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Should gaming disorder include non-digital gaming activities, e.g., collectible card games, tabletop games?

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VIEWPOINT

ABSTRACT

This commentary critically considers the case for including non-digital gaming within the scope of gaming disorder. The ICD-11 category for gaming disorder refers to gaming (i.e., 'digital gaming' or 'video-gaming') which may be predominantly 'online' (i.e., over the internet) versus 'offline'. Non-digital forms of gaming (i.e., gaming that does not involve any electronic devices and is not conducted over the internet) are not explicitly recognized. We suggest that gaming in both digital and non-digital formats is an activity of relevance to addiction studies and public health, and that an exclusive focus on digital gaming may overlook potential non-digital game-related risks and harms. We refer to popular collectible card games (e.g., Pokémon, Magic: The Gathering [MtG]) and tabletop games (e.g., Warhammer 40K), as these activities seem to have the most in common with online games, particularly in relation to similarities to digital monetization schemes (e.g., loot boxes). We call for research to investigate the relative costs and benefits of engagement in non-digital gaming activities. If highly involved players of non-digital games tend to not report gaming disorder symptoms or harm, then it may be worthwhile examining how these players differ from digital game players. Finally, investigating non-digital gaming may produce new insights into developing effective interventions and preventive measures for problematic digital gaming.

KEYWORDS

gaming disorder, non-digital gaming, card games, tabletop gaming, loot box, hazardous gaming

Gaming as a human preoccupation has been examined across disciplines including game studies (ludology), psychology, anthropology, and economics. Definitions of "gaming" vary but tend to refer to an interactive activity that involves rules, goals, and challenge, and which has winning and losing outcomes (Stenros, 2017). Gaming usually differs from gambling in that the activity often involves a predominance of skill and does not involve the classic element of gambling (the staking of something of value on an outcome largely or entirely determined by chance) (NB: there is a large online marketplace of games that are monetized with gambling-like mechanisms, such as loot boxes, and in-game spending opportunities involving randomness). However, some games – particularly many digital games – defy conventions and involve minimal interactivity or challenge, have no definitive endpoint, and focus on storytelling, role-playing, and immersion. Further, the integration of digital games with online platforms and services (e.g., streaming, social media, cryptocurrency trading) means that players can often engage in multiple activities simultaneously and synergistically. Therefore, our understanding of digital gaming often acknowledges a complex situation involving different behaviors and motivations for play, games that defy simple categorization (e.g., genre), and gaming that often overlaps with complementary adjacent online and offline activities.

In the field of behavioral addictions, the question of what constitutes gaming has become increasingly relevant with the ICD-11 category of gaming disorder, with its essential criteria

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and specifiers for the condition (World Health Organisation, 2025). The ICD-11 category refers to 'gaming behaviors' with the specifier of predominantly 'online' versus 'offline' gaming. Offline gaming in the 6C51 category refers to 'digital gaming' or 'video-gaming' that is "not primarily conducted over the internet". Importantly, non-digital gaming (i.e., gaming that does not involve any electronic devices and is not conducted over the internet) is not currently recognized within the scope of gaming disorder in the ICD-11 (NB: the DSM-5-TR is consistent with the ICD-11 in this regard). Neither the 'predominantly offline' nor 'unspecified' categories of the ICD-11 provide any explicit mention of non-digital gaming or any text open to this interpretation. This contrasts with gambling disorder, which refers to both online and offline (i.e., land-based) gambling. An implication of these classifications is that gambling disorder could involve poker in a real-world setting or a virtual (online) casino, whereas gaming disorder could potentially involve digital chess but not chess played with a physical board and pieces in the real world.

In our view, gaming in both digital and non-digital formats is an activity of relevance to addiction studies and public health, and that an exclusive focus on digital gaming may overlook relevant non-digital game-related risks and harms. There are many examples of 'non-digital' games that deserve attention in studies of problem gaming, if not gaming disorder, and there are cases of individuals who excessively engage in and/or spend money on these non-digital gaming activities. In this paper, we draw attention to collectible card games (e.g., *Pokémon*, *Magic: The Gathering* [*MtG*]) and tabletop games (e.g., *Warhammer 40K*), as these activities perhaps have the most in common with online games, particularly in relation to similarities to monetization schemes found in online games (e.g., loot boxes). A detailed examination of the other similarities across digital games, table top games, and collectible card games is beyond the scope of this piece, but it bears noting that, in addition to the financial purchasing opportunities in each activity, all three activities share features including: interactivity; the requirement of strategic thinking and planning; problem-solving; social interaction; immersive properties; fantasy, science fiction, military, or other genre-based themes; narrative and role-playing elements; and reward systems featuring random and variable reinforcement. Many collectible card games have digital versions that largely replicate the physical game experience; therefore, it seems arbitrary to recognize one version and not the other.

Collectible card games have received little attention in problem gaming research (Calvo, Carbonell, Oberst, & Fuster, 2018; Mattinen, Macey, & Hamari, 2023). One of the most popular games is *Magic: The Gathering* (MtG), a strategy card game, which is played by millions globally (see: https://investor.hasbro.com/magic-gathering). Note: As a disclaimer to arguments that follow, we are not suggesting that MtG is inherently more problematic than other card games and we would consider that risks apply to other games too. Released as a physical game in the 1990s, digital and online versions of MtG were later developed. These games, and games that are like MtG, have many similarities to online strategy games with in-game purchasing options (e.g., microtransactions, including loot boxes). The physical game requires acquisition of cards to play; cards may be purchased on the secondary market or as a retail product. A popular collectible card product is the 'booster pack' which, like a loot box, contains a random assortment of cards with the chance of obtaining highly desirable and valuable cards. High-end booster packs for MtG can cost many hundreds, sometimes thousands, of dollars for a box, which makes them comparable to the once-off cost of a gaming console like the Sony PlayStation® 5 or Nintendo Switch® 2.

