

Early Gambling Behaviour in Online Games

Parental Perspectives vs. What Children Report

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Abstract

In this study, we focus on early gambling practices in online games via surveys administered among primary school children and their parents. The convergence of gambling and digital games comes along with new challenges for parental awareness and mediation. The lack of an obligatory strict classification system and labelling of simulated gambling games and their gambling characteristics makes it hard for parents to identify potential risks. In addition, the online context of simulated gambling games lowers the threshold for children to be exposed to gambling activities at a very early age. Our research questions are twofold: (1) What are parents' perspectives on children's engagement in gambling games? (2) What do children report about their game play incorporating gambling elements? Our study therefore measures parental mediation of games of chance and explores its relation with early online gambling behaviour in children.

Keywords: children, gambling, online, simulated gambling games, parental mediation

Introduction

The lines between gaming and gambling are becoming increasingly blurred in online games that are popular among children. This chapter will focus on the growing amount of new forms of easily accessible online games with free gambling elements and the role of parents to guide their children's gaming behaviour. As the incorporation of gambling elements in games such as slot machines or casino features where one can win to proceed in the game is on the rise, parental guidance and active intervention is much advised. Games with gambling features are often embedded in social media and promoted by online pop-up ads, free play time offers and tempting messages that

promise high chances of winning. King and colleagues (2014: 305) call this phenomenon of non-monetary gambling in online games “simulated gambling” and define it as “a digitally simulated interactive gambling activity that does not directly involve monetary gain but is otherwise structurally identical to the standard format of a gambling activity due to its wagering features and chance-determined outcomes of play”.

The emergence of simulated gambling and their increased popularity among children comes with four concerns and potential risks.

Firstly, the lack of an obligatory strict classification system of simulated gambling games and their non-monetary gambling characteristics might give the false impression of an innocent form of game play. The grey zone in which these games operate makes it hard for parents and children to see potential risks (King, Delfabbro & Griffiths, 2010) and can lead to the development of positive attitudes towards gambling and actual gambling behaviour at an early age. A study among Australian 12 to 17-year olds shows that a history of playing simulated gambling games is linked to a higher risk of endorsing indicators of problematic gambling (King et al., 2014).

A second concern is that non-monetary incentives such as candy, toys and certificates can function in the same way as money, or even become more appealing to children than money (Hardoon & Derevensky, 2001). It suggests that objects of value do not have to be part of the tangible world, as digital objects such as credits, points, levels, avatar features or game tool characteristics can hold the same attraction.

Thirdly, players engaged in simulated gambling are likely to make an irrational connection between their play behaviour and the outcome of the game, as if it would concern a typical skill-based game play (King et al., 2014). It is typical for gamblers to believe one can win thanks to developed skills; the interpretation of gambling outcomes is influenced by a false positive belief in odds, and so-called magic thinking. Derevensky, Gupta and Baboushkin (2007) see the same thinking strategies reoccurring within children. When they are engaged in gambling, children believe not only luck is involved in winning or losing, but also their skills.

Finally, the online, digital context in which simulated gambling occurs adds to their increasing risky potential. The wide spread uninterrupted access to the internet together with the rise in accessibility, affordability, and popularity of online devices and applications among young people lowers the threshold to be exposed to digital gambling activities. Both for adults and children, this online expansion comes with possibilities for anonymous gambling and growing difficulties to restrict gambling activities, something that was easier to control before the digital age (King et al., 2014).

As Hardoon and Derevensky (2001: 211) already labelled offline gambling as “the most frequently reported potentially addictive behaviour engaged in by children and adolescents”, the societal and academic need to study exposure to online, and therefore less controllable, gambling related activities is high. Research on child gambling behaviour and children’s use of online and offline games of chance is very rare (Bellringer et al., 2014) as the majority of studies on gambling focus on adults or adolescents.

