A brief intervention to support gamblers to stick to their limits in EGM venues: an exploratory study

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Our vision: A Victoria free from gambling-related harm

A brief intervention to support gamblers to stick to their limits in EGM venues: an exploratory study

Simone Rodda
Kathleen Bagot
Victoria Manning
Dan Lubman

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Executive summary

Background

- Australia hosts the most gaming machines per capita and around 20% of the world's modern electronic gaming machines (EGMs) are distributed across hotels, clubs and casinos (Productivity Commission, 2010). This gambling type generates around half of all money wagered in Australia, equating to approximately $12 billion expenditure in 2015/16.

- Low and moderate risk gambling contributes to almost 85% of gambling-related harm in Australia and EGMs are the source of most gambling-related harm

- In recognition of the harms associated with gambling, a number of industry programs have been implemented within EGM venues. For example, host responsibility (referred to as responsible gambling) activities may include voluntary self-exclusion programs, removal of automatic teller machines, venue staff training to identify problem gambling behaviours, machine modifications (e.g., pop up messaging) as well as trials of voluntary pre-commitment technology.

- In a review of the host responsibility literature, Ladouceur et al. (2017) concluded that most initiatives were not theoretically based, were under-utilised (due to voluntary uptake) and evidence on the interventions' efficacy or effectiveness was limited.

- While gamblers report using a wide range of strategies to limit gambling, it is not clear to what extent such strategies are successfully implemented, and in turn, if the strategies are effective. As well as identifying successful strategies, research also needs to identify the best ways to ensure their effective deployment.

- There is very limited research examining the reasons for strategy failure. To date, research has focused on lapse and relapse in people with problem gambling rather than a failure in strategy implementation. Although most gamblers set gambling limits, there are multiple occasions where these limits are exceeded (a 'bust').

- Action and coping planning has demonstrated efficacy to support behaviour change for a range of health conditions but has not previously been applied to gambling. The overall aim of this exploratory study was to investigate the feasibility and impact of an action and coping planning intervention deployed in gambling venues to improve adherence to goal intentions.

- To do this we (a) examined the feasibility of an in-venue intervention (b) examined its impact 30-days later (c) determined the uptake of strategies in venue and over a 30-day period (d) identified the strategies recommended by gamblers to use or avoid (e) examined the reasons for exceeding limits and (f) examined attitudes towards Australian low-risk gambling guidelines.

Approach

- This research was a longitudinal cohort study delivering a randomised controlled trial in gambling venues and two follow-up evaluations.

- Access to 11 venues was negotiated with each organisation management as well as venue staff. Gamblers who were intending to set a monetary limit on EGMs (n=184) were recruited in venues and administered an intervention prior to gambling.

- The intervention was one 20-minute session of action and coping planning which was facilitated by an interviewer. The control group was an assessment alone.

- The action and coping planning intervention was administered prior to entering the gaming room. It involved participants developing an action plan for sticking to limits (how, what, when). Participants then identified possible obstacles for that plan (e.g., run out of money) and then a coping plan to address possible obstacles. Coping plans were written in an *'if.. then'* format (e.g., if I run out of money, then I will leave the venue).

- Data from both the intervention and control group were assessed in order to understand the strategies utilised, recommended or avoided by gamblers within EGM venues.

- Post-gambling evaluations were conducted in the gambling venue at the conclusion of the episode of gambling. 30-day follow-up evaluation was conducted via telephone or accessible as an online survey.

- The main outcome measures were adherence to goal intentions regarding gambling spend during the gambling session and adherence to intentions at 30-days post-intervention (measured by the Time Line Follow-Back).

- Measures included demographics, readiness, intentions for spending, time-line follow-back, Problem Gambling Severity Index (PGSI), maintenance and recovery self-efficacy and attitudes towards low-risk gambling guidelines. Participants were also administered the 30-item Gambling In-venue Strategies Checklist (GISC) which measured strategies to limit time or money spent gambling, change the manner of gambling and harm reduction.

Results

- The intervention was feasible in terms of recruitment and willingness of gamblers to engage in a pre-gambling intervention. In total, 360 individuals entering the venue were approached to participate, with 261 screened for eligibility. There were 184 gamblers who completed the pre- and 155 completed the post-gambling survey.

- In terms of impact, the intervention did not improve goal intentions at either follow-up assessment across all EGM gamblers. On average, all gamblers spent similar or less than what they intended (median ratios of 100). Overall, fewer moderate risk/problem gamblers (MR/PG) (74%) stuck to their limits than No problem/Low Risk (NP/LR) gamblers (91%).

- Most gamblers enacted strategies to limit their gambling prior to entering the venue. They were frequently unable to develop a coping plan (or back-up plan) as they believed nothing would get in the way of enacting their strategy. PGSI was positively correlated with the use of an in-venue strategy meaning fewer MR/PG enacted strategies in advance of gambling.

- When examined by PGSI sub-samples, gambling intervention participants intended to spend significantly less in the 30 days after the intervention compared to the amount spent in the 30

days prior to the intervention. This reduction was not found for the control group, where they intended to spend statistically similar amounts in the 30 day pre- and post-intervention

- Gamblers used an average of 14 different behavioural strategies over a 30-day period. In this 30-day period, two strategies were used by 90% of gamblers: use only the money brought into the venue and only play low denomination machines.

- Gamblers most frequently recommended strategies for limiting gambling were to bring in the exact amount of cash (20%) followed by not taking cards (15%) and setting a money limit (9%).

- The average amount of money spent on a bust (i.e., a single episode of gambling where limit was exceeded) ranged from $20 to $1500 (M=$446, SD=$402).

- Busts were related to the amount of money spent in the past 30 days, greater gambling harms and greater gambling severity. Reasons for busts included both distal (occurring before attending the venue, such as negative affect, lapse in intentions to set a limit, needing to win money) and proximal (in-venue reasons, such as chasing losses, wins or spins, social facilitation and losing money too quickly) factors.

- Qualitative evaluation of the GISC indicated strategies were more complex and nuanced than previously reported. Gamblers infrequently enacted strategies related to the manner of gambling (e.g., using low denomination machines) and more frequently used strategies to reduce time and money gambling (e.g., plan gambling spend in advance) and to a lesser extent harm reduction (e.g., avoid borrowing money for gambling).

- Over a 12 months period 47/104 (45%) gamblers reported having a bust whereby they exceeded their limit in a single episode of gambling. Self-reported busts ranged from $20 to $1500 (M=$446, SD=$402).

- Gamblers recommended both distal (e.g., avoid gambling altogether, leave cards or cash at home, set a time or money limit) and proximal (e.g., walk away when losing and change the manner of gambling) bust-prevention strategies.

- The reason monetary limits were not breached is due in part to the planned amount of money spent in a single session of gambling. Compared with Australian low-risk gambling guidelines around half of the sample set limits in excess of these guidelines. There was general agreement however that no more than $40 a week on gambling was about right. However, those with MR/PG indicated that the recommended limit was somewhat low.

Conclusions

- A single session, action and coping planning intervention is a feasible intervention for gamblers. This was indicated by the rate of recruitment, willingness to engage in the intervention and willingness to engage in follow-up.

- Gamblers frequently pre-selected at least one strategy before coming into the gambling venue (e.g., *planning in advance the exact amount of money I would spend today*). This meant that around half of the action plans were documenting what had already been implemented.

- Gamblers received facilitation in terms of completing coping plans; however approximately one-third were not able to develop a coping plan. This was because many gamblers could not

envisage any obstacles to the implementation of the strategy (i.e., no perceived gap between intention and behaviour).

- There was no significant difference between the intervention and control groups whereby, on average, all participants stuck to their goal intention or did better than intended.

