is a popular leisure activity (Gambling Commission, 2017a).

Behavioural Addiction: Gaming and Gambling Harms

Previous research has reported the benefits of video games for the wellbeing of CYP (Johannes et al., 2021; Kovess-Masfety et al., 2016; Picton et al., 2020), although this relationship seems to be complex and has been debated (Johannes et al., 2022; Vuorre et al., 2022). Especially, when considering the factors associated with excessive and problematic video game engagement (Close & Lloyd, 2021). Griffiths (2005) argues that, whilst many behavioural addictions (such as gambling) have particular and idiosyncratic characteristics, they have been suggested to share components (salience, mood modification, tolerance, withdrawal, conflict, and relapse) and follow a similar biopsychosocial process, where interconnected biological, psychological and social-environmental factors influence health and wellbeing (Engel, 1977). Therefore, video game addiction could potentially lead to similar behaviours like gambling, especially due to shared features like loot boxes using random rewards (Nielsen & Grabarczyk, 2019). As it can be suggested that a specific behavioural addiction may contribute to the promotion of addictive tendencies (Widyanto & Griffiths, 2006). Therefore, as well as building a positive image of gambling in the minds of CYP, early and prolonged exposure to highly engaging video games may predispose them to addictive tendencies. Longitudinal studies with young gamers aged 18-25 suggest loot boxes are a stronger predictor of migration to gambling involvement after six months than non-randomised in-game microtransactions (Brooks & Clarke, 2023), raising concerns about physical, emotional, social, financial, and career harms (Langham et al., 2016). The convergence of gaming and gambling has suggested to pose risks of problem gambling behaviours (e.g., Drummond & Sauer, 2018; King, & Delfabbro, 2018; Xiao & Henderson, 2019; Zendle & Cairns, 2018, 2019) as youth gambling links to later gambling-related harm (Kessler et al., 2008). However, the recent UK gambling white paper overlooks this, including loot boxes (House of Commons Library, 2023).

CYP are suggested to be particularly vulnerable to gambling-related harms (Kräplin & Goudriaan 2019; Wardle et al., 2019; World Health Organisation, 2017). Blake et al. (2019) suggests that CYP may be affected by gambling-related harms in unique ways due to their developmental stage and social environment. Those currently aged 16-25, the first cohort experiencing the altered gambling landscape following the Gambling Act (2005) and are described as emerging adults; characterised as free from both parental constraints and adult responsibilities, with greater risk-taking behaviour and sensation-seeking experimentation (Arnett, 2000; Wardle, 2020). This propensity for risk-taking behaviour, plausibly associated with financial over-investment, creates vulnerability for gambling-related harms as suggested by research exploring loot box spending (Spicer et al., 2022; Brooks & Clark, 2023). The convergence of gaming and gambling through features like loot boxes may offer new avenues for these behaviours. Therefore, research is essential to understand the lived experiences of gaming and gambling-related harm throughout childhood and adolescence, including qualitative studies (Kim & King, 2020; Zendle et al., 2020; 2021; von Meduna et al., 2020).

Systems of Public Health

Gambling is recognised as a public health issue (Nature, 2018; The Lancet, 2017, Welsh Government, 2018), supporting a shift to a health-oriented perspective (Sanju & Gerada, 2011), and fostering a gambling as a health harm narrative via campaigns, to enhance healthcare practitioners' awareness and patient guidance (Johnson & Regan, 2020). Additionally, broader actions are needed beyond healthcare settings, including wider social systems of education, civic planning, and product regulation (Kings Fund, 2019, GambleAware, 2021). The National Strategy to Reduce Gambling Harms (NSRGH, 2021) recognises that effective public health approaches need to be guided by the voices of consumers and those with lived experience of gambling harm.

Similarly, it has been suggested that a public health approach may be suitable to address risks of harm from gambling-like loot boxes (Xiao et al., 2022). The Gambling Commission (2017a) highlights the unknown impact of normalised gambling attitudes on CYPs development and wellbeing, and furthermore that lower-threshold interventions may be vital to reach CYP before they start gambling. For example, emergent gambling behaviours, including loot box engagement, which are suggested to build a positive image of gambling (Smith & Nairn, 2019). The need for a preventative approach is further supported by evidence that those experiencing gaming and gambling-related challenges have limited access to healthcare services until resultant acute mental health issues arise, which may be due to inadequate treatment options (Park et al., 2021). Additionally, inadequate understanding of contemporary video game features like loot boxes among adults (Mik, 2021) may hinder healthcare practitioners from providing preventative treatment, and parents from seeking treatment on

behalf of minors who are at risk. This highlights the role of wider systems of support surrounding healthcare, such as practitioner training and parent education. In order to understand these influences in preventative public health approaches, research involving lived experience participants should explore how the design of healthcare services and systems can protect CYP at risk of emerging gambling-related harms (NSRGH, 2021).

Rationale

The convergence of gaming and gambling introduces novel risks, including overlapping harms (Drummond & Sauer, 2018; King, & Delfabbro, 2018; Xiao & Henderson, 2019; Zendle & Cairns, 2018, 2019; Zendle, 2022). More research is needed to understand gaming and gambling harms in CYP which may include more contemporary features such as loot boxes and related game features alongside factors and signs of harm such as overspending (King & Delfabbro, 2019; Kolandai-Matchett & Abbott, 2022; Spicer et al., 2022; Brooks & Clark, 2023). Healthcare systems lack insight into responding to these risks and providing support services and treatment options for CYP (Regan et al., 2022). Investigating the interplay between gaming-related harms and gambling-related harms among individuals with lived experience is critical for understanding the previous experiences, the contemporary challenges, and considerations for the future to create positive change. This study addresses this gap by involving lived experience participants to comprehend their journeys through gaming and gambling-related harm. This research could have important implications for those many stakeholders seeking to protect CYP from gaming and gambling harm, including healthcare services, practitioners from a wide range of different disciplines.

The following Research Questions (RQ) were posed:

RQ1: What are the lived experiences of people with gaming and/or gambling related harms in relating to healthcare services and other related support systems.

RQ2: How can these experiences inform healthcare services and other systems to more effectively protect CYP who may be at risk of gaming and/or gambling-related harm.

Method

Design

To explore lived experience insights on CYP gaming and gambling harms, a qualitative design employing semi-structured focus groups was adopted. This method aligns with the effectiveness of these methods in exploring knowledge and contextual ideas (Kitzinger, 1994), allowing participants to share opinions and develop consensus within the group (Crossley, 2002). A focus group may recognise shared experiences while presenting different opinions and facilitating follow-up discussions (Van Teijlingen & Pitchforth, 2006; Van Teijlingen & Pitchforth, 2007).

Qualitative methodologies highlight the interpretive understanding over measurement (Geertz, 1993; Saratakos, 1998). Therefore, qualitative approaches using focus group methods enable deeper understanding of participants' relationships with the settings and systems in which they find themselves, in this case, enabling experiences of gaming and gambling and access to healthcare services in the UK to inform analysis of the risks of gaming and gambling-related harms for CYP.

Two focus groups (scheduled for 90 minutes each) were conducted online due to COVID-19 restrictions. Video internet-based focus groups capture the nuances of physical communication (Collard & van Teijlingen, 2016) and enhance disclosure of sensitive issues (Fox, 2007). Also, video internet-based focus groups allow for convenience and open dialogues (Van Teijlingen & Pitchforth, 2006). A potential limitation of focus groups is that minority views may be overwhelmed by majority views and not captured by the data. However, this can be mitigated by controlling the number of participants and researcher cues (Stewart & Shamdasani, 1990) and by encouraging diverse perspectives (Van Teijlingen & Pitchforth, 2007).