Nevertheless, previous retrospective research on offline gambling has shown that gambling behaviour starts already in preadolescence (Bellringer et al., 2014; Gupta & Derevensky, 1998; Vitaro & Wanner, 2011). This early stage is crucial because adolescent and adult problematic gamblers indicate that they were initiated in gambling at approximately at the age of 10 (Burge et al., 2006; Gupta & Derevensky, 1998). Gambling is less visible than other illicit and pernicious behaviour for children such as alcohol, tobacco or other drug use, but starts around the same period in development (Hardoon & Derevensky, 2001). Gambling disorder is the only non-substance-related addictive disorder that is included in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). Prevalence rates of adolescent pathological gambling appear to be twice the size of adult gambling rates or even more, indicating that between 4 per cent and 8 per cent of adolescents struggle with problematic gambling behaviour (Gupta & Derevensky, 1998; Ladouceur et al., 2013). Next to the estimation of the percentage problematic gamblers, there is a large group that does not (yet) show severe symptoms of gambling disorder, but has been involved in gambling, which is legally not allowed for minors. As Petry (2003) describes, gambling exists along a continuum: from non-gambling, gambling, to mild, moderate and severe gambling problems. One third of all boys and one sixth of girls between eleven and fourteen years old admitted to have been gambling in the three months previous to the study (Chaumeton et al., 2011). This exposure to gambling is not innocent as the work of Derevensky and colleagues (2007) shows that 10 to 15 per cent of these minor's risk to become addicted to gambling during their adult life. In addition, gambling problems among Swedish youth were associated with poor mental health and alcohol use (Fröberg et al., 2013).

As online gambling is on the rise, the harmful potential of this far less controllable form of wagering is far higher. Wong and So (2014) revealed that adolescents who gamble online are three times more likely to develop problematic gambling habits than their peers who gamble offline. The risk is higher for boys as they are more involved in gambling than girls and older adolescents play more often monetary forms of gambling compared to younger teenagers who look more for free gambling sites. This last type of gambling games opens the gate to monetary gambling and points into the direction of the success of simulated gambling games. This subtle integration of gambling aspects in online games that are initially not linked with gambling such as adventures games is of pivotal importance in an ongoing changing context. King and Delfabbro (2016) conducted a systematic review of all studies researching digital simulated gambling (e.g. online casino games, demo games, free instant win games) and found only six empirical studies on the phenomenon among adolescents conducted in only three countries: two in Australia, three in the UK and one in Canada. These studies reported a prevalence rate of simulated gambling during the life span of adolescents between 2.3 and 28 per cent.

Following the rationale elaborated above, this chapter will focus on instances of early gambling in online games played by young children (primary school age) and the crucial role of their parents in mediating children's game play behaviour.

Family influence and parental mediation

The socialization function of family members in children's offline gambling behaviour has already been discussed by Gupta and Derevensky (1997) and Tremblay, Huffman and Drabman (1998). A high majority (81%) of the children between 9 to 14-years old that had been gambling reported to have done so along with family members (Gupta & Derevensky, 1997). In a survey study on family related gambling activities, Shead and colleagues (2011) found that fathers reported to be engaged in more sports related and competitive gambling activities such as poker, primarily with their sons. Mothers, on the other hand, were more likely to be involved in raffle and lottery scratch ticket activities together with their children. Most adolescent gamblers have been initiated in gambling by their parents (Bellringer et al., 2014; Gupta & Derevensky, 1997). Parents serve as trainers during family gambling related activities and parents' own gambling behaviour predicts early gambling in children (Vitaro & Wanner, 2011). The social learning theory of Bandura (1986) provides an explanatory framework to understand how fathers and mothers act as primordial role models. It shows how parents can not only trigger children's involvement in gambling, but more subtly and prior to any gambling activities also shape children's attitudes towards this type of games. Even before mirroring their parents' behaviour, children form attitudes towards gambling games and perceive them as socially accepted and normal activities (Vitaro & Wanner, 2011). The latter authors make a plea in favour of prevention programs that precisely focus on the attitudes of children towards gambling. Wong and So (2014) also emphasize the importance of educational programs that help raising awareness of online gambling risks among minors and their parents.

Parental behaviour and parental attitudes towards gambling can increase or decrease the gambling risks in children (Shead et al., 2011). Permissive parenting attitudes and setting gambling examples enhance the risk, whereas restrictive measures and active parental mediation such as discussing gambling activities and rules discourage child gambling. Vitaro & Wanner (2011) found that parents who gamble are more tolerant to gambling games and less effective in monitoring their children's gambling behaviour. Research also revealed gender differences in parental behaviour, responses and attitudes towards youth gambling. Shead and colleagues (2011) showed that mothers were more likely to judge gambling as a serious issue than fathers, and that mothers gave evidence of less lenient attitudes. Mothers and fathers also differed regarding active parental mediation practices, with mothers engaging in more conversations with their teenagers about gambling and being better informed about prevention and educational measures than fathers. Parents tended to overestimate the age of their children's first betting behaviour and underestimated the chance that their children had already been gambling (Ladouceur et al., 1998). Acknowledging that the convergence of gambling and digital games comes with new challenges for parental awareness and mediation, and that parents act as important socialization agents, this chapter aims to study parental mediation and focuses on parents' versus children's perspectives on simulated gambling.

