Use of consumer protection tools on Internet gambling sites: Customer perceptions, motivators, and barriers to use

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Introduction

The Internet gambling market is now largely legalized and authorised by jurisdictions that recognize the benefits of licensing requirements and futility of prohibition. All credible gambling licensing bodies require some form of consumer protection, often in the form of tools to facilitate informed play to assist customers to gamble at personally affordable levels. Many operators provide the required tools in compliance with licences but do little to promote these or encourage their use. As such, the tools have limited impact in terms of minimizing gambling-related harms. This paper aimed to explore the awareness of and use of consumer protection tools among Australian online sports wagering customers. By providing a greater understanding of the motivations and barriers to tool use in the context of informal budgeting strategies, the paper can inform strategies to enhance tool uptake and subsequent effectiveness.

Internet gambling and gambling-related harms

After almost two decades of legitimate offerings, the online sector's share of global gambling is around 10%-11% (Pilling, 2019). The global online gambling market is expected to register an annual growth rate of 9.7% from 2018 to 2023, with 84 nations now offering legalised online gambling, which is the main factor to support market growth (Mordor Intelligence, 2018). In Australia, only wagering and lottery products can be legally provided by licensed providers, with all other forms of gambling prohibited from being offered online. The online wagering market was estimated to be worth AUD$1.4 billion in 2014, and is continuing to grow at a rate of 15 per cent per year (Department of Social Services, 2015), with the use of Internet betting in Australia more than doubling between 2012 and 2018, such that 34.1% of Australians were placing bets online (Roy Morgan, 2018).

Many gamblers set themselves a limit, either formally or informally, and even use strategies to keep their gambling at affordable levels (Lostutter, Lewis, Cronce, Neighbors, & Larimer, 2014; R. T. A. Wood & Griffiths, 2015). Features of Internet gambling may undermine the ability for gamblers to maintain control, such as its increased availability and accessibility, the ability to engage in high speed and uninterrupted play, convenient online payment methods, and gambling in private (Gainsbury, Russell, Hing, Wood, & Blaszczynski, 2013; Wardle, Moody, Griffiths, Orford, & Volberg, 2011; R. T. Wood & Williams, 2011). Internet gambling accounts for an increasing proportion of those seeking formal help for gambling problems (GamCare, 2018; Hing, Russell, Gainsbury, & Blaszczynski, 2015; Zhang et al., 2018). As such, preventing problem gambling in the

context of online wagering has emerged as a significant area of concern for policy-makers and researchers.

The provision of consumer protection tools by gambling operators online

Internet gambling offers theoretically greater practical opportunities to facilitate harm-minimisation efforts than land and cash-based gambling venues through monitoring customer accounts, behavioural algorithms, and electronic transactions (Forsström, Jansson-Fröjmark, Hesser, & Carlbring, 2017; Harris & Griffiths, 2017; Monaghan, 2009). Behavioural algorithms can detect potentially risky behaviours, enabling operators to proactively intervene while opt-in consumer protection measures generally rely on customers to initiate action. For example, customers can track their gambling expenditure, set binding limits, and block access to accounts for specific periods. The effectiveness of online tools is supported by a study of 1,797 lottery customers which found that most (54.5%) participants suggested it was easier to keep to their spending limits when purchasing lottery tickets online as compared to in retail venues (R. T. A. Wood & Griffiths, 2015). This suggests that consumer protection tools can support gamblers to maintain self-control and make rational, controlled decisions (Harris & Griffiths, 2017) and to function as early intervention measures to prevent gambling problems from developing (Dragicevic, Percy, Kudic, & Parke, 2015; Ladouceur, Shaffer, Blaszczynski, & Shaffer, 2017).

Most operators provide, either voluntarily or as compliance with licensing conditions, a range of consumer protection resources including messaging, self-exclusion, age restrictions, self-tests, link to help resources, activity statements, deposit limits and temporary time outs (Bonello & Griffiths, 2017). Despite Internet gambling being widely available, there is remarkably little theoretical or empirical research to inform on the most effective interventions to minimise harms in the form of consumer protection tools (Blaszczynski, Parke, Parke, & Rigbye, 2014; Harris & Griffiths, 2017; Ladouceur et al., 2017; Lucar, Wiebe, & Philander, 2012). The limited information available suggests that few Internet gamblers engage with these tools (Marionneau & Järvinen-Tassopoulos, 2017). UK surveys suggest that 9% of gamblers have used financial limit setting tools and 3% have taken self-tests or used time outs. With the exception of limits, which 60% of participants knew of, the majority of participants were not aware of the availability of other tools (Gambling Commission, 2019). A French population survey showed that 62.3% of gamblers do not use voluntary deposit limits on gambling sites (Costes, Kairouz, Eroukmanoff, & Monson, 2016).