Participants

Five participants (aged 28-49; four male and one female; focus group 1, n = 3; focus group 2, n = 2) with lived experience of gaming and/or gambling related harms were recruited through convenience sampling and snowball sampling across the UK. The ideal number for online focus groups has been suggested to be between 3-6 participants (Collard & van Teijlingen, 2016). Three participants were recruited for each focus group but in the second focus group one participant did not attend. Although smaller than usual, the dynamic between the two participants proved successful. Natural dialogue emerged with minimal intervention from the facilitator (facilitator: 5%, each participant: 47.5%). The building of ideas between participants is recognised as a strength of focus groups (Leung & Savithiri, 2009), reducing research bias (Kress & Shoffner, 2007; Stewart et al., 2007).

Recruitment adhered to age restrictions (Gambling Act, 2005), requiring participants above 18 for discussions about gambling. Young Gamers and Gamblers Education Trust (YGAM) and Betknowmore UK networks aided recruitment. Four participants had experienced mostly gambling-related harm; one had mainly experienced gaming-related harm. Recruiting participants with gaming-related harm was difficult, possibly due to its novelty and lesser recognition compared to gambling-related harm.

Procedure and Materials

After providing written consent, participants were sent a short online survey via Qualtrics, to provide age, gender, UK-location, and the harm type (mostly gaming, mostly gambling, or both). Location was provided to ensure UK representation. Courtesy contact was made prior to each focus

group to build trust and rapport (Collard & van Teijlingen 2016). Focus groups were conducted using Zoom and data transcribed live using the Otter.ai transcription tool. Each focus group, attended by two researchers, both lasted close to, but no longer than 90 minutes which included a five-minute break. One researcher was leading the focus group and asked the questions (see Appendix A for the Focus Group Research Instrument in Supplementary information). The other researcher was not directly involved (camera off, microphone muted). The benefit of having two researchers is that if one researcher has any technical difficulties the other researcher can step in as a backup. However, it was important that only one researcher was active during the session to avoid the risk of influencing small groups of participants. Afterwards, each participant received a debriefing form and a £25 e-gift voucher as compensation for their time.

Ethical considerations

Ethical approval was obtained via Bournemouth University, Faculty of Science and Technology Ethics Committee. CYP were not included in this research project due to harm development emerging in adulthood, the focus of the research was the participants experiences, and the implications CYP age group. As part of the consent process, participants were required to confirm that their experiences of harm were not continuing through signing a disclaimer form, agreeing that they were in a position to be taking part in the research and at a point of recovery. Confidentiality and the right to withdraw were emphasised at the beginning of the focus group and confidentiality was maintained with chosen codenames by participants which was applied in the focus groups and for analysis.

Analysis

Data was analysed via six-phase thematic analysis as suggested by Braun & Clarke (2006), which has been used extensively as an analytical approach for focus group methodologies involving participants with lived experience of biopsychosocial phenomena including gambling harm (Braun & Clarke, 2023; Marco et al., 2023). A contextualist approach was used when analysing the data, drawing together an essentialist approach in relation to the participants' lived experiences, with the aim to the representation of the participants' voices, and a constructionist approach in relation to participants' advice about systems of preventative healthcare, placing these lived realities within wider social discourses identified by participants and researcher alike (Braun & Clarke, 2006).

The coding of the data took place over six phases, led by the first author and involving the whole research team to construct the data interpretation (Finlay, 2002; Ping-Chun 2008; Seidman, 2013). The first phase was focused on data familiarisation, checking, and correcting the Otter.ai transcriptions. In the second phase initial codes were generated by tagging items of interest. These codes were recorded in a research journal to reflect upon potential relationships between codes. In the third phase

these initial codes were categorised, grouped into potential themes, and organised. In the fourth phase themes were restructured to result in the five themes and arranged into the 17 subthemes with direct and indirect relationships mapped. In the fifth phase themes and subthemes names were reviewed through literature-based codes and defined. In the six phase analytical memos were written to summarise the content of each theme and subtheme.

Reflexivity

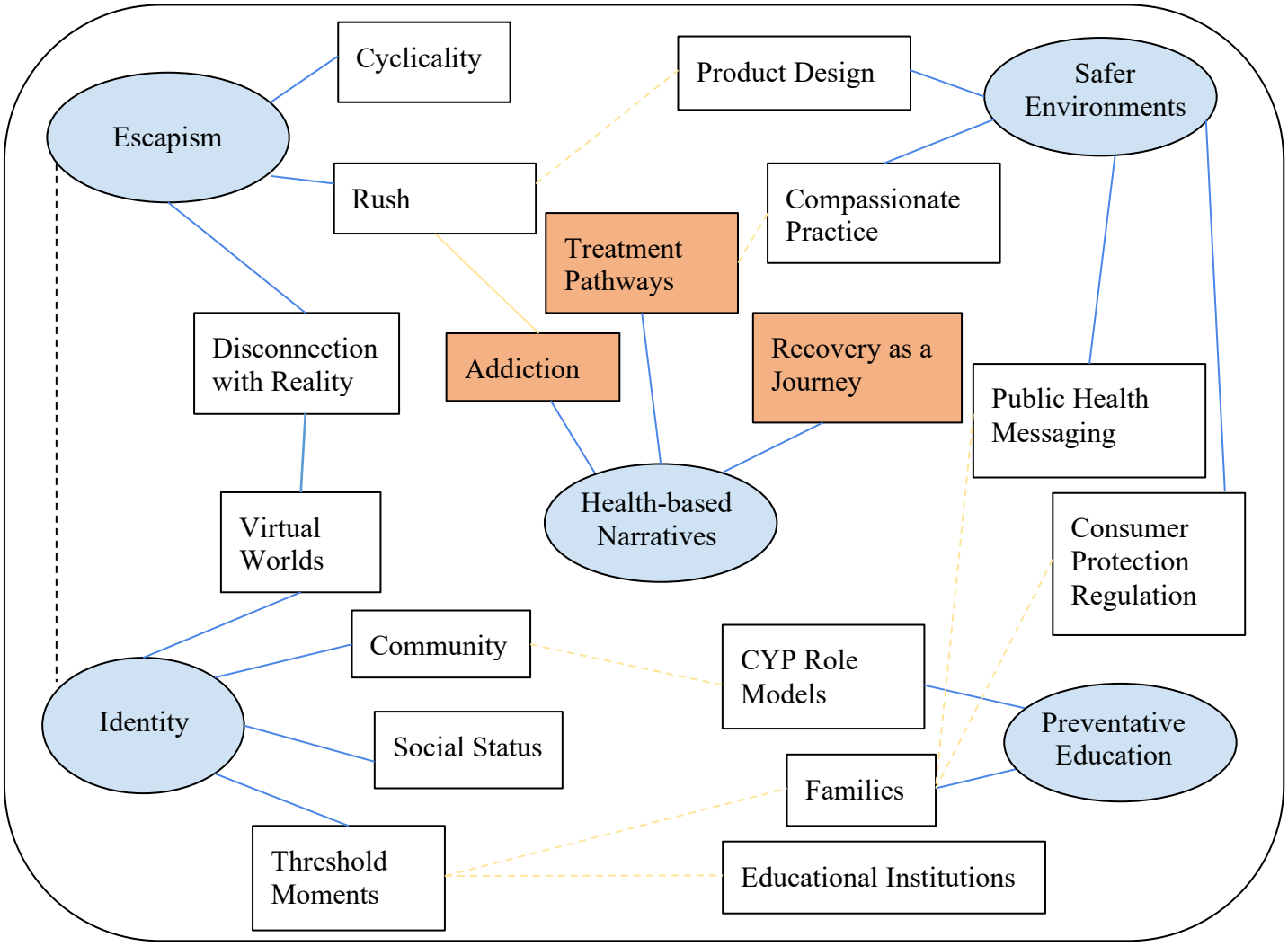
Following suggestions by Braun & Clarke (2019), a reflexive approach was included in the process by embracing researcher subjectivity as a resource for research (Braun & Clarke, 2023) and encouraging self-evaluation (Berger 2015). The researcher who took the lead on the analysis had the least experience of the literature and lived experience at that time of analysis to encourage a more inductive approach. However, it was acknowledged by all of the researchers that previous experiences, knowledge, biases and the backgrounds will have still influenced the analysis. As such during the analysis, meetings were arranged to offer reflexive commentary on the interpretation of the themes with three other researchers who had different backgrounds and disciplines (education, cyberpsychology, developmental psychology, health and social care) and therefore brought different perspectives. This combination of different perspectives and knowledge added rigour to the data analysis process and encouraged reflexive engagement.