Aims and methodology

Based on the literature review, our central research questions are twofold. On the one hand, we investigate what parents' perspectives are on children's engagement in simulated gambling activities. On the other hand, we focus on what children themselves report about their game play incorporating gambling elements. We will analyse whether these two perspectives diverge or show similarities. Previous research mainly focuses on adolescents and adults but as gamblers indicate that they started at an early age, precisely the group of primary school children is an important age cohort to study. For this reason, we formulated the following research questions and hypotheses:

- RQ1: To what extent do parents of children in the highest grade of primary school allow their children to engage in gambling games?
- H1: Fathers hold a more positive attitude towards gambling games than mothers do.
- RQ2: To what extent do children in the highest grade of primary school report engaging in computer games incorporating gambling elements?
- H2: Active parental mediation concerning games of chance is negatively linked to early online gambling behaviour in children.

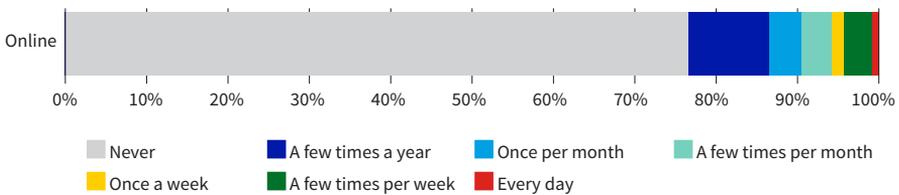
In the spring of 2016, we administered paper-and-pencil questionnaires among children of the fifth and sixth year in 16 primary schools, geographically spread over Flanders, the Dutch speaking part of Belgium. The questionnaire was tested beforehand in two classrooms in order to evaluate the comprehensibility of the questions for this young age group and to time the duration of completion. This led to changes in the precise wording of questions and ensured the planned timeslot for the survey (approximately 50 minutes). The survey consisted of several parts asking for demographic information, possession of media devices, use and frequency of playing different games and gambling types. We also measured attitudes towards gambling, and the parental mediation measuring instrument developed by Nikken and Jansz (2006), which was originally built for gaming, was adapted by our research team to measure mediation for games of chance. Only children whose parent or guardian gave their written permission in advance were offered the children's questionnaire on gaming and games of chance. In addition, we gave children a print version of the parent survey and an informed consent form for their own participation to be returned when filled out by a parent/guardian. The research protocol was approved by the university's Social and Societal Ethics Committee.

A total of 645 children filled out the survey (response rate of 84%). The average age was 10.5 years; half of them were boys (49.5%), half of them were girls (50.5%). The response rate of parents was considerable (53%), yielding 344 completed adult surveys with an average age of 42. Although the majority were mothers (76.7%), the participation rate of fathers (21.3%) was relatively high compared to other parent surveys (see EU Kids online response rates in Vandoninck, 2016).

Results

Our results show a high discrepancy between what parents allow their children to do and what children themselves report about their online gambling game behaviour. 95.6 per cent of the parents say their children are not allowed to play games of chance. 4.4 per cent says this is only possible under specific conditions. Only 1.2 per cent of the parents thinks games of chance should be permitted for all ages. However, 23.6 per cent of the children report playing free digital gambling games such as free casino games.

Figure 1. Children’s reported frequency use of free online gambling games (per cent)



12.6 per cent of the children play this type of games once a month to several times a week, one percent does so on a daily basis. Of the children who report playing free digital gambling games, 28 per cent says playing along with (close) family members, 19 per cent does so with friends, seven per cent plays online with strangers but the largest group plays non-monetary gambling games on their own (44%). These simulated gambling games make use of virtual currencies instead of real money or make it possible to win virtual objects of value such as so-called “skins” to garnish guns in a shooter game by opening chests or the winning of treasures filled with gems in adventure games. Gaining a particular chest is not merely related to player skills but linked with a, for the player unknown, odds ratio as is the case in games of chance. Three per cent of the children said they had been playing online games for money. They were helped by family members or by friends. Also three percent of the children had already engaged in online betting. Nearly three quarters of the children (73.6%) say they are not allowed to play games of chance by their parents, a quarter thinks they can.