The Present Study

The current study examined attitudes towards the use of, and impact of three consumer protection tools provided by Australian online wagering operators: activity statements, deposit limits, and time outs. Activity (summary or transaction) statements enable customers to track their gambling spend by showing their wins, losses, withdrawals, deposits, and current balance. Research suggests that gamblers have positive views towards receiving activity statements, that these are among the most popular of all consumer protection tools, and they appear to be effective in reducing time and money spent gambling (Auer & Griffiths, 2016; Gainsbury, Parke, & Suhonen, 2013; R. T. A. Wood & Wohl, 2015).

Voluntary deposit limits (also referred to as a form of voluntary pre-commitment) enable customers to set a personal limit on the amount of money deposited into their gambling account for a specified time period (e.g., 24-hour, weekly, or monthly). There is mixed evidence on the impact of deposit limits for online gambling; some studies indicate reduced spending as a result (Auer & Griffiths, 2013; Broda et al., 2008), others show small or no effects (Ladouceur, Blaszczynski, & Lalande, 2012; Ladouceur et al., 2017; Nelson et al., 2008). In a literature review, Lucar and colleagues (2012) found that monetary limit setting tools are generally positively viewed because they encourage gamblers to reflect on the amount of time they spend gambling. However, usage is often low because operators are falling short of properly promoting the tools.

Another type of harm-minimization tool is a temporary time-out (also known as take a break, or temporary self-exclusion) which allows customers to suspend their gambling account for a specified period (generally less than six months). In a study of Swedish online gamblers, 46% of their participants reported that a seven-day self-exclusion was a useful consumer protection tool. This was followed by a one-month self-exclusion, and daily self-exclusion option (Griffiths, Wood, & Parke, 2009).

To design behavioural change strategies, it is essential to understand both motivators and barriers to the use of consumer protection tools). This includes attitudes and social norms (i.e., who else is using the tools) and complementary behaviours, such as self-budgeting strategies. Further, to inform appropriate targeting of interventions, it is important to consider customer subgroups. In relation to tool use, this includes those experiencing gambling harms, as well as distinctions based on core demographics. Through these objectives this paper intends to inform strategies to enhance tool uptake and subsequent effectiveness.

Given the lack of previous literature on use of consumer protection tools, exploratory analyses were used. However, based on their perceived relevance for Internet gambling

customers, we hypothesized that activity statements would have the highest use of the tools, followed by deposit limits, and lastly time-outs.

Methods

Participants

Six participating online wagering operators each sent 2,000 randomly selected customers who had placed a bet in the past six months an invitation email on behalf of the research team. Of the 12,000 individuals emailed, 3,595 opened the email. Of those who opened the invitation email, 734 began the survey. Participants were excluded from analyses if they met any of the following criteria: failure to complete the survey (n = 118), no online wagering within the past 12 months (n = 4), or failure of two or more attention check items (n = 48). The final sample consisted of 564 participants. All procedures were approved by the [BLINDED FOR REVIEW] ethics committee. All participants provided informed consent by submitting the survey.

Note that some participants did not provide responses to problem gambling severity (*n* = 3), or demographic items (*n* = 11), and one participant did not provide their age. These participants were retained for the majority of analyses, but do result in altered degrees of freedom for a small subset of the results.

Participants were aged between 19 and 83 (*M* = 43.86, *SD* = 15.29), predominantly male (90.8%), with an education level equivalent to year 12 or greater (87.7%), and most worked full time (61.0%). Participants were predominantly Australian citizens or permanent residents (93.5%), did not speak any languages other than English at home (87.0%), and were of European ethnicity (69.5%). Participants were typically married (46.3%) or had never married (34.0%). Slightly over half of all participants had children (55.9%).

Measures

The online survey included the following measures:

1) *Demographics:* Age, gender, education, employment status, household income, citizenship/residency status, whether participants speak languages other than English, marital status, ethnicity, and whether participants have children.

2) *Gambling Behaviour:* Fixed-choice questions measuring the frequency of online wagering, the number of active online wagering accounts, typical monthly expenditure.

3) *Use of budgets:* A question assessed whether participants set a formal or informal budget for online wagering, and for those who indicated positively, fixed-choice options assessed strategies used to stick to the budget.