Results

The analysis revealed five main themes emerged from the overlap of gaming and gambling experiences and harms : Escapism (including three subthemes of Cyclicality, Disconnection with Reality, and Physiological Rush), Identity (including four subthemes of Social Status, Community, Virtual Worlds, and Threshold Moments), Preventative Education (including three subthemes of CYP Role Models, Families, and Educational Institutions), Safer Environments (including four subthemes of Compassionate Practice, Public Health Messaging, Consumer Protection Regulations, and Product Design) and Health-based Narratives (including three subthemes of Addiction, Treatment Pathways, and Recovery as Journey) Figure 1, the solid blue lines link the theme (oval boxes) to its main sub-themes (square boxes): yellow solid lines represent direct relationships, and the dotted lines represent in-direct relationships (yellow for subthemes and black for themes). The orange square sub-themes denote the sub-themes which had a more gambling focus and consensus (See Appendix B table B1 for the theme table in Supplementary information).

Figure 1

Thematic map of findings of the overlap of gaming and gambling experiences and harms



Note. The thematic map includes the five themes, denoted in the blue ovals, and 17 subthemes, denoted in square boxes. The white square boxes represent both gaming and gambling sub-themes, and the orange square boxes denote the sub-themes which had a more gambling focus and consensus.

Escapism

All participants described how gaming or gambling behaviour offered an escape from various aspects of their lives in the real world, typically negative elements such as stress and challenging feelings. Participants came to associate the rush of gaming and gambling with an escape from negative aspects of life, and this escapism developed a cyclical quality, leading to a disconnection from reality.

Cyclicality: Participants described escapism as having a cyclical quality, since gaming or gambling behaviour was experienced as both cure

and cause of negative life experiences which fed into each other. OJ: *"the impact of the relationship breakdowns, the stress and the pressure from the financial position that I was in...so then you just come back around and there's more confusion, more hurt, more loss and then back to addiction".*

Disconnection with Reality: All participants discussed the experiences of avoiding the real life consequences of their gaming or gambling behaviour, they described this experience as a disconnection with reality. Andrew: *"So it's kind of that escapism thing isn't it where as long as you're in your virtual world, your fantasy land, everything's going to be okay. And it's almost easier to keep sort of, you know, reinforcing that opinion, than it is sort of turn around and face to real life consequences of what you're doing".*

Rush: Participants reported gambling and gaming elements which gave them a rush were one of the key aspects of the experience: Trevor: *"I was spending hundreds of pounds on these loot boxes. And it was just trying to get that hit again, but in a different way, I'm spending money to open something, I don't know what's on the other side of it. And I get that adrenaline rush, I get that dopamine rush. So as soon as I figured out that, you know, this could be gambling."*

Identity

All of the participants described how their gaming or gambling activities became connected with perceived aspects of their identity through key life events and moments, including a sense of belonging within gaming or gambling communities, and their perceived social status within virtual worlds.

Social Status: Participants reported how in-game items leverage social status and being treated by others as a mentor or an expert generated positive self regard which was sometimes lacking in other areas of life. Trevor: *"I was interested in sport, but I didn't excel in any of the sports. But when it came to gambling, I was good at something I was really passionate about, I learned quite easily. So I was trying to kind of climb my way up this social ladder from a hierarchy perspective."*

Threshold Moments: Each participant highlighted how transitional moments in life impacting upon self-identity were associated with increased risks of gaming or gambling-related harm, such as moving into higher education, relationship or family breakdown or episodes of poor mental health. Nicola: *"And then sort of after my daughter was born, my daughter's got quite a lot of problems. She was starved of oxygen at birth. So she was in Great Ormond Street. So there was a lot of pressure and I sort of started to gamble more."*

Community: Each participant reflected on the human need for social belonging was met by a community of people engaged in the same activity, which was integrated into self-identity. Johnny: *"And you go to the bookies, and you see the same people there. And there's the same staff and you build*

up like a community of people that you can... understand how they're feeling."

Virtual Worlds: All participants agreed virtually accessible gaming and gambling environments were recognised to give access to different communities in which a sense of identity could be established. In relation to gaming, it was recognised that CYP seek virtual items in video games such as skins for establishing a sense of identity. Andrew: "*Rather than can I have a new pair of trainers, they're saying, can I buy a skin in a game please...If I haven't got that, then I'm not cool."*

Preventative Education

There was a consensus amongst all participants about the need for preventative education and early intervention to raise awareness about risks of gaming and gambling harm for CYP and supportive adults, including: families, educational institutions, and role models.

CYP Role Models: All participants suggested that preventative education which informs CYP about the risks of gaming and gambling harm was more effective when involving familiar role models and including peer-to-peer conversations. Trevor: *"I think it's really important that our young people are having conversations with people who they are familiar with, who they can kind of see themselves through, right?"*

Families: Another consensus was from participants was that family attitudes to gaming and gambling activities influenced risks of harm. Johnny: *"Well, we can start with parenting…and maybe try and help them before they get to that point, before they get to the point where it is a proper addiction, and you have got Bailiffs ringing up."*

Educational Institutions: All participants agreed that campaigns to raise awareness of risky activities in schools and universities reduced risks of harm. *OJ: "And at university, there was loads of good stuff around. You know, avoiding taking drugs and making sure that you are having alcohol in moderation, practicing safe sex, sexual health, all this kind of stuff. Absolutely nothing on gambling at all...I didn't even really know you can become addicted to gambling".*

Safer Environments

All participants agreed that individual's network and environment can support safer environments through a range of approaches; from interactions with compassionate health professionals and public health communications as well as the regulations of and gaming and gambling environments.