Our results do not support the hypothesis that fathers hold a more positive attitude towards gambling games played by children than mothers, although fathers do play these games more often than mothers ($M= 1.51$ for fathers vs $M=0.80$ for mothers, $t=-3.66$, $df=92$, $p<.001$). Both fathers and mothers generally agree with the statement that they think playing games of chance could be harmful for their children ($M=3.32$ for fathers and $M=3.43$ for mothers, $t= 0.98$, $df=317$, $p > .05$). Both groups of parents also equally believe that playing games of chance could form a treat during the developmental process of their children ($M=3.07$ for fathers and $M=3.30$ for mothers, $t=1.92$, $df=315$, $p> .05$). The results reveal that fathers ($M=2.81$) do not play games of chance more often along with their children than mothers do ($M=2.83$, $t=.39$, $df=312$, $p>.05$).

Active parental mediation concerning games of chance is significantly negatively linked to children's early offline gambling behaviour (Kendall's tau = $-.36$, $p < .001$) but not significantly to early online gambling behaviour (tau = $-.13$, $p > .05$). The majority of the parents (62.8%) does never talk to their children about their use of games of chance (see Table 1) whereas only 6.2% never talks about general computer games that their son or daughter plays. Parents often forbid their children to play a specific game of chance (62.8%) but a quarter (26.5%) never gives any explanation to their child about what happens in such a game.

Table 1. Parental mediation of children's computer game playing and games of chance involvement (per cent)

How often ...	Often	Once in a while	Seldom	Never	Sum
do you play computer games together with your child?	0.9	16.0	44.7	38.4	100
do you talk with your child about the computer games it plays?	33.8	47.9	12.0	6.3	100
do you watch closely whether a computer game is suited for your child?	63.2	29.8	3.8	3.2	100
do you read the content description of a new computer game your child is going to play?	18.0	19.2	26.1	36.7	100
do you play games of chance together with your child?	0.0	0.6	15.5	83.9	100
do you watch closely which games of chance your child is playing?	28.3	12.2	5.7	53.8	100
do you talk with your child about games of chance it plays?	16.3	11.9	7.5	64.3	100
do you forbid your child to play specific games of chance?	62.8	9.4	5.8	22.0	100
do you read information on the games of chance your child plays or wants to play?	13.5	11.9	11.5	63.1	100
do you give explanation to your child about what happens in a game of chance?	27.2	30.3	16.0	26.5	100

Conclusion and discussion

Our research among Flemish children of on average 10-years old shows that nearly a quarter of this young age group is engaged in free digital gambling games such as free casino games and one out of seven does this on a regular basis (once a month to daily). More than a quarter of the children who play simulated gambling games reports playing along with (close) family members. Our research is one of the first to study the prevalence of simulated gambling among preadolescents as most studies focus on monetary forms of gambling or gambling games among adolescents or adults. In line with previous research on offline gambling (Bellringer et al., 2014; Gupta & Derevensky, 1998; Vitaro & Wanner, 2011) indicating that gambling starts already early in childhood, our study has demonstrated the early prevalence of simulated gambling too. Acknowledging this might form the gateway to more serious and monetary forms of gambling at a later age, detecting instances of early gambling is of high societal importance. As the big majority of parents say their children are not allowed to play games of chance, our findings reveal a wide gap between what parents allow and what children themselves report on simulated gambling behaviour.

From a parental mediation perspective, special attention is needed from parents for children's online contact with gambling elements. Talking and discussing games of chance seems to be related to children's real life (offline) engagement in gambling such as playing casino games with friends and betting behaviour. Our data show that the more parents talk about this, the less often children engage in it. Unfortunately, this is not the case for the more hidden online gambling activities. This holds especially true when simulated gambling activities such as free casino games are concerned. Parents do not expect their young children to be exposed to gambling features through popular online games that are not labelled as games of chance. This can create a false feeling of safe, harmless entertainment while it is likely to pave the way for the engagement with monetary forms of gambling and the creation of positive attitudes towards gambling among children. The non-monetary objects of value such as rare gems, digital points and levels or skins function as strong rewards, comparable to monetary wins. In contrast to previous literature, our survey data do not indicate that fathers hold a more positive attitude towards gambling games played by children than mothers do. We call upon future evidence-based research to come up with awareness raising prevention programs that offer parents – fathers as well as mothers – a more thorough insight in the rapid changing game world in which the lines between gambling and games are becoming increasingly blurred. A recognizable industry label on games indicating incorporation of simulated gambling features could

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help parents in their monitoring role. As more than a quarter of the children who play simulated gambling games play together with family members, it is clear that home is an important location to get a grasp on this spreading phenomenon.