4) *Consumer protection Tool Knowledge and Use:* Questions measuring knowledge of and use of each consumer protection tool: Activity Statements, Deposit Limits, and Time-out. Experienced participants indicated their satisfaction with the tool, reasons for using the tool, and perceived change in gambling as a result. Inexperienced participants were asked to indicate their reasons for non-use.

5) *Problem Gambling:* The severity of problem gambling was measured using the nine-item Problem Gambling Severity Index (PGSI; Ferris & Wynne, 2001). The standard response and scoring systems were used in this study. The internal reliability of the PGSI was extremely good in the current sample ($\alpha = .91$). Participants who scored 3+ (moderate-risk gamblers and problem gamblers) on the PGSI were asked what type and mode of gambling made the primary contribution to any gambling-related problems experienced using fixed choice response options.

To reduce demands on participants, the survey made use of skip-logic. As such, participants only viewed questions that were relevant to them (e.g., if a respondent had not used deposit limits, they would not be asked questions about their satisfaction with that tool). In these instances, analyses were performed on the subset of eligible participants.

Statistical Analyses

Data pre-processing and analyses were conducted using SPSS v25 (IBM Corp., 2017). One-sample Binomial tests were used for categorical variables with binary responses items (e.g., did gambling behaviour change due to activity statements). Chi-Square tests were used for the comparison of multiple categorical variables, with *Z*-tests used to identify post-hoc differences. Fishers Exact tests were used if expected cell-counts were < 5. Owing to the complexity involved in analysing "pick any/c" variables that have mutually exclusive options (e.g., "I spend more time gambling" and "I spend less time gambling"), we only describe the proportion participants selecting each option. Mann-Whitney *U* tests were used when comparing ordinal variables or counts between two groups.

We explored several factors that may be related to the use of Consumer protection tools. For these analyses, we first calculated the total number of tools used by each respondent ($M = 1.12$, $SD = 0.62$, $Mdn = 1$, $min = 0$, $max = 3$), and performed a series of Spearmans Rho correlations to identify potential significant associations.

Alpha was set at 0.05, with the Bonferroni method was used to correct for multiple comparisons. Effect sizes were calculated for Chi-Square tests (Cramers *V*, small > 0.10 |

medium > 0.30 | large > 0.50), One-Sample Binomial tests (Cohens g, small > 0.10 | medium > 0.20 | large > 0.25), and Mann-Whitney U tests (r, small > 0.10 | medium > 0.30 | large > 0.50).

Results

Wagering Activity

Participants were more likely to place online wagers weekly (47.2%) or daily (30.5%), and less likely to place wagers monthly (12.6%) or less than monthly (9.8%). Participants were more likely to have two (26.4%) or three to four active accounts (29.6%), and less likely to have five to six (11.7%), or six or more active accounts (13.3%). One-fifth of participants had a single active account (19.0%). Typical monthly expenditure is presented in Table 1, which indicates the high degree of variability in expenditure. Participants generally spent less than $150 per month across all their active wagering accounts. There was, however, a modest proportion of participants that spent in excess of $150, including 11.9% of participants who reported spending more than $1001.

Table 1. Self-Reported Monthly Online Wagering Expenditure for 564 Participants.

	%
$0	3.5
$1-25	15.8
$26-50	12.9
$51-75	5.7
$76-100	10.1
$101-150	7.8
$151-200	8
$201-300	8.3
$301-500	7.4
$501-1000	8.5
$1001-2000	6.4
$2001-5000	2.3
$5001+	3.2

Note. All values are in Australian $.

Self-budgeting

More than half of the participants had set formal or informal budgets for their online wagering (55.5%). A variety of strategies were reportedly used by participants to adhere to these budgets (Table 2). Common strategies included limiting the funds available in their account/s (46.6%) and withdrawing funds on a regular basis or following large wins (47.0%). Approximately one-quarter of self-budgeting participants viewed their personal bank/credit card statement as an adherence strategy (24.6%). Among the 313 participants who set budgets, adherence was generally good; half adhered to their budgets most of the time, and 38.3% always adhered. Only 9.9% adhered some of the time, and 1.6% never adhered.

Table 2. Reported Self-Budgeting Strategies for 313 Participants.

	%

Make regular withdrawals or withdrawals after big wins	47.0
Keep limited funds in my wagering account	46.6
Look at my personal bank account/credit card statement	24.6
Limit the number of gambling sites/accounts I use	15.3
Self-exclusion	15.3
Gamble only at set time periods	14.4
Only deposit at specific times/days	8.6
Use the tools on the website/app	6.4
Set a limit on my bank account/credit card	3.5
None	9.9
Others (please specify)	7.3

Note: Participants could select multiple options.