- Engaging in the intervention did make a difference to goal intentions over the next 30 days, whereby MR/PG in the intervention group intended to spend less than they had in the previous 30-days.

- This study indicates gamblers use a broad range of strategies and that they use these strategies most of the time when gambling in an EGM venue. This knowledge can be used to further support gamblers in minimising harms.

- As busts are relative to a priori limits, gamblers at any level of gambling severity can experience a bust. Repeated busts may be an indicator of loss of control and a progression towards problem gambling. Interventions need to focus on factors that mitigate the risk of a bust (e.g., pre-commitment) and those that assist gamblers to stick to their limits all of the time.

- Even though most gamblers, most of the time stick to their limits, our research indicated these limits are frequently higher than low-risk gambling guidelines.

Background

Problem gambling (termed Gambling Disorder in the DSM-5; (American Psychiatric Association, 2013) is characterised by a loss of control and repeated attempts to reduce or limit gambling, resulting in a range of adverse consequences (Neal, Delfabbro, & O'Neil, 2005). Similar to other addictions, Problem Gambling (PG) has periods of relapse, resulting in a return to excessive or uncontrolled gambling (Blaszczynski, McConaghy, & Frankova, 1991; Hodgins & el-Guebaly, 2004; Oakes et al., 2012a, 2012b). In Australia, prevalence studies estimate around 0.6% of the population has problem gambling (based on a score of 8+ on the PGSI; (Ferris & Wynne, 2001) with a further 4 to 11% being at low or moderate risk (Davidson & Rodgers, 2010; Hare, 2015; Sproston, Hing, & Palankay, 2012). Low and moderate risk gambling contributes to almost 85% of gambling-related harm in Australia and New Zealand (Browne et al., 2017; Browne et al., 2016; Langham et al., 2015) and most of this expenditure is on electronic gaming machines (EGMs).

EGM venues have been the subject of extensive research for more than 20 years. It is now well established that the density and location of EGM venues is associated with increased uptake of gambling and associated gambling problems (Young, Markham, & Doran, 2012a, 2012b). In Australia, EGM venues are reported to be attractive to gamblers (especially women, shift-workers and older people) as they provide a sense of safety, early and late opening hours and reduced cost meals and drinks (Hing & Nisbet, 2010; Thomas, Sullivan, & Allen, 2009b; Trevorrow & Moore, 1998). Australian gaming venues also play host to the modern gaming machines that allow rapid play (a bet every six seconds) with losses of up to AUD$1200 per hour (Productivity Commission, 2010). This continuous form of gambling has been linked to a loss of control, the development of gambling problems and exceeding personal limits (Barratt, Livingston, Matthews, & Clemens, 2014; Breen & Zimmerman, 2002).

Acknowledging public concerns that gambling should be provided in a safe environment, operators, governments and gambling regulators in Australia and internationally have introduced recommendations and/or legislated changes to reduce harms from gambling (Harris & Griffiths, 2017; Ladouceur, Blaszczynski, & Lalande, 2012; Ladouceur, Shaffer, Blaszczynski, & Shaffer, 2017). Some changes have focused on physical aspects of gaming venues, including the removal of automatic teller machines, smoking bans, placement of clocks on gaming machines and restriction of trading hours. For the most part however, initiatives have focused on educating gamblers of the potential risks associated with losing control alongside messaging that encourages gamblers to engage in 'responsible gambling,' to minimise harm and to stay in control (Livingstone, Rintoul, & Francis, 2014; Rintoul, Deblaquiere, & Thomas, 2017). The resultant action by gamblers is to identify and implement their own personal strategies in order to avoid harm, stay in control or where necessary regain control when gambling in an EGM venue. However, there have been few experimental studies in gambling venues which seek to assist gamblers to stay in control.

To further explore this issue, we first draw on three distinct literatures: responsible gambling strategies (stay in control), protective behavioural strategies (reduce use and/or avoid harm) and behaviour change strategies (regain control). Second we describe the implementation literature on in-venue strategies and propose methods to improve that implementation. Third, we explore the possible reasons for poor implementation while drawing on the relapse literature. This section of the report will then conclude with a description of the current study's aims and research questions.

Responsible Gambling (RG) Strategies

A first line of research investigating how gamblers can stay in control in EGM venues involves gambling operators, regulators and government-initiated "responsible gambling" (RG) programs. RG is the gambling industry's response to government and community pressure to protect gamblers from harm and offer a safe gambling environment (Blaszczynski et al., 2011). A range of top down approaches are proposed that focus on the gambling environment (e.g., machine modifications, staff training) and the gambler (i.e., education campaigns to instruct gamblers on how to "maintain their gambling expenditure to affordable limits", p.225) (Ladouceur et al., 2017). A systematic review of 29 studies (Ladouceur et al., 2017) reported that the evidence base for RG is focused on five themes: identifying behavioural characteristics of gamblers that predict later problem gambling; self-exclusion (i.e., avoiding venues altogether); venue staff interventions (e.g., training in order to approach gamblers experiencing problems); pre-commitment (i.e., setting gambling limits); and machine modifications such as in-game messaging. For the most part, the only evidence to date for RG measures involve avoiding gambling altogether (i.e., self-exclusion) or venue modifications that focus on identifying problem gambling (rather than supporting limit setting). In terms of strategies for sticking to limits in venues, although voluntary pre-commitment could be implemented by gamblers (as opposed to a modification to the environment), of the five studies conducted (Ladouceur et al., 2017), none occurred in EGM venues (all targeted internet gambling).

Over recent years, RG has expanded to focus more on preventing problem gambling rather than its original purpose of assisting all gamblers to stick to their limits. A study by Hing, Sproston, Tran, and Russell (2017) examined the uptake of 11 RG messages with 860 gamblers, the majority of whom were recruited from EGM venues. The RG messages were sourced from a gambling prevention and treatment agency website (Victorian Responsible Gambling Foundation). They included four items on advanced planning (i.e., *gamble with what you can afford to lose, set a money limit, set a time limit, leave cards at home*), five harm minimisation (e.g., *never chase losses, take frequent breaks, don't gamble when you are depressed or upset, avoid alcohol, don't think of gambling as a way of winning money*) and two general strategies (e.g., *balance gambling with other activities, gamble only once a week*). Participants were asked to report whether they had ever used each strategy as a means of *staying in control of gambling*. Non-problem and low and moderate risk gamblers used more strategies than problem gamblers (PGs). The types of strategies endorsed also differed: the most frequent strategy used by non-PGs was *only gamble with what you can afford to lose* and *never chase your losses*. PGs most frequently endorsed *leaving bank or cash cards at home.* This study indicates RG messaging on staying in control may resonate with gamblers. For example, there was an average uptake of 4.4 strategies and almost all gamblers (regardless of their level of risk) reported implementing at least one strategy. Limitations of this study however, included the types of RG messages tested (i.e., messages were sourced from one website), the subset of items tested (i.e., 11 strategies related to planning and harm minimisation) and the response time window (i.e., *ever* used any of the 11 strategies). The retrospective approach used is also limited because of recall bias (i.e., the average age was 50 years which means gambling may have occurred over a long period of time). Further, when lifetime reporting is deployed, it is not possible to know which strategies are used for what level of risk (e.g., non-PGs may have previously been PGs and vice versa).