Compassionate practice: All participants discussed the importance of communication skills, person-centred care and familiarity, in making people feel comfortable to talk about gaming and gambling issues. Trevor*: "putting a metaphorical arm around me…coming down to that emotional level, not just sat at the desk typing away".*

Public Health Messaging: All participants highlighted a societal awareness of the health risks of gambling have changed over recent generations due to public health messaging and signposting towards treatment and support services. A similar approach is lacking for gaming and may be required. Johnny: *"Gambling now is getting more of a different understanding…it might be a bit of entertainment, but people are starting to wake up, it's like cigarettes…the worm is turning, as opposed to gaming, which I think is in its infancy. And you know, if not picked up on, it could get horrendous."*

Consumer Protection Regulations: Participants all described how the level of information provided within gameplay experiences and product marketing about the potential risks of gaming or gambling was significant in experiences of harm. Nicola: *"when you first log in...there should be like, 10 questions about gambling and then 'do you think you've got a problem with gambling? And then if so it throws you to all the different helplines. And I think with FIFA, Call of Duty, all these games that you can buy add-ons, they should have the same thing so their parents can monitor the spending cap, you know, what they're doing".*

Product Design: There was a consensus among participants that the design of products and many experiences of gaming included an overlap in gaming and gambling features. In the discussions participants highlighted both themselves as CYPs and CYP in general being exposed to gambling while gaming even in traditional settings such as arcades as well as in gaming. Andrew: *"and you realise they have so many of these sort of pay-to-win elements built into the back end of the game…unless you've got those particular cards of players, you can't compete…So it's going to draw somebody who might not necessarily even have any previous history of any sort of gambling or gaming addiction to sort of enter into that realm where they're actually spending considerable amounts of money on that game."*

Health-based Narrative

Participants discussed health narratives around illness and support for both gaming and gambling, with a greater focus on health in the case of gambling-related harm, than in relation to gaming-related harm. All participants related to the idea of addiction, however participants with experiences of gambling-related harm described an understanding of addiction as an illness, with the need for treatment pathways and an ongoing process of recovery whereas gaming was not described in this illness narrative.

Addiction: Participants discussed an understanding of uncontrolled behaviours as an addiction and health problem OJ: *"She started to see just how little control I have. And started to understand that it was an addiction, it's referred to as a disease as a reason".*

Treatment Pathways: Participants agreed there was a lack of basic information about how to seek treatment and support for behavioural addiction. Treatments were discussed in the context of gambling more than

gaming where symptoms were addressed rather than causes, such as antidepressants, were considered inappropriate. Nicola: *"Gambling, out of all of them, it's not recognised enough, you know, if you're an alcoholic, or you're a drug addict, you go to the doctors, and straight away, you know, we can refer you here and refer you there. But with gambling, it's 'what do we do with this person?'"*

Recovery as a Journey: Recovery as an ongoing process involving a range of connected services within systems of healthcare was a consensus among the gambling related harm than the gaming related harm. OJ: *"So there's a whole network of people that are going to support you now and I'm just one of those people…And within that network, you get the opportunity to do loads and loads of different things, they're gonna support your recovery."*

Discussion

This study explored the parallels in lived experiences of gaming and gambling-related harms, likely stemming from convergence of gaming and gambling facilitated by features like loot boxes. Participants shared experiences of addiction and overlaps in gaming and/or gambling. Connecting this to themes of escapism, identity, and the role of healthcare systems and other related support systems in developing preventative education and safer environments for CYP who may be at risk of gaming and gambling-related harm. Similar to previous research it was suggested by participants that loot boxes and other gaming features could be a potential gateway to gambling as well as the reverse, in that those who experienced problem gambling suggested they were more vulnerable and drawn to aspects of gaming such as loot boxes (Spicer et al., 2022).

Alongside parallels in experiences of gaming and gambling related harm, the data revealed differences in the use of health-based narratives were much more focused on experiences of gambling related harm compared to gaming related harm. One possible explanation for this is as represented in Figure 1, that the gaming themes seem to be on the periphery, whereas the gambling themes were widely acknowledged in all themes and sub-themes, but had much more focus in the health applications compared to gaming. This may be in part a reflection of gambling addiction being recognised and diagnosable compared to gaming addiction which is still debated (Kessler, et al., 2008; Ferguson, & Colwell, 2020).

Health-based Narratives

Participants discussing experiences of gambling-related harm drew upon health-based narratives, understanding behavioural addiction as an illness which requires specific psychological treatment over a period of time, and the need for early intervention. This theme was also connected to subthemes of compassionate practice and public health messaging mentioned previously. Participants recognised that increased awareness of gambling as a health risk has resulted from measures such as public health

campaigns, accessible treatment pathways, and signposting of support. This could be linked to a shift in the approach of primary care settings to problem gambling behaviour, from social problem to health harm (Gerada & Sanju, 2011), including multi-disciplinary measures such as shared care schemes, improved screening processes, and nationwide training.

In contrast, when discussing experiences of gaming-related harm these health-based narratives were not as clear and focused on in the discussions compared to gambling, particularly around the topics of addiction, recovery, and treatment. This again could be due to gaming addiction still being debated (Ferguson, & Colwell, 2020). While it has been acknowledged in the International Classification of Diseases (ICD-11) more recently, it is only mentioned in the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) as needing further investigation (Petry & O'Brien, 2013; Billieux et al., 2021). Therefore systems-wide thinking could be lacking to bring about changes in awareness about the risks of online gaming. As an example of systems-based thinking, the World Health Organisation's (WHO) recognise that the inclusion of gaming disorder, could also raise the awareness of players and health professionals to risks of harm, prevention and treatment measures (WHO 2018; Billieux et al., 2021). This may encourage both governments and the gaming industry towards social responsibility measures (Xiao et al., 2022; Xiao et al., 2023).

Safer Environments

Participants highlighted the influence of wider systems in preventing gaming and gambling related harm. The themes of escapism and identity are linked by the importance of the social context which surrounds a gameplay experience and environment, affecting the risks of harm which players including CYP may be exposed to. Participants suggested that some elements of product design led to harmful overspending, such as a lack of informed choice and the presence of loot boxes with competitive in-game advantages. This finding supports the consensus in the literature (e.g., Zendle et al., 2019; Hodge et al., 2022; Brooks & Clark, 2023). Another example includes King & Delfabbro's (2019) concerns about overspending due to features such as loot boxes with competitive advantages and purchasing systems which disguise the true cost of the activity until players have already made substantial financial and psychological investments. As such Cemiloglu et al. (2020) proposes embedding ethical requirements into the design of technology, to ensure informed choice and the monitoring of player data to identify risk factors. There also needs to be considerations of the different design features and appearance of loot boxes that relate to both the players experience and level of risk (Zendle et al., 2019; Hodge et al., 2022). Xiao et al. (2023b) highlights that industry self-regulation has led to poor compliance with loot box probability disclosure when compared with other legal systems where this is mandatory.

Participants also highlighted the role of consumer protection regulations and how family attitudes towards gaming and gambling are

affected by consumer protection regulations. Expressing concern that consumer protections for over 18s against gambling-related harms not being applied effectively to video game features such as loot boxes. For example, consumer protections such as age ratings on video games can aid informed choices, assisting players (including CYP) and enabling parents/guardians to raise awareness of monetisation techniques (Derrington et al., 2021; Valentine, 2018; Zaman et al, 2020). Whilst there are newly industry standard labels which warn of the presence of in-game purchases including loot boxes (e.g. ESRB, PEGI, IARC), industry self-regulation has led to unsatisfactory rates of compliance (Xiao, 2023).

The findings also relate to public health messaging and supporting other research involving participants with lived experience, which calls for open and realistic information about harms associated with gaming and gambling products via public messaging and school-based education, to reduce stigma and make it easier to speak up, and to discourage CYP from gambling (Marco et al., 2023). To be effective, this messaging should avoid placing individual responsibility on those who have problems, and rather focus on the risks of the activity (van Schalkwyk, 2021). These research findings support Xiao's (2021) call to test out a diverse range of strategies to find out what is effective in this novel context, including multiple evidence-based population-level strategies (Marco et al., 2023). Within the general field of public health there is an understanding that changing the context to encourage healthy decisions is more effective than health education (Frieden, 2010), but this needs to be explored within this specific field.