Consumer protection tool use and impact

The majority (60.5%) of participants were aware that all three tool types existed. Participants were more likely to be aware of activity statements (96.6%) compared to deposit limits (85.5%) and time-out (65.8%) tools. Usage rates also varied between tools. Among those indicating awareness of the tool, 88.4% had used activity statements, 24.5% had used deposit limits, and 8.1% had used time-out tools.

Consumer protection tool users were, overall, satisfied with each tool. Of the 468 users of activity statements, 71.0% were satisfied or very satisfied, compared to 3.6% that were dissatisfied or very dissatisfied. Similarly, of the 81 users of deposit limits, the majority were satisfied or very satisfied (72.8%), while 5.0% were dissatisfied or very dissatisfied. Within the 23 users of time-out tools, 60.9% were satisfied or very satisfied, and 8.7% were dissatisfied.

A small number of participants who had used each tool reported that this had impacted their gambling. Among Activity Statement users, the proportion that thought their gambling had changed because of this tool (22.9%) was significantly lower than the proportion that did not (77.1%, $Z(n = 468) = -11.70$, $p < 0.001$, $g = -0.27$). Although the majority of deposit limit (58%) and time-out (69.6%) users thought that their gambling had changed, these proportions were not significantly greater than the proportion of users who did not think their behaviour had changed (deposit limits = 42.0%, $Z(n = 81) = 1.33$, $p = 0.182$, $g = 0.08$; time-out = 30.4%, $Z(n = 23) = 1.67$, $p = 0.093$, $g = 0.20$).

Changes in gambling behaviour generally reflected the implementation of consumer protection behaviours. Activity statement users who reported a change in behaviour ($n = 107$) indicated that they were more in control of their gambling (70.1%), were spending less money gambling (32.7%), were spending less time gambling (29.9%) and were thinking

about their gambling less (15.0%). Approximately one-fifth (18.7%) indicated that they had thought about their gambling more.

Deposit Limits ($n = 47$) were perceived to have affected gambling by reducing the amount of money (63.8%) and time (46.8%) spent gambling, by increasing control over gambling (53.2%) and reducing thinking about gambling (23.4%). Again, almost one-fifth thought about their gambling more (17.0%), and 2.1% indicated that deposit limits had made them spend more time gambling.

Of the 16 users of time-out tools that reported that their gambling had changed, 10 spent less time gambling, 9 spent less money gambling, and 8 were more in control of their gambling.

Reasons for Using and Not Using Consumer protection tools

The reported reasons for using each Consumer protection tool are presented in Table 3. In general, the most popular reasons for using Consumer protection tools were to increase feelings of control and proactivity with gambling, and to identify or respond to spending too much money gambling. The majority of activity statement users viewed their statements to see their transaction history, and just under half to see a summary of their gambling. Deposit limits were primarily used to limit gambling spending, as a means of tracking gambling spending, and to avoid developing gambling problems. Of the 23 participants that had used time-out tools, 12 had done so to take a break from gambling.

Table 3. Reported Reasons for Using Consumer protection Tools.

	Activity Statements (N = 468) (%)	Deposit Limits (N = 81) (%)	Time-out (N = 23) (%)
I want to feel in control and be proactive with my gambling	25.4	48.1	30.4
I [view the statement to see if I'm spending / think I spend] too much money gambling	15.4	22.2	30.4
I don't want to develop gambling problems	8.8	28.4	17.4
I [view the statement to see if I'm spending / think I spend] too much time gambling	7.7	12.3	17.4
A gambling operator prompted me to use this tool	1.3	4.9	0.0
A friend/family member suggested that I use this tool	0.4	1.2	4.3
I want to track my gambling spend	30.8	30.9	
I want to limit my gambling spend		67.9	39.1
I am interested to see my transaction history (wins, losses, deposits, withdrawals)	76.1		
I am interested to see an overall summary of my gambling	49.6		
I want to compare gambling across my accounts	13.5		
I don't want to have to monitor my gambling spend		6.2	
I want a time out from gambling			52.2
I want to stop my gambling			8.7

			4.3
I don't want to use that website anymore			4.3
Other (please specify)	5.6	0.0	0.0

Note: The *N* reported for each tool type includes only those participants that had used that tool, and is a subset of the total study *N*. Participants could select multiple options. A blank space indicates that the option was not presented to participants in that column.