Protective Behavioural Strategies (PBS)

A second line of research investigating in-venue strategies refers to them as Protective Behavioural Strategies (PBS). PBS were first proposed in studies aiming to reduce college students' alcohol consumption, intoxication or alcohol-related harms (Pearson, 2013). Broadly, these drinking control strategies aim to limit or stop alcohol over-consumption (e.g., leave the bar at a certain time, decide how much to drink in advance), change the manner of drinking through avoidance of behaviours associated with faster drinking (e.g., mixing drinks, drinking games) and engagement in behaviours to minimise harm which are not be directly related to alcohol consumption (e.g., have a designated driver, never leave a drink unattended, have a friend let you know when you have had enough) (Pearson, 2013). PBS for gambling has only recently emerged and focuses on minimising gambling harm through the implementation of a set of strategies before or during gambling. Compared with RG, which are venue-initiated strategies taking a top-down approach to harm minimisation (Blaszczynski et al., 2011), PBS are strategies initiated by the gambler which are more of a bottom-up approach to avoid or reduce gambling-related harm.

The uptake of PBS has been examined with the 16-item Gambling Protective Behaviour Scale (GPBS) (Lostutter, Lewis, Cronce, Neighbors, & Larimer, 2014). The GPBS contains two factors: harm reduction strategies (e.g., *leave the venue before running out of money, avoid chasing, avoid borrowing, plan gambling so it won't interfere with other priorities, avoid cash machine, keep track of money while gambling, set a limit and don't break it, keep track of time and control the size of bets*), and avoidance strategies (e.g., *have friend let me know when to stop, limit days a week gambling, avoid gambling when bored, depressed, set time limit in advance, avoid carrying cash cards*). Participants are not provided any prompts as to the purpose of strategies (i.e., not asked whether strategies are used to limit gambling or stay in control) and are instead asked to rate the frequency of strategy use (0=never to 4= always) over a six month period. The most frequently used strategy was *not chasing losses* which, on average, was used almost always (M=3.4, SD=1.2). Lostutter et al. (2014) reported a negative relationship between the use of strategies, and gambling expenditure and severity, whereby more frequent use of strategies was associated with less money spent gambling and lower severity of gambling. The research by Lostutter et al. (2014) is important as it extends the well-established use of PBS for alcohol and establishes the use of PBS by gamblers. Where PBS were developed to limit or reduce excessive drinking and related harms, PBS for gambling targets avoiding the harms from *problem gambling* (not gambling per se). As such, there are limited items related to the manner of gambling (e.g., using low denomination machines, not changing the bet if winning or losing). Similar to RG research, the GPBS also suffers from issues associated with recall bias because it is administered over a six month period. Further, to our knowledge, the GPBS items have not been administered to any samples beyond college students.

Behaviour Change Strategies

Behaviour Change Strategies are cognitive and/or behavioural actions gamblers take to reduce or regain control over their gambling (Rodda et al., 2018a; Rodda et al., 2016a). These are different to RG and PBS in that they are used to reduce gambling behaviours (e.g., time or money spent) so as to return to a level perceived to be acceptable to the individual. Similar to RG and PBS, behaviour change strategies are used both in the gambling venue (e.g., referred to as consumption control), prior to gambling (e.g., planning time and money spent gambling), and are also used as a way to avoid gambling altogether (e.g., avoid venues, substitute gambling for other activities) (Knaebe, Rodda, Hodgins, & Lubman, 2018; Rodda et al., 2018a; Rodda et al., 2016a).

Two studies in particular have included in-venue strategies within lists of behaviour change strategies. Moore, Thomas, Kyrios, and Bates (2012) administered a checklist of 20 strategies to 303 gamblers (21% problem gamblers) which contained 11 broad behaviour change strategies (e.g., avoidance of venues, urge management, financial management, professional help, social support, focus on alternatives to gambling) and nine strategies specific to in-venue gambling (e.g., set time or money limits, avoid gambling alone, track spending, limit alcohol). Participants were asked to rate the frequency of strategy use (1=never, 4=done often) for limiting gambling. Moore et al. reported PGs used more strategies than non-PGs. which reflects the high number of change strategy items in the measure (i.e., strategies that would be used by someone to reduce their gambling rather than limit it such as self-exclusion or avoidance). The scale prompt was more similar to PBS (focus on limiting) than change strategies (focus on reduction). This highlights the importance of excluding broad behaviour change strategies when specifically examining strategies used in venues to stick to limits.

Rodda et al. (2018a) administered a checklist of 15 categories of strategies (comprising 99 items) to 489 at risk or PGs (including 333 PGs). Participants were asked to rate the helpfulness of strategies to limit or reduce gambling (1=not very helpful, 4=very helpful). This check-list included 12 strategies specifically associated with in-venue gambling (referred to as consumption control). The most frequently endorsed items were *planning ahead and limiting the amount of cash carried* (84%), *avoid chasing losses* (83%) and *planning ahead and leaving credit cards and non-essential cash at home* (80%). Approximately 95% of the sample (inclusive of at risk and PG) reported the use of at least one consumption control strategy and there was no difference in the helpfulness of this strategy by level of gambling severity. The studies by Moore et al. (2012) and Rodda et al. (2018) identified multiple strategies that had not been previously examined in the RG or PBS literature (e.g., stick with my strategy – don't increase or change the bet, cash out winnings, give winnings to someone else). These two studies are important because they indicate that at risk and PGs use in-venue strategies as a means of regaining control over gambling (not just as a means of minimising harm). The studies are limited however, in the number and types of strategies tested and also recall bias (i.e., both studies tested lifetime use of strategies).

Despite the different foci (i.e., stay in control, limit harm and reduce gambling) of these three literatures (i.e., PBS, RG and behaviour change strategies, respectively), many of the in-venue strategies identified in these studies overlap. However, previous research studies have found that non-problem gamblers utilise a greater and fewer number of strategies than PGs (depending on the study), with this discrepancy appearing to relate to the target behaviour and how measures are presented to participants. For instance, in studies that have asked gamblers to rate strategies for staying in control, these are endorsed by a greater proportion of non-problem gamblers (Hing et al., 2017; Lostutter et al., 2014). In studies that ask gamblers to rate the helpfulness of strategies to reduce gambling, these are endorsed more frequently by problem gamblers (Moore et al., 2012; Rodda et al., 2018a). A way to address this issue and move the field forward is to focus on a common aim of the three different literatures – sticking to limits in gambling venues. Sticking to limits has the advantage of moving beyond the reason for setting the limit (to stay in control or to reduce gambling) and narrows the scope so that strategies are specific to gambling behaviours (i.e., excludes broader behaviour change strategies such as avoiding gambling).

Strategy implementation

While gamblers report using a wide range of strategies to limit gambling, it is not clear to what extent specific strategies are successfully implemented, and in turn, if the strategies are effective. While there has been a great deal of work examining implementation failure across other health

behaviours (Gollwitzer & Sheeran, 2006), there have been just two studies involving problem gamblers. Rodda et al. (2018a) reported that whilst 85% of strategies had been used by more than half of the gamblers sampled, the average rating was only "a little helpful" to "moderately helpful" in sticking to gambling limits.

Similarly, Rodda et al. (2016a) analysis of 149 online counselling transcripts identified that behaviour change strategies to limit or reduce gambling were frequently attempted but prematurely abandoned or identified as unhelpful. This outcome was because of a mismatch between need and strategy selection (e.g., selecting a lifestyle change strategy to manage urges, rather than an urge management strategy), poor or unplanned transitions between strategies (i.e., changing from one strategy to another haphazardly), as well as a failure to fully plan or review the implementation or maintenance of strategies. Thus, as well as identifying successful strategies, research also needs to identify the best ways to ensure their effective deployment.

The reasons for strategy failure

There is very limited research examining the reasons for strategy failure. To date, research has focused on lapse and relapse in people with problem gambling rather than a failure in strategy implementation. Relapse can be the result of a lapse (i.e., a single incident of uncontrolled or excessive gambling) and is defined as a return to gambling following a period of abstinence or controlled gambling (Marlatt & Donovan, 2005). In a recent large scale 5-year prospective Canadian study, 25% of gamblers were found to relapse in the year following reported recovery, with 30% relapsing within 2 years and 40% within 3 years (el-Guebaly et al., 2015b).