The findings highlight the importance of involving CYP in the design and delivery of healthcare services through peer support schemes and by guiding public health strategies. This aligns with research highlighting practitioners and healthcare systems' role in promoting peer support through lived experience in recovery (Shalaby & Agyapong, 2020). Research demonstrates that recent users of health or social services, or experts by experience, are well-placed to advise on public health measures (Care Quality Commission, 2021) and giving voice to CYP with lived experience of loot box gaming may reveal overlooked aspects, aiding policy-makers and practitioners with insights for effective interventions (Rolando & Wardle, 2023). Where CYP have been consulted on preventative strategies, they support multi-faceted public health approaches which include tighter regulation of gambling and simulated gambling products, less advertising, age-related restrictions for simulated gambling features, and gambling education in schools (Thomas et al., 2023). Consulting CYP may also be important because there is evidence that the success of a mental health service for young people is linked to how safe and respected a young person feels who uses that service (Hawke et al., 2019).

Participants recognised that early intervention is supported by compassionate practice and a person-centred approach which makes it

easier for a person experiencing harm to disclose this to a practitioner. Research suggests that services which are embedded within communities over a sustained period of time are particularly effective in providing compassionate care for the ongoing recovery of those who have experienced gambling-related harms (NHS Scotland, 2016). Initiatives such as the Glasgow Project demonstrate how early intervention to mitigate gambling harms among adults. A wide-ranging cross-disciplinary collaboration in a regional-first approach, enhancing access to support and treatment, raising awareness among front line staff, and creating localised support pathways which meet whole family needs (Voll et al., 2022).

Escapism

Participants described how gaming and gambling offered a form of escapism, initially both the escapism and rush from gaming and gambling was a pleasurable leisure activity and later as a place of refuge from challenging or stressful life experiences. Participants reported looking for a rush as part of wanted to escape which could parallel with addiction characteristics such as mood modification (Griffiths, 2005). Ultimately leading to a cycle of disconnection with reality and associated harms. This aligns with Woody's (2018) definition of escapism as ''masking over, numbing, and absenting oneself from human reality'' (p. 188). The participants' experiences revealed the progression from more positive escapism (enjoyment) to negative escapism (avoidance coping) (Hagstrom & Kaldo, 2014; Warmelink et al., 2009). These findings support existing research indicating a link between negative escapism and problematic gambling/gaming (Puiras et al., 2020). Suggesting escapism as a key predictor of problematic gaming but also a complex experience which can be positive as well as negative (Hagstrom & Kaldo, 2014; Yee, 2006).

Identity

In both gaming and gambling-related harms a common characteristic for participants was how the activities became connected with a sense of self and social status, particularly from virtual items in gaming and feeling they have a skill/ability at gambling. Participants sought a sense of status or value within a community which aligns with Maté's (2018) suggestion that self-insecurities are key in understanding addiction. The findings of this study suggest that there is a heightened risk of harm when aspects of identity, community, and status were connected to gaming or gambling activities. Participants continued with behaviour which they knew to be harmful in order to preserve their status within a community, or because they experienced a positive sense of self regard within the activity. Highlighting the potential role of social motives for risky activities. Social factors have been previously suggested to influence decisions to purchase loot boxes for example, social status and identity being hinged on their in-game avatar's appearance (Zendle et al., 2019; Hodge et al., 2022). Similarly, Close & Lloyd (2021) note various personal and social factors

drive loot box purchasing, including aesthetic items for social approval as well as social and psychological capital which becomes attached to virtual products. McGonigal (2012) suggests reducing these risks by tying gameplay experiences to lived reality. Therefore, the quality and nature of the social networks surrounding gambling or gaming activities may influence the extent to which especially CYP could be at risk of harm. Practitioners and systems of public health could therefore support CYP and their parents/guardians to understand the importance of the social contexts, and to identify signs of harm in converging gaming-gambling online environments.

Virtual Worlds were reported by participants to be the means and access in which identity, social status, community were established and connected. From the previous sub theme there is an overlap with social status and the virtual world. For example, virtual worlds have been previously suggested to create a sense of belonging and identity, and negotiate feelings of connection, control, and power (Kelly & Coughlan, 2018). Highlighting the complexity of virtual worlds from the social/identity factors within them to the virtual items and the role of loot boxes. As such understanding of these virtual worlds has been suggested to be inadequate among adults (Mik, 2021). Hence, healthcare practitioners it would seem need to be trained to understand/ be aware of these virtual worlds and the "…digitally-infused…" lives of CYP (Belani, 2021, p. 1), In this way healthcare systems can respond to the virtual part of CYP lives more effectively and provide the person-centred care and compassionate practice which leads to earlier disclosure of gaming or gambling problems,

Threshold Moments, participants identified how threshold or transitional moments in life were associated with increased risks of gaming or gambling-related harm, such as moving into higher education or family breakdown. These findings suggest that emerging adults for example those beginning university at 18 may represent a particularly vulnerable group, due to increased financial and social independence co-occurring with reaching the legal age for gambling (Gambling Act, 2005; Wardle, 2020). These findings support research which suggests that, for some university students, both gaming and gambling can be seen as relief from social isolation and a reaction to financial insecurity (YGAM, 2019).

Preventative Education

Participants linked family attitudes and childhood experiences of gambling exposure in family or education settings to later gaming and gambling harm. These findings support previous research suggesting CYP are highly influenced by their upbringing/social environments, concerning both gaming (Schneider et al., 2017) and gambling (Hardoon & Derevensky, 2002). Research with gamblers suggests that exposure to gambling and games of chance in preadolescence shapes problematic gambling habits (Zaman et al., 2020), supporting the theory of normalising gambling in CYPs (Macey & Hamari, 2019). This highlights the need to

involve family and Educational Institutions in prevention through measures like parental training and enhanced student supervision (Burns et al., 2015) and awareness of convergence through features such as loot boxes (e.g., Zendle et al., 2019; Hodge et al., 2022; Spicer et al., 2022; Brooks & Clark, 2023).

Participants discussed various preventative approaches, all focused on raising awareness of converging gaming and gambling harms amongst CYP, and through the education of adults who are in a position to support them, including parents/guardians, teachers, healthcare practitioners, and peers/role models. Preventative educational programmes have been designed to raise awareness among these specific groups, and evaluation reports suggest that they can increase awareness of converging gaming and gambling harms, reaching over 360,000 CYP (Evanics & Latif, 2020). However, some theorists suggest that discourses around risk and choice in educational interventions downplay the conduct of the industry, including predatory marketing strategies and product design (van Schalkwyk et al., 2022). When exploring preventative measures, a balance between consumers and commercial actors is crucial for children's welfare whilst not unduly restricting adults' freedoms to make informed choices about participation in gambling-like activities (Derrington et al., 2021).