In general, the most frequently reported reasons for not having used the Consumer protection tools (Table 4) was the perception that gambling could be controlled without the tool/s, the absence of any perceived gambling problems, and a non-specific perception that the tool/s are not needed. A small proportion of participants reported that they did not use the tools because they believed them to be only useful for people with gambling problems, or that they did not know how to access or use the tools.

Table 4. Reported Reasons for Not Using Consumer protection Tools.

	Activity Statements (N = 63) (%)	Deposit Limits (N = 364) (%)	Time-out (N = 341) (%)
I can control my own gambling without the [tool]	47.6	59.6	56.9
I don't have any problems with my gambling	46.0	44.8	41.9
I don't think I need to access the [tool]	28.6	46.2	46.3
I think [the tool is] only for people with gambling problems	12.7	17.3	19.6
I don't want anyone to think that I need assistance with my gambling	6.3	1.9	2.1
I don't know	4.8	2.7	1.5
I don't know where to access the [tool]	6.3	0.3	0.9
I used to [use the tool] but I don't anymore	6.3	0.5	0.3
I don't have the time	6.3	0.3	
I don't understand what the activity statement is for	4.8		
The activity statement doesn't provide relevant information	3.2		
I don't want to limit how much I spend		14.8	
I don't know what limit to set		1.6	
I don't want to be blocked from gambling			12.9
The time periods are too long			0.3
I use other strategies to control my gambling (please specify)	9.5	4.1	3.8
Other reasons (please specify)	3.2	3.6	3.5

Note: The *N* reported for each tool type includes only those participants that had not used that tool, and is a subset of the total study *N*. Participants could select multiple options. A blank space indicates that the option was not presented to participants in that column.

Consumer Protection Tool Use and Problem Gambling

Almost one-third of participants were classified as non-problem gamblers (29.8%), 27.6% were classified as low-risk gamblers, 30.3% as moderate-risk gamblers, and 12.3% as problem gamblers.

Among those classified as moderate risk and problem gamblers, gambling problems were more likely to be attributed to wagering on horse/dog races (37.0%), or wagering on sports events (17.2%), and slightly over one-tenth had experienced problems due to EGMs (11.8%). One-quarter (25.6%) of those with PGSI scores over three reported that they had no problems.

Participants that had experienced problems due to their gambling tended to attribute these to gambling on the Internet using apps (48.0%). Relatively few participants attributed their gambling problems to betting via telephone (5.1%). One-quarter of participants attributed their gambling problems to wagering on the Internet via websites (26.0%), and one-fifth to gambling in venues (20.9%).

There were significance differences in the setting of (χ^2(3, $n = 561$) = 12.48, $p = 0.006$, Cramer's $V = 0.15$) and adherence to formal or informal budgets (χ^2(9, $n = 311$) = 65.10, $p < 0.001$, Cramer's $V = 0.26$) as a function of problem gambling risk level. Post-hoc tests indicated that low-risk gamblers (65.2%) were significantly more likely than non-problem gamblers (46.7%; $Z = 3.33$, $p = 0.005$) to set budgets for their online wagering. However, there were significant difference between non-problem gamblers and moderate-risk (57.6%) or problem gamblers (49.3%), or between low-risk gamblers and moderate-risk and problem gamblers (all p's > 0.151). Although non-problem gamblers were less likely than low-risk gamblers to set a budget, those who did, reported significantly greater adherence. As shown in Table 5, non-problem gamblers were significantly more likely than low-risk gamblers to adhere 'always' or 'most of the time'. Reported adherence was also greater for non-problem gamblers than for moderate-risk and problem gamblers, with non-problem gamblers more likely to report adhering 'always' compared to moderate-risk and problem gamblers. Non-problem, low-risk, and moderate risk gamblers were significantly less likely to report adhering 'sometimes' compared to problem gamblers.

Table 5. Self-Budgeting Adherence by Problem Gambling Risk Level for 311 Participants

| | Problem gambling risk level | | | |
	Non-problem gambler	Low-risk gambler	Moderate-risk gambler	Problem gambler
	N = 78 (%)	N = 101 (%)	N = 98 (%)	N = 34 (%)
Never	1a (1.3)	1a (1.0)	2a (2.0)	1a (2.9)
Sometimes	1a (1.3)	6a,b (5.9)	12b (12.2)	12c (35.3)
Most of the time	24a (30.8)	57b (56.4)	61b (62.2)	13a,b (38.2)
Always	52a (66.7)	37b (36.6)	23b (23.5)	8b (23.5)

Note. Problem gambling risk levels that are significantly different at each level of adherence are indicated by differing subscripts