Studies across the addiction field identify that there are both proximal and distal factors implicated in how an individual responds to high risk situations that influence the risk of relapse (Blaszczynski et al., 1991; Hodgins & el-Guebaly, 2004; Marlatt & Donovan, 2005; Marlatt & George, 1984; Oakes et al., 2012a, 2012b). Proximal factors are immediate precipitants that increase the probability of a lapse and include the individual's current level of coping skills (e.g., ability to manage negative affect), outcome expectancies (influenced by erroneous cognitions about winning) and the abstinence violation effect whereby established behavior change is abandoned following a lapse (Marlatt & George, 1984). Distal factors are stable predispositions that appear to increase an individual's vulnerability to lapse and include lifestyle factors (e.g., focus on gambling at the exclusion of other activities) and urges and cravings (Blaszczynski et al., 1991; Hodgins & el-Guebaly, 2004; Marlatt & Donovan, 2005; Oakes et al., 2012a, 2012b). Minimising the risk of relapse is contingent on an individual determining that there is a problem and forming an intention to change their behavior (e.g., limit or reduce gambling), as well as devising and implementing a plan or strategy to enact this change (e.g., seek treatment, use a behavior change strategy such as avoid gambling). To this end, research investigating lapse and relapse for problem gambling has almost exclusively involved gamblers who are undertaking treatment (Blaszczynski et al., 1991; Hodgins & el-Guebaly, 2004; Oakes et al., 2012a, 2012b; Smith et al., 2015). This focus has been at the exclusion of understanding whether those at low or moderate risk gambling also experience episodes of excessive or uncontrolled gambling.

Although there has been a focus on those with PG, lower risk gamblers also report feeling guilty about their gambling, betting more than they can afford, making multiple attempts to reduce their gambling and gambling more than intended (Cowlishaw et al., 2018). These symptoms are all associated with the outcome of intentions to set a personal monetary limit for gambling and whether or not the limit was breached (e.g., gambling more than intended). Research suggests that most no or low risk gamblers do set monetary limits in advance of gambling (Lalande & Ladouceur,

2011; Nower & Blaszczynski, 2010; Rodda, Bagot, Manning, & Lubman, 2018b) and they may do this more frequently than those with problem gambling (Blaszczynski, Ladouceur, & Moodie, 2008; Nower & Blaszczynski, 2010). It also appears that gamblers with more severe PG may exceed their limits more frequently than those at lower severity. For example, Lalande and Ladouceur (2011) interviewed 82 gamblers and reported those with greater gambling severity as defined by the DSM-IV set larger loss limits than non-problem gamblers, kept gambling until all resources were spent and exceeded their limits more frequently. These studies also reported gamblers stuck to their monetary limits "most of the time" or "very often" suggesting that some of the time limits are not set or they are breached. It is unclear whether all gamblers have at some time exceeded their limits (not just problem gamblers), and where limits are exceeded, whether the triggers are similar to those reported as pre-cursors to lapse or relapse (e.g. urges and cravings, negative affect, erroneous cognitions).

To date, research investigating the equivalence of a lapse for those who are not attempting to change their gambling has been limited to just a few studies investigating exceeding monetary limits (Lalande & Ladouceur, 2011; Nower & Blaszczynski, 2010). In particular, previous research has not specifically looked at gamblers across the continuum of severity who have exceeded their limits (colloquially called a 'bust'), and it has also not explored whether these busts are severe or disruptive. The exact meaning and definition of having a bust or exceeding a limit is still in its infancy. There is now a common language across addictive behaviors for lapse and relapse (i.e., engaging in a behaviour after a period of abstinence). This consistency has been made possible through clinical observations and extensive research in gambling and the broader addictions (Marlatt & Donovan, 2005; Marlatt & George, 1984). Busts appears to be associated with a behavioral lapse or relapse which according to self-regulation theory can happen to any gambler (i.e., no problem through to PG). According to this theory, we each have our own set of personal standards, values and goals that we consciously (or unconsciously) use to regulate behavior (Baumeister & Heatherton, 1996). We know when behavior is out of alignment because it is abnormal or a deviation from what normally happens. In terms of limit setting, it is likely that most gamblers bet around the same amount each visit and that a bust represents a significant departure from normal behavior. In the current study we define a bust as gambling more than intended in a single session that may or may not occur during a gambling lapse or relapse.

Understanding busts is important as harm from gambling comes not just from repeated gambling but from crisis events (such as a single session of excessive gambling) (Langham et al., 2015). Recent longitudinal research indicates gamblers frequently transition into and out of levels of gambling risk (el-Guebaly et al., 2015a). Most studies investigating transitions have focused on life events and comorbidities (el-Guebaly et al., 2015a; Reith & Dobbie, 2013) rather than specific gambling events such as a bust. Understanding whether busts occur across the gambling continuum and then how gamblers respond to these can contribute towards our understanding of these transitions. If busts are frequent across all levels of gambling risk, then interventions may be appropriate that reduce the risk of such an event.

Action and coping planning

One approach that could be used to improve the implementation of gambling behaviour change strategies is through action and coping planning. Action and coping planning are theorised to bridge the gap between intentions and behaviour within the Theory of Planned Behaviour (Gollwitzer, 1999; Sniehotta, Scholz, & Schwarzer, 2005a; Sniehotta, Schwarzer, Scholz, & Schüz, 2005b). According to this approach, linking a goal intention (such as 'I want to stick to my gambling

limits') with an action plan specifying how to respond (i.e., when, where and how) can assist in closing the gap between intentions and behaviour (Sniehotta et al., 2005b).

Across broader health areas, the use of action and coping planning has demonstrated effectiveness in changing an individual's behaviour. This includes smoking cessation (de Hoog et al., 2016), increasing physical activity (Carraro & Gaudreau, 2013; Sniehotta et al., 2005a), salt reduction (Agondi, Gallani, Cornélio, & Rodrigues, 2012) as well as increased fruit and vegetable consumption (van Osch et al., 2009). Multiple studies have reported action planning is effective in reducing binge drinking in student populations (Arden & Armitage, 2012; Hagger et al., 2012; Murgraff, White, & Phillips, 1996; Norman & Wrona-Clarke, 2016) as well as alcohol reduction in community samples (Armitage, 2009; Armitage & Arden, 2012).

The theorised proposal that underlies the effectiveness of action and coping planning bridging the gap between an individual's intentions and subsequent behaviour is because decisions are made in advance and not in the heat of the moment. The focus is on the development of specific plans to support a specific goal intention (e.g., stick to $20 limit). Action planning details when to undertake a behaviour (e.g., when considering gambling), where (e.g., in a gambling venue), and how (e.g., set a timer so that I stay only 20 minutes). Establishing when, where and how in advance means that individual can act even without conscious intent because they have already set in motion a set of actions when in that situation. By selecting where to implement the action plan, for example, when the individual arrives at the gambling venue, this prompts the action plan already devised and thought through to be activated. Sniehotta et al. (2005b) report action planning supports acting as intended and faster initiation of goal consistent actions.