Supporting CYP

These findings shed light on how evolving technology may create vulnerabilities for users, especially CYP who could be more susceptible to gambling and gaming related harms (e.g., Zendle et al., 2019). Concerns were raised about the welfare of CYP in light of an increased accessibility to products designed with gambling like activities through video games, particularly for those below 18. While there are still differences between traditional gambling and gambling like features in gaming, such as being able to cash out winnings. It has been argued that the connection with problem gambling and loot boxes spending remain even if players cannot cash out in the traditional ways (Zendle et al., 2020). However, cashing out and near misses have been found to appear in loot boxes which have been suggested to amplify the relationship with problem gambling (Zendle, et al., 2019; Zendle et al., 2020). Therefore, there is a need for more research and safeguarding of a generation who are growing up with access to gambling-like elements in video games, such as loot boxes, in an era marked by insufficient regulation of the Gambling Act (2005) (DCMS, 2023; House of Commons Library, 2023; House of Lords, 2020).

The findings also support previous studies on similarities between problem gambling and problem video gaming, which highlight the need for interventional approaches at an early stage (e.g., Drummond & Sauer, 2018; Spicer et al., 2022; Richard et al., 2023). Particularly when practitioners may be unequipped to provide support (Mik, 2021). This has major implications for the design of healthcare systems, including awareness-

raising among healthcare services and policy-makers seeking to safeguard CYP engaging with these activities.

This study's findings reveal that participants experienced significant harm linked to their gaming or gambling issues before accessing healthcare services, often triggered by health or financial problems. This was linked to a need for earlier intervention to support at-risk players more effectively. When discussing earlier intervention participants predominantly emphasised how wider healthcare systems, (e.g., public health campaigns, screening processes, national training priorities, and treatment pathways) can influence educational and family settings, teachers, parents/guardians, digital environments as well as the wider regulatory processes and societal values. Therefore, suggesting the importance of a biopsychosocial (Engel, 1977) perspective upon healthcare which recognises the complex interplay between psychological, sociological, and biological factors. Previous research supporting CYP mental health have drawn upon Bronfenbrenner's (2005) Bioecological model of human development to represent the complex networks surrounding CYP, healthcare, and environment (e.g., Burns et al., 2015; Halsall et al., 2018; Kelly & Coughlan, 2018) including the new addition of techno-subsystems to represent technology use (Johnson & Puplampu, 2008). Further research would be warranted to explore the application to the Bronfenbrenner model to CYP in the context of gaming and gambling to understand the different factors of the environment on development.

Overall, from the results of this study, protecting CYP from the risks of converging gaming and gambling-related harms seems to suggest a tailored approach considering several factors. Firstly, extensive video game engagement exposes CYP to emerging forms of gambling like loot boxes. Secondly, CYP are differently affected by regulations such as Gambling Act 2005 due to their underage status for gambling. Thirdly, specific stakeholders including educational institutions, third sector organisations and charities can raise awareness and help to protect and support CYP. Fourthly, targeting parents can effectively reach CYP, particularly minors under parental responsibility. Fifthly, adapting health and social systems to CYP may involve leveraging social media and other digital channels to reach target audiences (Belani, 2021).

Limitations

Four limitations were identified in this study. Firstly, online focus groups lacked control over participants' physical reactions and the research environment compared to face to face focus groups. Secondly, this study's lived experience participants represent individuals who have already accessed healthcare services and entered a recovery journey. This potentially could influence their perspectives limiting the presentation of perspectives from high-risk individuals who have not accessed healthcare services. Thirdly, this study related to individuals aged 7-25, including various developmental stages and social contexts such as primary and

secondary schooling, university, and workplace environments. Research demonstrates that individual characteristics linked to loot boxes, like impulsivity, evolve during this age range (Arnett, 2000; Garrett et al., 2023). Therefore, it is imperative to investigate potential nuances and differences within narrower age groups and specific social contexts. Fourthly, despite efforts to recruit diverse participants, the majority were male and shared experiences of gambling-related harm. This partly reflects challenges in recruiting lived experience participants who can be difficult to reach due to the nature of the discussions, and the ethical requirement that they are in a position in their recovery to be able to discuss the topics safely. This may also be attributed to the relatively recent emergence of gambling-like elements in video games with affected individuals potentially not at the stage where they have entered recovery. Fifthly, ethical considerations pose barriers to researching CYP currently experiencing harm or at risk of harm. Also, individuals aged 7-25 may face additional challenges discussing sensitive topics and their experiences with unfamiliar adults in a focus group context. To mitigate ethical concerns this study involved adult participants who had undergone a recovery process.

Future research

This study's findings align with Xiao et al. (2023a) in advocating diverse public health strategies, drawing from the public health approach to gambling regulation whilst also recognising that different measures may be effective for online gaming environments and for the protection of CYP. In considering this range of approaches, care must be taken to balance the interests of consumers, commercial actors, and the welfare of CYP (Derrington et al., 2021). This can be achieved by conducting research involving CYP which provides experiential knowledge on the problems they face (Rolando & Wardle, 2023). For example, in relation to the disclosure of odds of loot box rewards, CYP could be consulted on a range of policies including more accountable forms of industry self-regulation and direct legal regulation to develop appropriate consumer protection (Xiao et al., 2023b). More widely, this study's findings suggest that online social networks surrounding gambling or gaming activities may introduce risks of harm through disconnection from reality, suggesting a need for further research into the role of social media, video games and other digital channels (Belani, 2021). Future research should keep pace with technological developments like VR, where increased immersivity may compound disconnection and escapism beyond traditional gaming (e.g., Hamad & Jia, 2022).

In seeking to understand nested systems of influence upon CYP's experiences of gaming and gambling related harm, Bronfenbrenner's (2005) ecological theory may provide a useful framework for further research (Halsall et al., 2018; Kelly & Coughlan, 2018). It has been suggested that Bronfenbrenner's (2005) theory can be valuable for guiding public mental health interventions when investigating interactions both

within and between different systems, and that future research should focus on analysing the dynamic interplay between intrapersonal and environmental factors in order to understand social inequality and place-based dimensions to complex public health problems (Eriksson, 2018).

Conclusions

This study, based on lived experiences, highlights the urgent need to consider how converging online gaming and gambling environments present novel risks to the health of players, particularly in CYP. These insights are valuable for understanding participants' experiences and their implications for healthcare systems seeking to protect CYP. The results suggested the convergence of gaming and gambling-related harm, particularly through new gaming elements like loot boxes, impacting behavioural addiction through identity and self-perception development, and raising questions about how healthcare services and systems respond preventatively to signs of harms. The findings invite policy-makers to consider the importance of balance, recognising the positive aspects of gaming as well as potential risks to players.

Supplementary information (Appendices)

Appendix A

Focus Group Research Instrument

Set-up

1. Housekeeping (for example, audio/visual tech and code names check)
2. Ground rules (for example, reminders of the session being recorded and etiquette for the online focus groups)
   - Including courtesy with others, comfort breaks, and reminder of ethical procedures such as withdrawal)
3. Introduction script (which included definition of gaming and gambling as well as young people (below), and guidance on the session).
   - Gaming: playing video or digital games on consoles, devices or phones.
   - Gambling: to stake or risk money, or anything of value, on the outcome of something involving chance
   - Children and Young people: aged between the ages of 7-25.
4. Recording commenced once participants all verbally consented for it to start.

Questions

What are your experiences of Health and Social Care Services in relation to your gaming or gambling issue?

a) Did you seek help and support from a healthcare professional?
b) If you didn't seek help from health professionals, why not?
c) Did you see it as a health problem?

What are your experiences of other services in relation to your gaming or gambling issue?

In your journey of getting better, what are the points where it would have been good to have professional intervention?

a) What would have helped you reach out sooner?
b) What were the barriers to reaching out?
c) Would it have been helpful if gambling and gaming is more openly discussed?
d) Why would this be helpful?