Significant differences in tool use as a function of problem gambling risk level were limited to deposit limits (χ^2(3, $n = 480$) = 33.69, $p < 0.001$, Cramer's $V = 0.27$) and time-out

tools (Fishers Exact $p < 0.001$, Cramer's $V = 0.23$). Problem gamblers (40.0%, $n = 24$) were significantly more likely to have used deposit limits compared to low-risk gamblers (20.2%, $n = 26$; $Z = 2.90$, $p = 0.024$) and non-problem gamblers (10.3%, $n = 15$; $Z = 4.92$, $p < 0.001$). Similarly, moderate-risk gamblers (34.9%, $n = 51$) were more likely to have used deposit limits compared to low-risk gamblers ($Z = 2.72$, $p = 0.039$) and non-problem gamblers ($Z = 5.01$, $p < 0.001$). There was no significant difference in the use of deposit limits between problem gamblers and moderate-risk gamblers ($Z = 0.69$, $p = 1.000$).

Problem gamblers (20.50%, $n = 9$) were also more likely to have used time-out tools compared to low-risk gamblers (3.10%, $n = 3$; $Z = 3.45$, $p = 0.003$) and non-problem gamblers (2.8%, $n = 3$; $Z = 3.69$, $p = 0.001$). Moderate-risk gamblers were more likely than low-risk gamblers to have used time-out tools ($Z = 2.77$, $p = 0.034$). There was no significant difference in the proportion of problem gamblers and moderate-risk gamblers ($Z = 1.23$, $p = 1.000$), or low-risk gamblers and non-problem gamblers ($Z = 0.13$, $p = 1.000$) that had used time-out tool.

There was no significant variation in the use of activity statements by problem gambling risk level ($\chi^2(3, n = 543) = 3.78$, $p = 0.286$, Cramer's $V = 0.08$).

Consumer protection Tool Use and Other Factors

The total number of tools used was significantly negatively correlated with age ($r_s(553) = -0.19$, $p < 0.001$), and significantly positively correlated with PGSI scores ($r_s(561) = 0.15$, $p < 0.001$), such that younger participants and those with higher PGSI scores were significantly more likely to use a greater number of tools than older participants and those with lower PGSI scores. The total number of tools used was not significantly correlated with the frequency of online wagering ($r_s(564) = 0.02$, $p = 0.615$), online wagering expenditure ($r_s(564) = 0.01$, $p = 0.767$), the total number of gambling activities engaged in ($r_s(564) = 0.03$, $p = 0.516$), the number of active online wagering accounts ($r_s(564) = 0.03$, $p = 0.546$). Participants who spoke a language other than English had used a significantly greater number of tools ($M = 1.33$, $SD = 0.58$, $Mdn = 1.00$) compared to participants who only spoke English ($M = 1.09$, $SD = 0.61$, $Mdn = 1.00$; $U = 13710.00$, $Z = -3.58$, $p < .001$, $r = 0.15$). Participants who had set their own informal budgets had used a significantly greater number of tools ($M = 1.20$, $SD = 0.66$, $Mdn = 1.00$) compared to participants who did not set their own budgets ($M = 1.02$, $SD = 0.55$, $Mdn = 1.00$; $U = 44813.50$, $Z = 3.57$, $p < .001$, $r = 0.15$). However, within the participants who set their own budgets, adherence to these budgets was negatively correlated with the number of tools used ($r_s(313) = -0.17$, $p = 0.002$).

Discussion

In the present study we explored a range of features related to Australian online wagerers' usage of consumer protection tools. This is a highly important study as most research in this area has focused on electronic gaming machines, and there are no Australian studies that have measured use of and attitudes towards consumer protection tools on licensed Internet wagering sites. Most participants were aware of all three tools, although a large proportion were not, indicating that online wagering sites need to make further efforts to enhance awareness, a necessary precursor of tool use. Although activity statements were widely used, relatively few participants had used tools which restrict gambling (deposit limits and time-outs) which supports international research findings (Costes et al., 2016; Gainsbury, Parke, et al., 2013; Gambling Commission, 2019). Tool use was higher among younger participants, which is consistent with recent finding from the UK (Gambling Commission, 2019); and among those with greater reported problem gambling severity – as discussed below.

