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How much have you won or lost? Personalized behavioral feedback about gambling expenditures regulates play

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ABSTRACT

In the current research, we tested the utility of a responsible gambling tool that provides players with personalized behavioral feedback about their play. We hypothesized that when the player's estimated monetary loss is less than their actual monetary loss, subsequent expenditures will be reduced. To this end, players ($N = 649$) enrolled in a casino-based loyalty program were asked how much they have won or lost over a three-month period whilst using their loyalty card. They were then provided with their player-account data. Results indicated that players who under-estimated their losses (i.e., those who lost more money than they thought at Time 1) did not perceive that they had reduced their play in the 3-month follow-up period. However, data on actual play indicated that they significantly reduced the amount they wagered as well as the amount they lost during the follow-up period. Given that informed decision-making is the raison d'etre of responsible gambling tools, these results suggest that providing players with accurate information about how much they spend gambling can moderate gambling expenditures.

1. Introduction

Gambling is a popular activity that has pervaded most cultures throughout the course of human history (Bernstein, 1996). Unfortunately, a small portion of players will become overly involved in terms of the amount of money and time they invest, despite the substantial mental and physical health, interpersonal, and financial problems that result (see Kessler et al., 2008; Petry, Stinson, & Grant, 2005). While debate still exists about how best to reduce potential harms associated with gambling, proponents of responsible gambling generally agree that players should be provided with information that would allow them to make informed decisions about their play (see Bernhard, 2007; Blaszczynski, Ladouceur, & Shaffer, 2004; Blaszczynski, Ladouceur, Nower, & Shaffer, 2008; Reith, 2008).

To facilitate responsible gambling (i.e., gambling within an affordable limit of money, time, and other resources; Blaszczynski et al., 2011), an array of tools have been developed that, among other things, inform the player about common misperceptions about how gambling games work (Wohl, Christie, Matheson, & Anisman, 2010), the odds of winning (e.g., Pelletier & Ladouceur, 2007; Turner, Macdonald, & Somerset, 2008), and the benefits of setting and adhering to a preset limit on the amount of money (Stewart & Wohl, 2013) and time (Kim, Wohl, Stewart, Sztainert, & Gainsbury, 2014) spent gambling. With the introduction of loyalty programs and the advent of online gambling, gambling operators have a potentially rich amount of player-account data that could complement and enhance these tools with personalized behavioral feedback (Edgerton, Biegun, & Roberts, 2016; Gainsbury, 2011). That is, many gambling operators now have the capacity to track a player's wagering as well as the outcome of their play and then provide this personalized behavioral information back to the player. Preliminary evidence suggests that personalized behavioral feedback helps to down-regulate wagering (Auer & Griffiths, 2015b, 2016; Wood & Wohl, 2015).

In the current research, we tested the idea that personalized behavioral feedback may be especially effective among people who play electronic gambling machines (EGMs) due to their tendency to underestimate expenditures and losses (see Volberg, Gerstein, Christiansen, & Baldridge, 2001; Wood & Williams, 2007). Specifically, we hypothesized that players who under-estimate their losses and are made aware of their underestimation via personalized behavioral feedback will reduce subsequent gambling expenditures (i.e., amount they wagered), which should exert downward

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pressure on the amount lost.

1.1. Personalized behavioral feedback and behavioral change

Although a comprehensive review of etiology of disordered gambling is beyond the scope of this paper (see Blaszczynski & Nower, 2002 for a discussion), according to the Reno Model (Blaszczynski et al., 2004), the player is ultimately responsible for his or her gambling behavior. Nonetheless, gambling operators must accept a duty of care to provide players with information and tools to help facilitate responsible gambling (see Blaszczynski et al., 2004; Hancock, Schellinck, & Schrans, 2008; Wohl, Sztainert, & Young, 2013). In recent years, many gambling operators have accepted this basic tenet of the Reno Model by implementing responsible gambling programs that aim to help the player make informed decisions whilst gambling (see Griffiths, Wood, & Parke, 2009; Reith, 2008; Shaffer, Ladouceur, Blaszczynski, & Whyte, 2016; Wood & Wohl, 2015). The expectation is that informed players will foster positive attitudes about responsible gambling, and that these factors will translate into reductions in problem gambling.

Frequently, responsible gambling programs include information campaigns that educate players about the potential risks and consequences of excessive gambling as well as tips for gambling responsibly (e.g., setting a limit on play). These educational initiatives have shown promise in terms of increasing gambling awareness about the (low) odds of winning, however, their effectiveness in adjusting players' gambling behavior is less than robust (e.g., Byrne, Dickson, Derevensky, Gupta, & Lussier, 2005; Delfabbro, Lahn, & Grabosky, 2006; Wohl et al., 2010, 2013). Indeed, Monaghan and Blaszczynski (2009) found limited evidence for the contention that campaigns that warn against excessive gambling modify players' behaviors. They argued that effective responsible gambling programs encourage players to reflect on their own gambling behavior. Specifically, promotion of self-appraisals is the route to self-regulation and thus responsible gambling.

