Limit-setting has become one of the more widespread types of social responsibility tools used by gambling operators who offer their products online and/or via a player card. Via these pre-commitment tools, operators allow players to pre-set the amount of time and/or money they wish to spend on gambling in a specified time period (typically per day, week, and/or per calendar month). Some scholars and members of the gambling industry view this method as a way of putting informed player choice at the heart of responsible gambling (Griffiths & Wood, 2008). There are a number of different ways that operators can implement limit-setting. More specifically, a player’s spending can be restricted in terms of play limits, deposit limits, bet limits or loss limits (Wood & Griffiths, 2010):

- **Play limit** – This is the maximum amount of money (or time) that a gambler can play with (or for) at any given time.
- **Deposit limit** – This is the maximum amount of money that a gambler can deposit into their playing account at any given time.
Operators and legislators also vary with respect to the obligation of limit-setting. Wood and Griffiths (2010) noted that in some cases, limit-setting is voluntary (i.e., the gambler can make their own choice as to whether to take advantage of the limit-setting tools on offer) while in others they are mandatory (i.e., the gambler has to set limits if they want to access the games operated by a specific gambling service provider). Some gambling operators offer the flexibility for players to choose different limits for different game-types (e.g., casino, sports-betting, poker). More recently, Walker, Litvin, Sobel and St-Pierre (2015) proposed the use of win limits. These are limits which reduce the amount of money a gambler can win. They tested this feature with a number of players and a simulated slot machine and found that a self-enforced win limit resulted in increased player performance and reduced casino profit.

We recently reported the results of a survey of 2,352 customers of the Norwegian operator Norsk Tipping (Auer, Reiestad & Griffiths, 2018). In this study, the attitude towards a newly introduced maximum monthly loss limit of NOK 20,000 (approximately £2100) was investigated. The majority of players found the mandatory spending limit useful and helpful. However, a sizeable minority of high-risk gamblers (approximately one-third) had a less favourable attitude towards global money limits. This may have been because some of the participants in this risk group felt that the limits impeded their typical gambling activity in some way. Even so, the majority (i.e., two-thirds) of high-risk players had positive views in contrast to a decade-old study by Bernhard et al. (2006) who found that gamblers in Canada strongly opposed mandatory limits.

Over the past 15 years a number of studies have examined the extent to which online gambling operators include different types of limit-setting on their gambling website. In an evaluation of the social responsibility practices of 30 British online gaming companies, Smeaton and Griffiths (2004) found that there was a wide variety of bet limits among the gaming sites they visited. The study found that minimum bet size among the 30 companies was £1, whereas the maximum bet size (of those companies that set upper limits) was £20,000. Many of the gambling websites they evaluated typically had £250-£1000 maximum bets and £10-£25 minimum bets. However, this study is now very old and carried out when social responsibility was only just emerging as an issue for gambling operators.

Kazhaal et al. (2011) examined 74 online poker sites and found that less than half of these sites offered any limit-setting tools. Fifty of world’s most well-known online gambling sites were visited and reviewed by Bonello and Griffiths (2017) regarding social responsibility practices. Out of the 50 sites, 45 of them (90%) offered players the opportunity to voluntarily set monetary spending limits. Deposit and spending limits were the most common types of limit setting. Spending limits by product type was only offered by one operator. Marionneau et al. (2017) reviewed consumer protection among all 18 licensed online operators in France. Betting limits as well as deposit limits were offered by all 18 operators. Calvosa (2017) reviewed ten regulated online gambling sites in Italy and all ten had a mandatory requirement for players to choose a deposit limit before they could play. However, in some countries, limit-setting is mandatory which explains why some researchers reported rates of 100% among operators.

In some jurisdictions, like the one in Austria, mandatory limits were introduced to protect the most vulnerable individuals (Auer & Griffiths, 2013). The only way for the player to continue gambling is to choose other gaming sites which do not protect players with mandatory limits. As appropriate prevention tools, voluntary responsible gaming features require a certain level of self-awareness. Players should be introduced to responsible gaming from the very start of their gambling during registration on a specific site. Wohl, Gainsbury, Stewart and Szitainert (2013) showed that players who watched an animated video prior to gambling more often stayed within their preset limits than players who did not watch the video. To our knowledge, most operators who introduce limits also regularly ask their players to update them. This is also a procedure that is highly recommended because players might only become familiar with their own gambling behaviour over time.

Very few studies have examined the behaviour of gamblers following the setting of monetary limits. Among video lottery players in Nova Scotia, a Canadian study by Focal Research (2007) found that RG features (including limit-setting tools) generally reduced the overall levels of player expenditure. However, Wood and Griffiths (2010) pointed out the specific impact of monetary limit-setting was not separated out from the other RG features. Since that study was published, identified VLT play which was a precursor for voluntary limit setting, was discontinued in 2015 in Nova Scotia.