Activity statements had been used by most participants and were viewed positively regardless of their risk of problem gambling, consistent with research indicating that activity statements are one of the most popular consumer protection tools across a broad segment of gamblers (Gainsbury, Parke, et al., 2013). Similar levels of satisfaction were reported by those who used deposit limits and time-outs. However, despite user satisfaction with tools, they did not appear to assist with self-reported budget adherence or affect change in gambling behaviour. Most activity statement users reported no change, which may reflect the lack of summary data provided by these, which simply list all transactions, some across multiple lines, with no net totals of deposits, withdrawals, wins, and losses. The lack of summary information likely explains the lack of impact activity statements have on gambling thoughts and behaviour.

Among users of the more restrictive tools, positive change was reported by a non-significant majority. This is consistent with previous research on use of Playscan, a consumer protection tool in which Internet gamblers take a self-test and receive feedback on their level of problem gambling severity with suggested actions (Forsström et al., 2017). It is possible that Internet gamblers can manage their gambling without ongoing tool use, which would be consistent with the reported reasons for lack of engagement. However, the in this study, the tools were not always useful in enabling behavioural change, including for those who would benefit from this as indicated by the gambling harms reported. Nonetheless, there is evidence from prior research to support the effectiveness of deposit limits – most users self-reported

change in the direction of sustainable gambling. This is consistent with previous research (Auer & Griffiths, 2013; Broda et al., 2008) and suggests that this tool may be useful for a subset of gamblers and merits further attention to enhance its use.

The relatively low impact of tool use on behavioural change does not mean that there is no benefit in providing these tools. The reported reasons for tool use indicate that many participants were seeking to be proactive in ensuring that they were gambling at sustainable levels, and a notable proportion of those using limits and time-outs did so to avoid developing gambling problems. This supports findings from a Swedish Internet gambling study indicating that 23% of users of consumer protection tools used these to play safely (Griffiths et al., 2009) and a Norwegian study which found more positive attitudes towards limit setting among low-risk compared to high-risk gamblers (Auer, Reiestad, & Griffiths, 2018).

The tools were mostly being used as intended, that is, activity statements to see summaries and transactions, limits for gambling expenditure and taking a time-out from gambling. Problem and moderate-risk gamblers were more likely to use the more restrictive tools, which is reflected in the reasons for use indicating some awareness of potential problems and excessive gambling. The use of tools by those at greater risk of problems is appropriate as these participants appear to be less successful at adhering to their self-set budgets. This suggests some awareness among gamblers of the importance of taking active steps and using tools to assist them to gamble within affordable levels. Nonetheless, tool use was related to less successful adherence to budget, potentially indicating the lack of effectiveness of tools in enabling gambling within affordable levels.

Understanding motivations for using tools is important, as is appreciating the barriers to this. The results support previous research (Griffiths et al., 2009; R. T. A. Wood & Griffiths, 2008) in demonstrating a pervasive view that consumer protection tools are intended for people with gambling problems and not perceived to be relevant or helpful in managing one's own gambling. Although time-outs may be arguably most useful for those who need assistance in avoiding gambling due to experience of harms, use of activity statements and deposit limits are relevant for all gamblers to enhance sustainable gambling.

Limitations & Future research

There are several factors to be mindful of when interpreting the results of this study. The low response rate to the emails sent by operators indicate that the participants are not representative of all Australian online wagerers. Email-based surveys traditionally have low response rates (Fernandez, 2019) and the survey was sent on a Friday, when participants may be busy with finalising the week's tasks. As consumer protection tools are more relevant to

Internet gamblers who frequently use online gambling sites, sending the survey to customers who have placed a bet in the last month, rather than last six months, may have increased the response rate as the survey would have been perceived as more relevant. Related to this, the limited number of participants who used the deposit limits and time-outs reduce conclusions that can be drawn about these tools. For the current analyses, we focused on those who had used each tool at least once in the past 12 months, however, it may be useful to consider the level of tool engagement to measure effectiveness (Forsström, Hesser, & Carlbring, 2016). Although we examined tool use based on several self-reported participant characteristics, future research should identify relevant customer segments, including those who would most benefit from using specific tools. This is important to enable targeted marketing strategies, that is, sending specific, customised messages to segments to increase the perceived relevance of these and impact on behaviour (Auer & Griffiths, 2016; Gainsbury, Abarbanel, Philander, & Butler, 2018).