Identifying gaming and gambling-related harm

The next question is about the ways in which Health and Social Care services can more effectively identify those at risk of gaming and gambling-related harm.

What might be the signs if someone was having difficulties with gaming or gambling?

a) What would you look for?
b) Are there any special considerations in relation to CYP?

Improving support for those experiencing gaming and gambling-related harm

The next questions are about the support which is offered to those experiencing or at risk of gaming and gambling-related harm

What can be done to support CYP experiencing gaming and gambling-related harms?

a) What can be done by Health and Social Care Services?
b) What can be done by other services or organisations?
c) Could you share any other examples of where a more integrated approach has improved healthcare provision for CYP?

What is your awareness of the support currently available for gaming and gambling-related harms?

a) Do you think the support available covers the need?
b) How can we help practitioners to provide better support?
c) How can we help services to provide better support?

Debrief and close.

Appendix B

Table B1. Theme table noting the themes, sub-themes, and illustrative quotes.

Theme	Sub-theme	Illustrative Quotes
Escapism Participants described how gaming or gambling behaviour offered an escape from various aspects of their lives in the real world, typically negative elements such as stress and challenging feelings. Participants came to associate the rush of gaming and gambling with an escape from negative aspects of life, and this escapism developed a cyclical quality, leading to a disconnection from reality.		
	Cyclicality Participants experienced gaming or gambling behaviour as a cycle "both cure and cause"	OJ: *"the impact of the relationship breakdowns, the stress and the pressure from the financial position that I was in...so then you just come back around and there's more confusion, more hurt, more loss and then back to addiction"*. Andrew: *"You'd sort of get that instant buyer's remorse and that instant buyers blues as soon as you press that Buy button. You know, in your mind what you're doing is wrong…but you're constantly trying to justify yourself with those adrenaline hits, because it feels good in that moment"* Johnny: *"I was just gambling all the time and lying. And because of how that made me feel, I gambled to escape how it made me feel."*

	Disconnection with Reality Gaming and gambling activities offered a place in which the real life consequences of the behaviour could be avoided.	Andrew: *"So it's kind of that escapism thing isn't it where as long as you're in your virtual world, your fantasy land, everything's going to be okay. And it's almost easier to keep sort of, you know, reinforcing that opinion, than it is sort of turn around and face to real life consequences of what you're doing".* Nicola: *"it was my escape from the real world, I'm escaping from all my problems and really deep down, you know"* OJ: *"I used new social media to almost kind of try and convince myself that actually my life was okay. Whereas like, behind the scenes, it was, it was very, I was just in a real mess"*
	Rush The physiological experience of gambling-like elements in video games was similar to that of gambling.	Trevor: (gambling-related harm participant) *"I was spending hundreds of pounds on these loot boxes. And it was just trying to get that hit again, but in a different way, I'm spending money to open something, I don't know what's on the other side of it. And I get that adrenaline rush, I get that dopamine rush. So as soon as I figured out that, you know, this could be gambling."* Andrew: *"So for me, it sort of the hook of the sort of, you know, the dopamine in the adrenaline rush of getting all of that power and all that excitement".* Nicola: *"So there was a lot of pressure and I sort of started to gamble more…and I really like the buzz of gambling"* Johnny: "*I was attracted to the noises and the sounds, I dont think I remember winning a great deal. But I just felt a connection to it, maybe it's...a bit of a buzz."*

Identity Participants described how their gaming or gambling activities became connected with perceived aspects of their identity through key life events and moments, including a sense of belonging within gaming or gambling communities, and their perceived social status within virtual worlds.		
	Social Status Being treated by others as a mentor or an expert generated positive self regard which was sometimes lacking in other areas of life.	Trevor: *"I was interested in sport, but I didn't excel in any of the sports. But when it came to gambling, I was good at something I was really passionate about, I learned quite easily. So I was trying to kind of climb my way up this social ladder from a hierarchy perspective."* Andrew: *"And for me, it was about that sort of social status within those gaming communities where I became known as somebody who was a whale…considered to be the big spenders who are sort of funding the game."* Nicola: *"And the casinos enticed me back continuously offering me everything I wanted: meals, food, family drinks, you know, free this free that…treated me like a pro"*
	Threshold Moments Transitional moments in life were associated with increased risks of gaming or gambling-related harm, such as moving into higher education, relationship or family breakdown or episodes of poor mental health, which may impact on self-identity.	Nicola: *"And then sort of after my daughter was born, my daughter's got quite a lot of problems. She was starved of oxygen at birth. So she was in Great Ormond Street. So there was a lot of pressure and I sort of started to gamble more."* Johnny: *"And my relationship with my partner, as that was breaking down, I could find myself betting more and more."* Trevor: *"My dad was leaving, he'd just fallen out of love with my mom. And I didn't really know how to process that at the age of 16, you know…And the word escapism has been mentioned already. And gambling was an escape for me."*

	Community The human need for social belonging was met by a community of people engaged in the same activity, which was integrated into self-identity.	Johnny: *"And you go to the bookies, and you see the same people there. And there's the same staff and you build up like a community of people that you can... understand how they're feeling."* Andrew: *"So as much as it's sort of that kind of boys VIP club thing that's going on where you sort of understand each other, there is still essentially a very toxic sort of community to be a part of, because again, you're also almost encouraging each other to spend more money".* Nicola: *"I mean, I love football, I've got a season ticket West Ham. And so I used to bet on football"*
	Virtual Worlds Virtual items such as skins are becoming increasingly significant for CYP establishing their sense of identity.	Andrew: "*Rather than can I have a new pair of trainers, they're saying, can I buy a skin in a game please...If I haven't got that, then I'm not cool."* Johnny: "basically it's just for ego. It's just for showing people well, I've got this new gun, or I've got this new skin". Nicola: "*I mean I have a five year old that plays FIFA and you know, they have bigger brothers and sisters playing, getting the young ones into buying loot boxes"*
Health-based Narratives The health narratives in the context of 'illness and support' for both gaming and gambling, with a greater focus on health in the case of gambling-related harm, than in relation to gaming-related harm. All participants related to the idea of addiction, however participants with experiences of gambling-related harm described an understanding of addiction as an illness, with the need for treatment pathways and an ongoing process of recovery whereas gaming was not described in this illness narrative.		
	Addiction An understanding of uncontrolled gambling as an illness or disease.	OJ: "She started to see just how little control I have. And started to understand that it was an addiction, it's referred to as a disease as a reason"

		Andrew: *all of the issues that would affect you as a gambler would also affect me as a sort of gaming addict as well.* Johnny: *"This isn't to do with the isn't to do with gambling it's to do with something inside of me that's not right."*
	Treatment Pathways There was a lack of basic information about how to seek treatment and support for behavioural addiction. Treatments which addressed symptoms rather than causes, such as antidepressants, were considered inappropriate.	Nicola: "Gambling, out of all of them, it's not recognised enough, you know, if you're an alcoholic, or you're a drug addict, you go to the doctors, and straight away, you know, we can refer you here and refer you there. But with gambling, it's 'what do we do with this person?" OJ: *"So there's a whole network of people that are going to support you now and I'm just one of those people. That network is going to be around for you forever. And within that network, you get the opportunity to do loads and loads of different things, they're gonna support your recovery."* Trevor: *"we need to consider also how do we support those who potentially have been through a period of abstinence, and then do relapse. Because you know, that is a high likelihood…how do we support that person to make the choice to come in to recovery, could that involve, you know, the GP just, you know, putting a checkup in at some point, or just giving them the option that, you know, I'm here to support you."* Andrew: *"And I think that there needs to be a lot more awareness raised for individuals to understand the similarities and the differences, and to provide more places for people to reach out because I remember distinctly when I was going through these problems in my twenties, looking online for something that existed that I could reach out for help with, because I knew I had a problem. But just there was nothing out there for me."*