Purchasing booster packs in search of 'jackpot' cards may resemble gambling (Zendle, Walasek, Cairns, Meyer, & Drummond, 2021). Some MtG players play with physical cards in-person (e.g., at home, or in game stores) whereas others play with physical cards via webcam (e.g., using *Spelltable*, which may meet the ICD-11 description of 'online' gaming), and; some players play the online versions of the game. Like other online games, online MtG games can involve play against human opponents and the digital cards can be bought from and sold to other players. Recognising these digital and non-digital implementations of essentially the same game, we contend that: whether MtG (or a similar game) is played in-person with physical cards, played online with physical cards, or played online with virtual cards, there is potential for individuals to engage in the activity in ways that jeopardize their finances and reduce psychological wellbeing. Regardless of game format and online connectivity, some individuals may become preoccupied with a non-digital (e.g., physical card) game, increasingly prioritise the game over other important activities, and lose control over their playing and spending behaviors, and experience significant impairment in important areas of functioning. In short, as recognised in problem gambling studies, problem gaming is not a solely online or digital phenomenon.

Empirical research into the addictive potential of non-digital gaming is limited, but emerging evidence highlights a growing interest in the area. Much of this research would seem to point to these activities having some hazards for players (e.g., spending more money than intended, prioritizing the game over other activities) but not necessarily always reaching the severity of a gaming disorder. For example, in Calvo et al.'s (2018) study of 218 players of *Star Wars* collectible card games, they reported that 23.9% were 'very much in agreement' that they were addicted to the game despite none of the participants meeting the internet gaming disorder (IGD) cut-off. Interestingly, these gamers spent more time preparing to play (e.g., for tournaments) than playing the game and this indirect time was more strongly related to IGD symptom scores than game-time. The authors concluded that, although some participants reported economic and family problems related to the game as well as self-esteem issues, none appeared to be addicted. Imposing the GD criteria onto this group could therefore risk 'overpathologization' when taking a confirmatory approach using addiction symptom screening tools (see Billieux, Schimmenti, Khazaal, Maurage, & Heeren, 2015; King, Billieux, Carragher, & Delfabbro, 2020).

A recent study by Xiao, Zendle, Petrovskaya, Nielsen, and Newall (2025) assessed the relationship between

expenditure on collectible card games, digital loot boxes, and problem gambling in a sample of 1,961 self-identified non-digital (i.e., collectible card-playing) gamers. The authors reported that in both cases, expenditure was correlated with problem gambling, but it should be cautioned that this might reflect a selection effect (i.e., the sampling may have contributed bias to this relationship). There is also a potential misinterpretation issue when administering problem gambling measures to gamers in terms of what the participant considers to be a form of gambling and whether this extends to gambling-like activities. Another recent survey by Mercante et al. (2024) of 115 players of tabletop role-playing games (TTRPGs) reported that 7.8% of players were "high risk" problem players (NB: the authors' classification involved meeting ≥4 DSM-5 criteria for IGD, with symptoms adapted for TTRPGs). While these studies provide only preliminary evidence – and in the case of Mercante et al. (2024), findings are based on small, idiosyncratic samples and involve unvalidated measurement – they highlight the hazardous potential of these forms of gaming, and the need to investigate these activities further. In addition to the gambling-like aspects of buying booster packs to obtain high-value cards, popular collectible card games involve elements including *high replayability* (e.g., no two games are alike), *rapid event frequency* (e.g., game turns are generally quick), *randomness* (e.g., drawing cards from a shuffled deck), and *volatility* (e.g., potential for large changes in player advantage), which may broadly contribute to harmful use.

In summary, we believe that the gaming disorder field should recognise and examine non-digital game participation and resultant harms, even though these activities are seemingly overlooked by the ICD-11 and DSM-5-TR classifications. Gathering more evidence on these games and their most active players would be a logical starting point; specifically, to investigate the relative costs and benefits of their engagement in the activity. The example of MtG, as well as other collectible card games (e.g., *Pokemon, Yu-Gi- Oh!, One Piece*), shows that some players invest considerable time and money in the game and adjacent activities. Relatedly, there may be many non-digital gaming activities that occur in conjunction with digital gaming that are being overlooked. If there are many highly involved players of non-digital games who do not meet gaming disorder (GD) criteria (or similar measures of harm), and instead tend to experience personal and social benefits, then it may be worthwhile examining how these players differ from digital game players. We encourage investigation of non-digital gaming-related participation and harms, including, for example, whether harms differ across games (e.g., the financial harms of digital versus non-digital games) and whether there exists a dose-response relationship between time and money spent on games like MtG and harm, to better inform our understanding of these issues affecting vulnerable players and their families. Finally, investigating non-digital gaming may produce new insights into developing effective interventions and preventive measures for problematic digital gaming. This includes understanding the potential therapeutic benefits of non-digital gaming (see Billieux et al., 2025) that may be leveraged to better engage and help problematic players of digital games.

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