We examined tool use among participants recruited from multiple online wagering sites, which is a key strength of this paper as most previous studies have been limited to users recruited from a single site. However, we did not investigate how consumers engage with tools across multiple sites. The use of and impact of tools across gambling sites is important given that the majority of online wagerers are likely to hold multiple accounts and problem gambling severity is related to diversity of gambling activity (Currie et al., 2006; Gainsbury, Russell, Blaszczynski, & Hing, 2015; LaPlante, Nelson, & Gray, 2014). Similarly, our sample did not enable sufficient investigation of individual characteristics. For example, although we identified greater tool use among younger participants, our ability to explore this finding is limited due to the relatively low tool use across the sample. Future research should examine use of consumer protection tools among younger adults as this group is at greater risk of experiencing gambling problems, including for online wagering sites (Gainsbury et al., 2014; Welte, Barnes, Tidwell, & Wieczorek, 2017). The finding that tool use was positively associated with problem gambling severity, but not with online wagering frequency or expenditure, or the diversity of gambling across online accounts and gambling activities may reflect the lack of accuracy in self-report of gambling intensity. Research has repeatedly demonstrated that gambling intensity is one of the most useful predictors of Internet gambling problems (Baggio et al., 2017; LaPlante et al., 2014; Philander & MacKay, 2014). It is recommended that future research combine self-report and behavioural data to provide greater comprehension of the factors related to consumer protection tool use.

Implications for policy and practice

This paper highlights the importance of careful consideration of the intended targets and aims of consumer protection tools. Interventions that place strict limits on gambling, such as self-exclusion, are intended to be used by those experiencing gambling problems who have failed to control their gambling within affordable levels (Motka et al., 2018). In contrast, tools that enable gamblers to track and limit the time and money they spend gambling are intended to be used by a broad segment of Internet gamblers, including those who wish to be proactive and have assistance to keep their gambling within sustainable levels. Although some participants reported these views, this study highlights a common perception that the tools are relevant only for those who cannot manage their gambling without assistance and who are experiencing gambling problems.

It is important to change the terminology and placement of tools to encourage use by all online wagering customers. The survey used in the study did not use the term 'responsible gambling' and referred to 'gambling tools' to avoid introducing bias into recruitment and responses. However, the gambling operators from which participants were recruited all use the term 'responsible gambling'. The term responsible gambling should be avoided where possible as this term may be interpreted to imply that it is the gambler's individual responsibility to gamble in a sustainable way without recognising the interplay between the gambling product and environment (Blaszczynski et al., 2011; Ivanova, Rafi, Lindner, & Carlbring, 2019; Reith, 2008).Terminology is needed to clarify that the tools are relevant for the entire consumer base (e.g., play management or account tools) to ensure that gambling is sustainable and affordable and to prevent the development of related problems (Tanner, Drawson, Mushquash, Mushquash, & Mazmanian, 2017). As most gamblers already set themselves budgets, there is a clear perceived recognition of the importance of such actions. Tools should be promoted as a way for gamblers to augment their own personal strategies such that they make managing play and tracking expenditure easier for individuals. Communication should focus on empowering personal autonomy for exercising personal control (Hertwig & Grüne-Yanoff, 2017). However, it is noted that the term 'responsible gambling messaging' and so forth, are often included in legislated requirements, indicating that changes are needed to gambling policy and regulations as well as to industry practice.

In addition to encouraging engagement with existing tools, attention should be paid to the development of further tools and strategies, including those that do not rely on individuals to be proactive. There are many changes which could be made to consumer protection tools based on behavioural economic literature to 'nudge' gamblers towards

sustainable play (Gainsbury, Tobias-Webb, & Slonim, 2018). These may include changing the defaults and anchors used for deposit limits to prevent sites using absurdly high anchors or defaults (Broda et al., 2008) or making tool use automatic such that gamblers have to opt-out rather than opt-in. The self-management strategies used by gamblers provide insights, for example, as many gamblers report keeping limited funds in their accounts and making withdrawals after wins, these options could be available and automated.

Increasing consumer protection tool use will not be the only solution to preventing gambling problems. A Swedish longitudinal study found that unregulated Internet gambling operators had the highest proportion of problem gamblers among their customers compared to the regulated market (Svensson & Romild, 2011). Similarly, Australian research indicates that gamblers using unregulated sites are more likely to experience problems (Gainsbury, Abarbanel, & Blaszczynski, 2018; Gainsbury, Russell, Hing, & Blaszczynski, 2018). Policies and practices that assist gamblers to monitor and limit their gambling expenditure across sites are necessary. Recent involvement of financial institutions in this area through enabling customers to block gambling from their accounts may be one strategy (Swanton, Gainsbury, & Blaszczynski, 2019). This is consistent with strategies already reported by participants who check bank statements as an adherence strategy. Continued efforts are needed to develop and evaluate consumer protection and play management strategies that are perceived as relevant and useful by a broad segment of Internet gamblers and are effective in facilitating gambling within affordable levels.

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