	Recovery as a Journey Recovery as an ongoing process involving a range of connected services within systems of healthcare.	OJ: "So there's a whole network of people that are going to support you now and I'm just one of those people. That network is going to be around for you forever. And within that network, you get the opportunity to do loads and loads of different things, they're gonna support your recovery." Trevor: *"we need to consider also how do we support those who potentially have been through a period of abstinence, and then do relapse. Because you know, that is a high likelihood…how do we support that person to make the choice to come in to recovery, could that involve, you know, the GP just, you know, putting a checkup in at some point, or just giving them the option that, you know, I'm here to support you."* Johnny: "*Going through the 12 steps of recovery. you go, As part of the steps you've worked through, guilt, resentment, and fear, and I've processed all of them in my life."*
Preventative Education The need for preventative education and early intervention to raise awareness about risks of gaming and gambling harm for CYP and supportive adults, including: families, educational institutions, and role models.		
	CYP Role Models Preventative education which informs CYP about the risks of gaming and gambling harm was more effective when involving familiar role models and including peer-to-peer conversations.	Trevor: *"I think it's really important that our young people are having conversations with people who they are familiar with, who they can kind of see themselves through, right?"* Nicola: *"there should be more peer groups that support… You know, people that really understand this. You know, and if if another gamer, perhaps who's older, can mentor them?"* OJ: *"just having some hope that actually there is a root out of this, it's going to be a really difficult journey but there is a way out…. I've supported other people who have been in a similar situation to me"*

		Andrew*: "Kids now today's age seems to be looking up to their favourite gamers and their favourite YouTubers"*
	Families Family attitudes to gaming and gambling activities influenced risks of harm.	Johnny: *"Well, we can start with education, with parenting, and maybe try and help them before they get to that point, before they get to the point where it is a proper addiction, and you have got Bailiffs ringing up."* OJ: *"They didn't know that you could become addicted to gambling...whereas if I'd gone on to them and said 'I've spent 50 quid on some drugs last week or whatever, can you give me some cash?' Like, obviously, that would be a completely different conversation".* Andrew: *"I didn't go to a GP. Initially, I had an intervention with my family. And I was basically forced to go into counselling.*
	Educational Institutions Campaigns to raise awareness of risky activities in schools and universities to reduce risks of harm.	*OJ: "And at university, there was loads of good stuff around. You know, avoiding taking drugs and making sure that you are having alcohol in moderation, practicing safe sex, sexual health, all this kind of stuff. Absolutely nothing on gambling at all...I didn't even really know you can become addicted to gambling".* Nicola: *"I think it has 100% gotta start with education. I think teachers…you know, they teach you the harms of alcohol, the harms of drugs, sex education, where's the lessons on gaming?"* Johnny: *"But I think also part of it is down to education. So, you know, one thing I'm really looking forward to doing with Peer Aid is going to schools, and just talking about gambling."*
Safer Environments An individual's network and environment can support safer environments through a range of approaches; from interactions with compassionate health professionals and public health communications as well as the regulations of and gaming and gambling environments.		

	Compassionate practice The importance of communication skills, person-centred care and familiarity, in making people feel comfortable to talk about gaming and gambling issues.	Trevor: *"putting a metaphorical arm around me…coming down to that emotional level instead of* just being *"sat at the desk typing away"*. Nicola: *"And you know, straightaway there's there's there's a big thing about you know, people in health practice not doing that body language…because you imagine walking in and someone's just like looking down?"* OJ: "*it will have taken a hell of a lot of courage to walk through that door. So I guess just some recognition of that, of what that journey might have been like, and the kind of fragile state that that person might be walking into that room with. Someone say to me, actually, you know, I recognised your how hard it is for you to be here today."*
	Public health messaging Awareness of the health risks of gambling have changed over recent generations due to public health messaging and signposting towards treatment and support services. A similar approach is lacking for gaming and may be required.	Johnny: *"Gambling now is getting more of a different understanding…it might be a bit of entertainment, but people are starting to wake up, it's like cigarettes…the worm is turning, as opposed to gaming, which I think is in its infancy. And you know, if not picked up on, it could get horrendous."* Trevor: *"So is the more that can be done around social media…raising awareness, and campaigns with YouTube."* OJ: *"I think about like Gamble Awareness Week or like there's other like national and international events, right that we could probably celebrate a little bit more, I'll just use to kind of raise the profile and raise awareness."* Andrew: *"there's so much more that can be done, you know, at all levels, really the individuals themselves, parents, teachers, GPs MPs, you know, the gaming industry that there's so much work to be done"*

	Consumer Protection Regulations The level of information provided within gameplay experiences and product marketing about the potential risks of gaming or gambling was important in the experiences of harm.	Nicola: *"when you first log in...there should be like, 10 questions about gambling and then 'do you think you've got a problem with gambling? And then if so it throws you to all the different helplines. And I think with FIFA, Call of Duty, all these games that you can buy add-ons, they should have the same thing so their parents can monitor the spending cap, you know, what they're doing".* Andrew: *"And not for the better because it's gone from this very regulated thing that is gambling, to this completely unregulated thing that is sort of the gaming industry. And they are not doing enough to protect young people and vulnerable people like myself at the time to sort of discourage these practices".* Johnny*: "Especially with the lack of regulation as well, I think that's the biggest thing with the gaming industries is they just aren't really being regulated at all"*
	Product Design Design of products and many experiences of gaming included an overlap in gaming and gambling features. Participants highlighted as CYPs and CYP in general being exposed to gambling while gaming even in traditional settings such as arcades as well as in gaming.	Andrew: *"and you realise they have so many of these sort of pay-to-win elements built into the back end of the game…unless you've got those particular cards of players, you can't compete…So it's going to draw somebody who might not necessarily even have any previous history of any sort of gambling or gaming addiction to sort of enter into that realm where they're actually spending considerable amounts of money on that game."* Johnny: *"I used to go to the arcades with my friends on the Saturday…While I was there, I think I saw someone or saw the lights of the fruit machine. So I put a couple of quid in."* Trevor: *"If a young person is actually flagging, that they're having an issue with gaming it could potentially be that pathway into an issue with gambling, because the mechanisms of gaming*

		and the way that the developed encourage further play, with the design of primary colours, and the sounds somewhat reflects casino products, you know, when that young person does hit a legal age to gamble, subconsciously, they're going to kind of be driven to that kind of hobby or interest."

Statement of Competing Interests
The authors do not declare any interest.

Relative Contribution
All authors were involved in the design and development of the study. SH was the lead on the project and was involved in coordinating the project. KD was involved in the data collection, conducted the analysis, and wrote the initial draft of the manuscript. SH led on the manuscript preparations and revisions. All authors were involved in the reviewing the research and approved the final version.

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Bournemouth University, Faculty of Science and Technology Ethics Committee, "Supporting practitioners' understanding of gaming and gambling in children and young people, on December 2020 Ethics ID 34395.

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Declarations
N/A.

Research Promotion
This research offered valuable insights from lived experience participants taking part in focus groups. Participants discussed gaming and gambling harms, healthcare services with a focus on children and young people, and the overlaps gaming and gambling such as loot boxes.

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