Importantly, there is a great deal of theoretical and empirical support for Monaghan and Blaszczynski's (2009) contention. People's motivation to act on information is greatest when it is personally relevant and tailored to their behavior (i.e., personalized behavioral feedback; Noar, Benac, & Harris, 2007; de Vries, Kremers, Smeets, Brug, & Eijmael, 2008). People suffering from hypertension, for example, are more likely to adhere to their treatment plan (and thus lower their blood pressure) when given daily personalized behavior feedback about their medication adherence and blood pressure levels compared to those who are not provided such feedback (Ruppar, 2010). Moreover, Smit, de Vries, and Hoving (2012) found that providing smokers who were motivated to quit with highly individualized feedback increased the odds of abstinence compared to those who did not received personalized behavioral feedback. Such feedback should also have utility in enhancing informed choice amongst people who gamble (Gainsbury, 2011; Lam & Mizerski, 2009).

With the increased use of player-accounts for loyalty programs and online gambling, there is ample opportunity to implement and test the influence of personalized behavioral feedback on subsequent gambling behavior (Auer & Griffiths, 2014; Edgerton et al., 2016; Gainsbury, 2011). In fact, researchers in the field of gambling studies have begun capitalizing on these opportunities to assess whether such feedback moderates gambling behavior (e.g., Auer & Griffiths, 2015a, 2015b, 2016; Griffiths et al., 2009; Wood & Wohl, 2015). Auer and Griffiths (2015a), for example, used player-account data from a commercial online gambling operator to inform players, via a pop-up message, when they played their 1000th game in a given gambling session. Results showed that players who were informed of their 1000th game were more likely to stop their gambling session after receiving this message than were players who did not received such personalized messaging. Wood and Wohl (2015) obtained data from people who gambled online with Svenska Spel (the Swedish gambling operator) and who opted to receive personalized behavioral feedback in the form of a color-coded risk rating (Green = no issues, Yellow = at-risk, Red = problematic). Players at risk for disordered gambling and who opted to receive personalized behavioral feedback significantly reduced the amounts of money deposited and wagered compared to a matched sample of players who opted out of receiving feedback – an effect observed the week following initial feedback as well as 24 weeks later. Thus, informing players of their gambling behavior appears to have a positive impact on subsequent expenditures.

1.2. Player's ability to track their wins and losses: an opportunity for personalized behavioral feedback

A heretofore untested application of personalized behavioral feedback involves providing players with precise information about how much money they have wagered over a recent series of gambling sessions. Such information may be particularly useful for players given estimated gambling expenditures tend to differ substantially from actual expenditures as reported by gambling operators (Volberg et al., 2001). For example, in an Australian survey of household expenditures, people's self-reported gambling expenditures were only 17.3% of actual gambling revenues (Access Economics, 2002). In similar surveys conducted in New Zealand (Statistics New Zealand, 1999) and Canada (Statistics Canada, 2003) the average household gambling expenditures reported was well below the per person average according to actual revenue. In contrast, Williams and Wood (2004) reported that players' self-reported gambling expenditures were higher than gaming revenues would suggest. Similarly, Volberg, Moore, Christiansen, Cummings, and Banks (1998) found that the average spend on lottery and table games obtained from surveys of players exceeded that which is calculated based on the data on gambling receipts available from state gambling regulatory agencies. The exception was EGM players who reported an average spend that was less than that reported by state gambling regulatory agencies – a pattern also observed by Ryan and Speyrer (1999).

One possible explanation for the variance between self-reported expenditures and those provided by the gambling industry may be the way the question about expenditures is posed to the players. Self-report surveys typically ask people how much they spend gambling. Whilst most people interpret "spend" as net gambling expenditures (i.e., amount gambled minus winnings), others equate "spend" to amount lost or turnover (i.e., the total amount gambled, including any re-invested winnings; Blaszczynski, Dumlao, & Lange, 1997). Volberg et al. (2001) noted that game characteristics may also account for this variation. Specifically, they argued that the speed of some games (e.g., EGMs) may hinder players' ability to accurately recall their expenditures. Indeed, EGM players can become so absorbed in the game that they dissociate (i.e., they detach from their current lived experience; Diskin & Hodgins, 1999, 2001; Grant & Kim, 2003; Kofoed, Morgan, Buchkowski, & Carr, 1997; Stewart & Wohl, 2013; Wynne, 1994). The consequence is that EGM players under-estimate their expenditures leading to excessive gambling (see Stewart & Wohl, 2013).

Providing a different perspective, Auer and Griffiths (in press) argued that most research that has examined possible biases in self-reported spending on gambling is flawed due to the use of aggregated self-report and industry data (i.e., comparison of average self-reported past year loss to industry-wide data from the