Research indicates that action planning is strengthened when accompanied by a coping plan (or back-up plan) that pre-empts potential obstacles to the action plan and identifies opportunities to act (i.e., if X happens, then I will do Y) (Hagger & Luszczynska, 2014). Knowing exactly what to do when specific situations arise has been shown to reduce ego-depletion (i.e., willpower) (Webb & Sheeran, 2003) and makes it easier to respond automatically in the heat of the moment (Gollwitzer & Brandstätter, 1997). A systematic review of coping planning for broad health-related behaviour change identified 11 RCTs (Kwasnicka, Presseau, White, & Sniehotta, 2013). These studies examined coping planning for increasing physical activity, moderating binge drinking, preventing smoking relapse, and reducing alcohol consumption. This review reported coping plans were either participant derived (i.e., entirely developed from participants) or guided by the researcher through the provision of pre-specified barriers and responses (referred to as volitional help sheets). The review also reported variability in the development of participant initiated plans and suggested outcomes were improved when participants had support or guidance to develop their plans. Overall, the review reported that the combination of action and coping planning produced better outcomes than action planning alone.

Action and coping planning have demonstrated efficacy to support behaviour change for a range of health conditions but have not previously been applied to gambling. Action and coping planning may be especially important in a gambling environment that facilitates loss of control and heightens physiological and emotional arousal through variable ratio schedules of reinforcement, alcohol, sensory distortions (e.g., artificial lighting), and risk and uncertainty around winning and losing money (Dowling, Smith, & Thomas, 2005; Livingstone et al., 2014).

Rationale, aims and research questions

Action and coping planning have demonstrated efficacy to support behaviour change for a range of health conditions but have not previously been applied to gambling. Evidence suggests gamblers may already have strategies for sticking to limits. However, the current evidence base is lacking in terms of the detail and breadth of these strategies when they are used by gamblers at varying levels of gambling severity. Furthermore, there is very limited evidence on how gamblers across the severity continuum experience implementation failure of strategies whereby they exceed their limits. There is some work already on the types of limits set by gamblers. However, to date no Australian study has compared current gambling behaviours in a venue or over 30 days to the Australian low-risk gambling guidelines (Dowling et al., 2017). These empirically derived guidelines identified the amount of expenditure across a range of gambling products that is unlikely to be associated with current or future harm. This is important as it may be that gamblers are able to stick to their limits but that their limits are higher than recommended.

The activities undertaken as part of this exploratory study are to examine the feasibility of an action and coping planning brief intervention in Victorian EGM venues. To do this the study will undertake the following activities:

Activity 1: Deploy and examine the feasibility of a brief intervention in Victorian gambling venues.

Activity 2: Undertake evaluation of the intervention post gambling and 30-days later.

Activity 3: Determine the uptake of strategies to limit gambling (by level of risk) in venues and over a 30-day period.

Activity 4: Undertake a qualitative evaluation of the EGM gambling check-list

Activity 5: Understand the proximal and distal prevention strategies for reducing the risk of a bust in gambling venues (i.e., why busts occur and how to avoid them)

Activity 6: Examine attitudes and adherence towards Australian low-risk gambling guidelines.

Our specific aims of this exploratory study were to determine the feasibility of deploying this type of intervention in a gambling venue and determine the impact of such an intervention on sticking to limits in the venue and then over a subsequent 30-day period. The specific research questions include:

1. Can an action and coping planning intervention be deployed within a gambling venue? Can this intervention increase adherence to goal intentions regarding gambling spend during the gambling session?

2. Does a brief intervention assist gamblers to maintain adherence to their intentions at 30-days post-intervention? What strategies do people use to stick to their EGM gambling limits? Is there a difference in the level of intervention impact by the level of gambling severity (i.e., NP/LR and MR/PG)?

3. What strategies are helpful? Does the frequency of strategy use differ according to level of problem gambling severity?

4. Are there additional strategies used by gamblers which are not reported in the literature? What do NP/LR and MR/PG recommend adopting or avoiding when gambling on EGMs?

5. How frequently do gamblers have a bust and do they occur across the continuum of gambling severity? What triggers a bust? What distal and proximal factors are associated with a bust? What do gamblers recommend in order to avoid a bust?

6. What are EGM gamblers' attitudes towards low-risk gambling guidelines? Are intentions and actual expenditure for different levels of gambling severity within these guidelines?

Approach

Research design

This study was a 2-group parallel-block randomised controlled trial, whereby participants received either one session of assessment plus action and coping planning (intervention) or an assessment alone (control). All participants were followed up post-gambling and then 30-days later. The study was approved by the Eastern Health Human Research Ethics Committee (reference E14-2017).

Inclusion criteria were: (i) planning to gamble on a poker machine in the next hour; (ii) planning to set a limit on gambling during the session and (iii) gambled in the past 30 days. Exclusion criteria were (i) not able to read or write in English language and (ii) identified as intoxicated (i.e., noticeable loss of coordination and other physical signs such as swaying or staggering) or a decrease in alertness (e.g., difficulty in paying attention).

Participants

Participant flow through this study is presented in Figure 1. In total, 360 participants were asked to participate in the study and 261 were screened for eligibility. Seventy-seven participants were excluded because they did not meet the inclusion criteria, leaving 184 who agreed to be randomised. One hundred and sixty participants (87%) attended the post-gambling assessment, comprising 77 in the intervention arm (88% of pre-gambling) and 83 in the control arm (86% of pre-gambling). At the 30-day follow-up evaluation, there were 104 participants (57% [104/184] of the randomised sample, 65% [104/160] of those who completed post-session assessment).

Action and coping planning intervention

Assessment only control

After completing a series of demographic questions, participants were asked to describe their intended actions and readiness to use strategies to limit their gambling spending that day. Participants were prompted to list all the strategies they would use when in the venue. Participants also indicated which of the reported strategies would likely be the most helpful in sticking to limits and reported their intended amount of money to be spent that day. The assessment lasted approximately five minutes.

Action planning + coping planning intervention

In addition to the assessment, gamblers in the intervention group received a brief intervention of action planning and coping planning tailored to each individual. The intervention condition was a 15-minute interview with facilitated action planning and coping planning. In conjunction with the interviewer, the strategy that participants identified as the most helpful in sticking to their limits was then transformed into an action plan (i.e., *how, what, and when* they would implement their strategy). Barriers (or obstacles) to implementing the action plan were then identified and potential ways of addressing the barriers identified. One of these barriers was selected for development of a coping plan which involved construction of an *if... then...* statement (e.g., *If* I worry someone might take my machine when I have a break, *then* I will remind myself that the break is more important than staying at the same pokie machine). Action and coping plans were entirely self-determined