In a laboratory study, Stewart and Wohl (2013) investigated the effect of a pop-up reminder concerning the setting of monetary limits. They found that individuals were significantly more likely to stick to their limits while gambling if they received a pop-up reminder which informed them that they reached their pre-set spending limit compared to those that did not. In a similar study, Wohl et al. (2013) examined the efficacy of two different responsible gambling tools (a pop-up message and an educational animated video) in relation to money limit adherence while gambling on a slot machine (n=72). The authors reported that both tools were effective in helping gamblers keep within their predetermined financial spending limits. In a virtual reality casino study of comprising 43 participants, Kim et al. (2014) found that participants who were explicitly asked to consider setting a time limit on their EGM play were significantly more likely to do so and spent less time gambling than those who were not given such instructions.

The other studies that have been carried out have used behavioural tracking data provided by online gambling operators. Broda, LaPlante, Nelson, LaBrie, Bosworth and Shaffer (2008) investigated the effects of player deposit limits among 47,000 sports bettors over a two-year period using data provided by bwin Interactive Entertainment. They examined the gambling behaviour of those who tried to exceed their deposit limit compared to all other players that did not. The deposit limit was simply the amount of money that was deposited into the gambler’s online account (excluding any winnings that the gambler had accumulated). At the time data were collected in
2005, it was mandatory for bwin players to set a deposit limit. Furthermore, players could not set a limit of more than €1000 a day or €5000 a month. There was also the facility for players to set their own deposit limits below that of the mandatory requirement. The results showed that only 0.3% of the gamblers tried to exceed their deposit limit. It was argued by Wood and Griffiths (2010) that the large daily and monthly mandatory limits may have been the main reason for so few gamblers trying to exceed their limits. In fact, Broda et al. (2008) reported that most gamblers in their sample got nowhere near the maximum deposit limit. More specifically, 95% of gamblers never deposited more than €1050 per month (i.e., approximately one-fifth of the monthly maximum €5000). It is also worth noting that the study did not report any findings relating to those who tried to exceed their own personally set expenditure limits.

We carried out a study using data from a random sample of 100,000 players who gambled on the win2day gambling website during a three-month period (Auer & Griffiths, 2013). The sample comprised 5,000 registered gamblers who chose to set themselves limits while playing on win2day where deposits were limited to €800 per week. The results of this study demonstrated that overall, voluntary limit-setting had a specific and statistically significant effect on high intensity gamblers. High intensity gamblers significantly decreased their play compared to similar players who did not choose a limit. Therefore, we concluded that voluntary limit-setting had an appropriate effect in the desired target group (i.e., the most gaming intense players). More specifically, the analysis showed that (in general) gaming-intense players specifically changed their behaviour in a positive way after they limited themselves with respect to both time and money spent. In most of the analyses (with the exception of poker players), the setting of voluntary time duration limits was less important than voluntary monetary limits. It should also be noted that our study is the only study ever to analyse voluntary time limits using a real-world data set.

More recently, using player card data provided by Norsk Tipping, we carried out a study to determine whether the receiving of personalized feedback about exceeding 80% of a personally set monetary personal limit had an effect on subsequent playing behaviour compared to those gamblers that did not receive personalized feedback. In effect, our study can be viewed as a real-world analogue of the studies conducted by Stewart and Wohl (2013) and Wohl, et al. (2013) in which the effect of pop-up messages on the adherence of limit-setting was tested. Both of these previous studies were laboratory studies and only the effect of the adherence to the pre-set limit within a gambling session was tested. Our study tested whether players receiving feedback about exceeding 80% of the monthly personal global loss had an effect on their gambling behaviour in the following three months. From a sample of 54,002 players, a total of 7,884 players (14.5%) received at least once piece of feedback that they had exceeded 80% of their personal global monthly loss limit between January and March 2017. Our results showed that those gamblers receiving personalized feedback in relation to limit-setting showed significant reductions in the amount of money gambled. However, we also found that there was no significant effect among the top 10% of players with the highest losses.

This study is the latest in a growing number of studies that have evaluated the efficacy of responsible gambling tools in real world settings using real gamblers in real time and real gambling websites (as opposed to efficacy evaluations in laboratory situations where the sample size is often very small and not necessarily representative of real gamblers because of the use of convenience sampling). The findings of our latest study (and other studies outlined above) are of use to many different stakeholder groups including researchers in the gambling studies field (who can attempt to replicate and extend the present study in other jurisdictions and cultures), and the gambling industry (who can employ such responsible gambling features knowing there is an empirical base demonstrating the efficacy of responsible gambling tools), as well as regulators and policymakers who can recommend or enforce that gambling operators utilize responsible gambling tools as a way of minimizing harm and protecting players.

References
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