References

- Bandura, A. (1986). *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bellringer, M., Taylor, S., Savila, F. & Abbott, M. (2014). Gambling Behaviours and Associated Familial Influences Among 9-Year Old Pacific Children in New Zealand. *International Gambling Studies*, 14(3), 457-471.
- Burge, A., Pietrzak, R. & Petry, N. (2006). Pre/Early Adolescent Onset of Gambling and Psychosocial Problems in Treatment-Seeking Pathological Gamblers. *Journal of Gambling Studies*, 22(3), 263-274.
- Chaumeton, N., Ramowski, S. & Nystrom, R. (2011). Correlates of Gambling Among Eighth Grade Boys and Girls. *Journal of School Health*, 81(7), 374-385.
- Derevensky, J., Gupta, R. & Baboushkin, H. (2007). Underlying Cognitions in Children's Gambling Behavior: Can They Be Modified? *International Gambling Studies*, 7(3), 281-298.
- Fröberg, F., Hallqvist, J. & Tengström, A. (2013). Psychosocial Health and Gambling Problems Among Men and Women Aged 16–24 Years in the Swedish National Public Health Survey. *European Journal of Public Health*, 23(3), 427-433.
- Gupta, R. & Derevensky, J. (1997). Familial and Social Influences on Juvenile Gambling Behavior. *Journal of Gambling Studies*, 13(3), 179-192.
- Gupta, R. & Derevensky, J. (1998). Adolescent Gambling Behavior: A Prevalence Study and Examination of the Correlates Associated with Problem Gambling. *Journal of Gambling Studies*, 14(4), 319-345.
- Hardoon, K. & Derevensky, J. (2001). Social Influences Involved in Children's Gambling Behavior. *Journal of Gambling Studies*, 17(3), 191-215.
- King, D., Delfabbro, P. & Griffiths, M. (2010). The Convergence of Gambling and Digital Media: Implications for Gambling in Young People. *Journal of Gambling Studies*, 26(2), 175-187.
- King, D., Delfabbro, P., Kaptis, D. & Zwaans, T. (2014). Adolescent Simulated Gambling via Digital and Social Media: An Emerging Problem. *Computers in Human Behaviour*, 31, 305-313.
- King, D. & Delfabbro, P. (2016). Early Exposure to Digital Simulated Gambling: A Review and Conceptual Model. *Computers in Human Behavior*, 55, 198-206.
- Ladouceur, R., Jacques, C., Ferland, F. & Giroux, I. (1998). Parent's Attitudes and Knowledge Regarding Gambling Among Youths. *Journal of Gambling Studies*, 14(1), 83-90.
- Ladouceur, R., Goulet, A. & Vitaro, F. (2013). Prevention Programmes for Youth Gambling: A Review of the Empirical Evidence. *International Gambling Studies*, 13(2), 141-159.
- Nikken, P. & Jansz, J. (2006). Parental Mediation of Children's Videogame Playing: A Comparison of the Reports by Parents and Children. *Learning, Media & Technology*, 31(2), 181-202.
- Petry, N. (2003). Moving Beyond a Dichotomous Classification for Gambling Disorders. *Addiction*, 98(12), 1673-1674.
- Shead, N. W., Derevensky, J. & Meerkamper, E. (2011). Your Mother Should Know: A Comparison of Maternal and Paternal Attitudes and Behaviors Related to Gambling Among Their Adolescent Children. *International Journal of Mental Health and Addiction*, (9)3, 264-275.
- Tremblay, G., Huffman, L. & Drabman, R. (1998). The Effects of Modeling and Experience on Young Children's Persistence at a Gambling Game. *Journal of Gambling Studies*, 14(2), 193-210.
- Vandoninck, S. (2016). *Dealing with Online Risks: How to Develop Coping Strategies and Preventive Measures with a Focus on Vulnerable Children*. Leuven: KU Leuven Faculty of Social Sciences.
- Vitaro, F. & Wanner, B. (2011). Predicting Early Gambling in Children. *Psychology of Addictive Behaviors*, 25(1), 118-126.
- Wong, I. & So, E. (2014). Internet Gambling Among High School Students in Hong Kong. *Journal of Gambling Studies*, 30(3), 565-576.