and generated by the participant. Participants recorded their action plan and coping plan on a study postcard. They also signed and dated the postcard indicating that they were fully committed to following the specified action plan and coping plan at this venue. Participants were reminded to keep the postcard and bring it back to the interviewer after gambling. Post-gambling, both groups indicated whether they had stuck to their limits and the amount spent in that session.
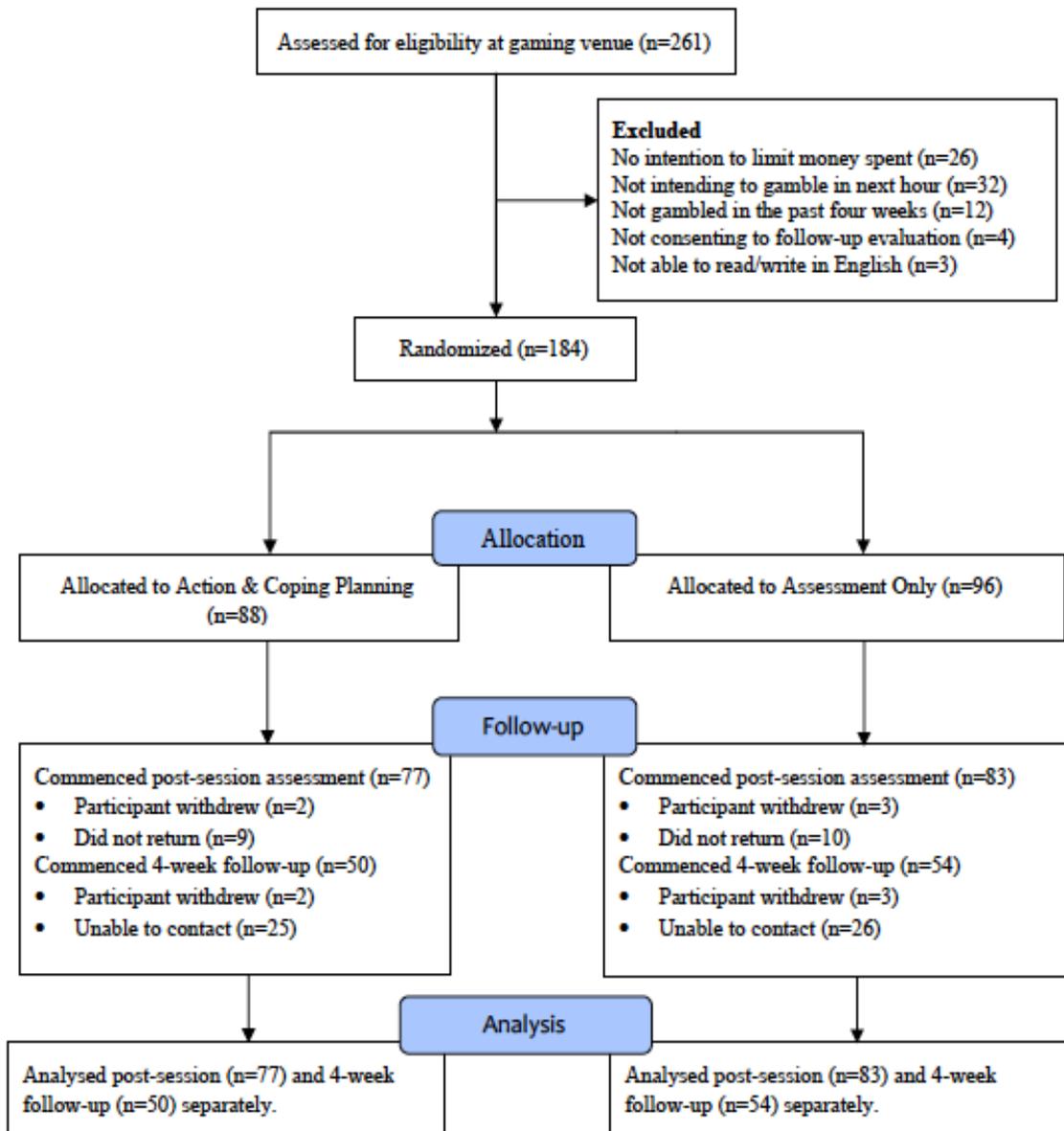
Figure 1. Participant flow

Measures

- Table 1 shows the schedule of administration of screening tools. Longer screens that were 12-month measures such as the PGSI and the Short Gambling Harms Scale were administered online at 30-day evaluation. This was because of time restrictions in the venue and the necessity of restricting interaction to 20 minutes pre-gambling and 5 minutes post gambling.

Table 1. Timing of administration of screening tools

Screen	Baseline	Post-session	30-day evaluation
Demographics	X		
Willing, ready, confidence	X	X	X
Expenditure (single session intention and actual and intended for the next 30 days)	X	X	
Time line follow back		X	X
Gambling In-venue Checklist (intended and over past 30 days)	X		X
Problem gambling severity index			X
Short gambling harms Scale			X
Qualitative (recommend strategy, exceeding of limits)			X
Attitudes and adherence to low-risk guidelines			X

- Demographics included age, gender, education, employment and living arrangements.

- Readiness to use strategies was measured by four readiness rulers (Miller & Rollnick, 2002): willingness, readiness and confidence to stick to strategies as well as confidence to start using the strategy again should a barrier arise. Rated on a scale of 1-10, these rulers have been previously administered to gamblers in terms of being ready, willing and able to change gambling (Rodda, Lubman, Iyer, Gao, & Dowling, 2015).

- Expenditure was measured in four ways. The first was intended spend in the venue (i.e., *How much money are you intending to spend today?*). The second was actual spend in the venue (i.e., *How much did you spend today?).* The third was "How much money do you intend to spend on the pokies in the next 30 days?" Lastly, participants were administered the Timeline Follow-back (TLFB) (Weinstock, Whelan, & Meyers, 2004) for the 30-days prior to gambling, and then also in the 30 days following the intervention. The TLFB is a well-established method for examining consumption for alcohol and has been adapted for problem gambling (Weinstock et al., 2004). This tool has been shown to be more reliable and valid than global estimates of gambling consumption (Hodgins & Makarchuk, 2003). It uses a calendar-based system with memory prompts (e.g., special events) to determine the frequency, amount and time spent gambling over a specified period. Participants write in the calendar on each day the amount

that they spent which can be used to calculate frequency and total spending over a specific period.

- The uptake of strategies was initially assessed with either an open text field on the intended actions to limit gambling (control group) (i.e., what do you intend to do to limit how much you spend playing the pokies today) OR completion of the draft Gambling in-venue Strategies Check-list (intervention group). This check-list included 26 items (see Appendix). Each strategy was scored dichotomously (i.e., yes, I intend to do this today, no I do not intend to do this today) and pre-venue strategies also scored dichotomously (i.e., yes I did this, no, I did not do this). At the 30-day follow-up assessment, all participants were presented with the checklist and asked to rate how often they had used the strategies in the previous 30 days (1=never, 5=always).

- To determine problem gambling status, we administered the 9-item Problem Gambling Severity Index (Ferris & Wynne, 2001). It is measured over a 12-month period on a four-point scale (0=not at all, 3=almost always) and yields four distinct levels of risk (0=no risk, 1-2 Low risk, 3-7 Moderate risk and 8-27 Problem gambler). This screen is the most widely used screen for identifying low, moderate and severe problem gambling and good reliability and validity are reported (Dowling et al., 2018).

- The Short Gambling Harms Scale (SGHS) measures harms from gambling such as a reduction in available spending money or savings, regret, shame, and distress (Browne, Goodwin, & Rockloff, 2018). Scored dichotomously, non-zero scores on the SGHS indicate some level of decrease in personal well-being due to gambling.

- To determine recommendations of strategies to use or avoid, participants were offered two open-ended questions: *"If you were to recommend just one strategy to someone who is trying to limit their gambling spending, which one would it be?"* and *"Based on your experiences in the past month, which one strategy would you tell people to avoid if they were trying to limit their gambling spending*?"

- Participants were asked to report on their experiences of passing their limits (referred to as busts). Specifically, participants were asked:

  o Thinking about the past 12 months, have you had a situation when you had a bust and went over your limits?

  o Could you tell us what happened when you had the bust (i.e., what was the trigger/situation, how much did you spend).

  o What advice would you offer to others in terms of avoiding a bust?

- Two questions were developed to determine attitudes towards low-risk gambling guidelines. These questions were informed by recent research conducted by Dowling et al. (2017) who reported low-risk gambling limits as a frequency of 20 to 30 times per year and expenditure between $380 and $615 per year. The two questions related to low-risk gambling limits were:

  o Recent research by Deakin University recommends gambling no more than once a week and spending no more than $40 a week on any form of gambling. Given that if you exceed this limit you are more likely to experience even low levels of gambling

related harm, how conservative or liberal do you think these limits are? Response options are 1 = too low, 4 = just right, 7 = too high.

o   How willing would you be to stick to these limits? Response options 1 = not willing at all and 7 = extremely willing.

Development of check-list

A literature search using PsychInfo, Medline and Google Scholar was conducted to identify strategies used to limit or reduce gambling. Search terms were 'responsible gambling', 'protective behavioural strategies' 'behaviour change strategies,' and 'unassisted recovery,' 'recovery,' 'self-control,' 'self-regulation,' 'natural recovery,' and 'limit setting.' We identified strategies in the literature for RG (Hing et al., 2017; Ladouceur et al., 2012; Ladouceur et al., 2017), PBS (Drawson, Tanner, Mushquash, Mushquash, & Mazmanian, 2017; Lostutter et al., 2014) and Behaviour Change Strategies (Abbott, Bellringer, Garrett, & Mundy-McPherson, 2014a, 2014b; Hagen, Nixon, & Solowoniuk, 2005; Moore et al., 2012; Rodda et al., 2018a; Rodda et al., 2018c). Because few strategies were related to the manner of gambling, we also reviewed grey literature that included unpublished and government reports (Lubman et al., 2015; McDonnell-Phillips, 2006; Schottler Consulting, 2010) as well as the alcohol literature for PBS (Pearson, 2013). Strategies were extracted from relevant literature, duplicates removed and grouped into themes. We then developed representative statements for each strategy theme. The checklist, referred to as the Gambling In-venue Strategies Checklist (GISC), contained 30 items. The GISC was administered as follows: *"You recently participated in a study investigating strategies people use to limit the money they spent in gaming venues. This is a follow up survey that asks you to rate the strategies you have used over the past 30 days. Thinking about your poker machine gambling in the past 30 days, how often did you use each strategy?"* Each strategy had a five point response scale (1=never used, 2=sometimes, 3=about half of the time, 4=most of the time, 5=always used). Participants could also add any items that they used that were not included in the scale. Potential score range for 30 item GISC is 30 to 150.

Procedure

The sample was recruited from 11 EGM venues in metropolitan and regional Victoria, Australia during August and September 2017. Support from a leading peak body was obtained which facilitated access to their gambling venues. Venues ranged in size from 75 machines to more than 2000 machines and recruitment occurred during day time hours, evenings and weekends. Seven female interviewers recruited participants and conducted both the pre- and post-assessment only and intervention interview sessions in the venue. Participants were initially screened against the inclusion criteria in the gaming venue foyer, with eligible participants provided paper copies of patient information and written consent and then were interviewed in a quiet space in the gambling venue (e.g., tea and coffee area). Participants were randomised using the sealed envelope technique. This is a technique whereby a statistician external to the team generates a computerised sequencing of numbers and then places each number in a sealed envelope (with a participant ID on the front of the envelope). To ensure an even distribution between groups we also allocated based on blocks of four and six.

To maintain confidentiality and anonymity, while being able to match participants pre- and post-gambling, participants were provided a unique identification number and asked to return to the interviewer at the conclusion of their gambling episode. Post-gambling interviews were conducted immediately following the intended gambling episode. This approach ensured participants taking a break from gambling to do another activity in the venue (e.g., have a meal) were interviewed

immediately post-gambling irrespective of whether they engaged in a second episode of gambling. Post-session, all participants were provided a $20 shopping voucher for their time, with an additional $30 shopping voucher offered to participants who completed a 30-day evaluation by telephone online via a survey platform (Qualtrics Survey Software).

Data analysis plan

Aims 1 and 2: Feasibility and intervention evaluation

Data analysis was undertaken with Stata/Inter-Cooled for Windows (v14.2, StataCorp LP). Because this was a feasibility study, analysis was conducted on total sample of completers at 30 day follow-up and PGSI sub-samples (rather than intent-to-treat). To determine pre-intervention equivalence of groups, chi-squares and Kruskal Wallis (categorical variables: e.g., gender), and independent sample t-tests (continuous variables: e.g., age, readiness to use strategies) were conducted.

Sticking to limit was calculated as a ratio between the intended and actual amount spent [intended / actual*(100)]. Scores < 100 indicate a participant did not stick to their limit, scores equalling 100 indicate a participant stuck exactly to their limit, and scores > 100 indicate a participant spent less than intended. Intend and actual spend values for the in-venue session and for the 30-day follow-up period had no upper limit. With this open-ended distribution and the extreme scores present in the data (e.g., intend spend values of >$2,000), median scores and non-parametric equivalent tests were utilised, resulting in a more conservative approach (Gravetter & Wallnau, 1996). Comparisons were conducted between the intended and actual amount spent, by each group (i.e., Control and Intervention) and sub-sample (by PGSI category), using Friedman's test with Kendall's co-efficient of concordance (W; values range from 0 = no agreement to 1= total agreement, indicating effect size). Non-significant W (i.e., $p \geq .05$) indicates no agreement/concordance between median values, and therefore differences exist between intended and actual spend.

Prior to conducting regressions, correlations were produced to examine the univariate relationships between demographics, intended and actual money spent and whether participants stuck to their limits (ratio score and dichotomous; yes/no). To determine the predictors of participants sticking to their limit at the 30-day follow-up period, a regression was conducted with demographics (age, gender), intend to spend amount, PGSI category (no, problem), in-venue strategy selected (yes, no) and cohort (control, intervention) included. The moderator variables of Amount Intending to Spend by Group, plus Amount Intending to Spend by PGSI, for both in-venue and next 30 days, were included to determine if participating in the intervention improved the likelihood of participants sticking to their pre-determined limit and the impact of PGSI scores in subsequent gambling sessions.

Aims 3 and 4: Uptake of strategies and qualitative evaluation of GISC

Descriptives were calculated for the frequencies of intended strategies and also strategies used over a 30-day period. Frequency of use of strategies at 30-days between participants with NP/LR gambling and MR/PG were compared with a series of two-tailed t-tests. To describe the types of strategies recommended by gamblers, we applied a simple content analysis to open text data (Berelson, 1952). This process involved extracting data into a Microsoft Excel spreadsheet and as recommended by Berelson (1952) becoming familiar with the data (i.e., reading and rereading). A data dictionary was then developed which was informed by the GISC but was also data driven (i.e., new themes were allowed to emerge). Two coders (SR and KB) then applied the dictionary to the entirety of the data. This resulted in near perfect agreement (99%). Where quotes have been presented these have been adapted for readability (i.e., spelling and punctuation corrected).

Aim 5 and 6: Experience of exceeding limits and attitude towards guidelines

Participant data were grouped according to self-reported bust or no bust and subjected to ANOVA to determine differences in gambling behaviour, harms and severity. To describe the experience of busts by gamblers and how they might overcome them in the future, we applied a thematic analysis (Braun & Clarke, 2006). This involved extracting participant responses into a Microsoft Excel spreadsheet and then reading and re-reading participant responses so as to become familiar with the data. As recommended by Braun and Clarke, initial codes were then generated from the data. Data were coded according to whether the bust was initiated pre-venue or in-venue and then according to the reason. Codes were then collated into larger themes and reviewed by the wider team. Codes were data driven, but the naming of themes was also informed by the wider literature (Blaszczynski et al., 1991; Hodgins & el-Guebaly, 2004; Marlatt & Donovan, 2005; Oakes et al., 2012a, 2012b). Illustrative quotes are reported with the participant's gender, age, total amount spent during the bust and PGSI score. All quotes have been reported verbatim except corrections to spelling, punctuation and grammar. Attitudes towards low-risk guidelines were determined with a series of t-tests.

Results

Aim 1: Feasibility of in-venue intervention

Recruitment

In total, 360 individuals entering the venue were approached to participate, with 261 screened for eligibility with 184 completing the pre- and 155 completing the post-gambling survey. Table 2 presents demographics of the total sample of 184 participants: 81 males (44.0%) and 103 females (56.0%). Participants were aged between 18 and 86 (M=56, SD=15.7 years). Many had not completed high school (n=76, 41.3%) with around one third obtaining a post high school qualification (n=62, 33.7%). Participants were most frequently employed: full-time or self-employed (n=32, 30.8%), part-time or casual (n=13, 12.5%) with similar proportions retired (n=28, 26.9%) or not in the labour force (i.e., unemployed, not in labour force) (n=31, 29.8%). Participants cohabitated as a couple (n=52, 50.0%), group household (n=15, 14.4%) or single person household (n=37, 35.6%).

Using the Problem Gambling Severity Index (Ferris & Wynne, 2001), which was administered at the post-gambling assessment, and consistent with other in-venue studies (Hing et al., 2017), participants scoring as no problem (NP) or low risk (LR) were combined into a NP/LR group (n=68, 65%), while moderate risk (MR) (n=18, 17%) and problem gamblers (PG) (n=18, 17%) were combined into a MR/PG group (n=36, 35%). This proportion of at risk and problem gamblers is similar to other research involving gamblers recruited from gambling venues in Australia (Hing et al., 2017; Thomas et al., 2013).

Prior to undertaking the intervention, there were no significant differences between groups (Table 2) except those in the intervention group had significantly higher confidence to resume using a strategy if they stopped using it than the control group. There was a similar proportion of males and females, with an average age >50 years. There were no pre-intervention differences between the control and intervention groups on self-reported intentions to stick to their limits (all reported very strong intentions). Similar amounts of intended spend and actual spend between sub-groups were reported, except problem gamblers in the intervention group were, on average, intending to spend twice as much as the problem gamblers in the control group ($100 compared to $50 respectively; Table 3), but this difference did not reach statistical significance. This non-significant result is likely because of the small sample but also wider interquartile range for the intervention group.

A similar proportion of participants from the control and intervention groups comprised the post-session sample [Control 52%, Intervention 48%: $\chi^2(1)=0.87$, p=0.35] and the 30-day follow-up sample [Control 52%, Intervention 49%: $\chi^2(1)=0.02$, p=0.89].

The majority of people approached who were not eligible were either not intending to gamble in the next hour or not intending to set a limit on their gambling. The active intervention component took approximately 20 minutes, with all participants completing the intervention.

Characteristics	Group	Total (N=184)		No Problem / Low Risk (N=68)		Moderate Risk / Problem Gambling (N=36)	
		Control (n=93)	Intervention (n=91)	Control (n=35)	Intervention (n=33)	Control (n=19)	Intervention (n=17)
Gender	Male	n=45, 48%	n=36, 40%	n=14, 40%	n=15, 46%	n=9, 47%	n=8, 47%
		$\chi^2(1)=1.45, p=.23$		$\chi^2(1)=0.21, p=0.65$		$\chi^2(1)=0.00, p=0.99$	
Age	Median years (IQR)	n=93, 55, (44, 67)	N=91,59.5 (43, 70)	N=35,63 (53, 68)	N=33, 57 (48, 68)	N=19, 51 (38, 58)	N=17, 58 (34, 66)
		$\chi^2(1)=0.83, p=0.36$		$\chi^2(1)=0.95, p=0.33$		$\chi^2(1)=0.01, p=0.91$	
High School Education#	Did not complete	40, 43%	36, 40%	17, 49%	14, 42%	10, 53%	5, 29%
	Completed	23, 24%	21, 23%	5, 14%	11, 33%	5, 26%	4, 24%
	Post High School	30, 33%	32, 35%	13, 37%	8, 24%	4, 21%	8, 47%
		$\chi^2(3)=2.35, p=0.50$		$\chi^2(3)=3.68, p=0.16$		$\chi^2(3)=3.01, p=0.22$	
Readiness to stick to strategy Mean (SD)		6.18 (1.25)	6.46 (1.11)	6.51 (0.95)	6.64 (0.74)	5.74 (1.49)	6.53 (0.87)
		$t(182)=-1.60, p=0.11$		$t(66)=-0.59, p=0.56$		$t(34)=-1.92, p=0.06$	
Willingness to stick to strategy Mean (SD)		6.10 (1.43)	6.44 (1.08)	6.6 (0.85)	6.70 (0.68)	5.58 (1.50)	6.35 (0.79)
		$t(182)=-1.84, p=0.07$		$t(66)=-0.52, p=0.61$		$t(34)=-1.90, p=0.07$	
Confidence to stick to strategy Mean (SD)		6.16 (1.37)	6.51 (1.02)	6.43 (1.04)	6.70 (0.59)	5.53 (1.87)	6.18 (1.01)
		$t(182)=-1.93, p=0.06$		$t(66)=-1.30, p=0.20$		$t(34)=-1.28, p=0.21$	
Confidence to resume strategy Mean (SD)		5.54 (1.83)	6.27 (1.42)	6.06 (1.41)	6.39 (1.54)	4.74 (2.13)	6.41 (0.87)
		$t(182)=-3.04, p=0.003$		$t(66)=-0.94, p=0.35$		**$t(34)=-3.02, p=0.005$**	
In-venue strategy main strategy Yes – with missing replaced as no		39, 42%	52, 57%	17, 50%	21, 64%	8, 42%	7, 41%
		$\chi^2(1)=10.81, p=0.04$		$\chi^2(1)=1.27, p=0.26$		$\chi^2(1)=0.00, p=0.96$	
Plan B not completed - Yes		N/A	28, 31%	N/A	14, 42%	N/A	2, 12%

Table 2: Participant Characteristics by problem gambling status

Note: IQR=inter-quartile range. SD=standard deviation. Comparisons between Control and Intervention groups are in italics, significant differences are in bold.

Delivery of intervention

Prior to recruitment, approximately half of the total sample had implemented, and acted upon, a pre-venue strategy (e.g., Planned in advance the exact amount of money I would spend today) (Table 2). Further, despite the best efforts of the interviewers, almost one-third of the Intervention group did not complete the coping plan component of the intervention. Most of these participants indicated a coping plan was not necessary (see last row of Table 2), for example they stated: "nothing will get in the way". The most frequent obstacles to successful implementation was not winning (or losing too quickly). Coping planning associated with this barrier included walking away, doing something else and leaving the venue. Significantly more participants in the intervention group had an in-venue strategy (e.g., *If I am losing, I will not increase or change my bet size*) than the Control group. While this difference was not significant for either of the PGSI sub-sample analyses this is likely due to small sample sizes.

Intervention impact

On average, all groups spent similar or less than what they intended (median ratios of 100; Table 3). Overall, fewer MR/PG (74%) stuck to their limits than NP/LR gamblers (91%).

For the total sample, significant W for comparisons between Control and Intervention groups revealed no effect of the intervention on spending what participants intended (null result for primary outcome).

However, while the MR/PG control (n=19) participants spent a similar amount as they intended (i.e., on average $50), the MR/PG Intervention group (n=17) spent significantly less ($60 less on average) than intended ($100) within the venue.

Aim 2: 30-day evaluation of intervention

30 days post-intervention

While all groups intended to spend a lower amount in the next 30 days compared to the prior 30 days (between $40 and $200 less; Table 4, comparisons A and B), these amounts were not significantly different for the total sample. When examined by PGSI sub-samples, the intervention participants intended to spend significantly less in the 30 days after the intervention (B) than compared to the amount spent in the 30 days prior to the intervention (A). This reduction was not found for the control group, where they intended to spend statistically similar amounts in the 30 day pre- and post-intervention. On average, the control and intervention groups spent (C) similarly to what they intended (B). When examined by PGSI category, MR/PG in the control group spent similarly to intended, the intervention group spent significantly more than they intended (secondary outcome, statistical analysis results).

When considering the raw dollar values, for the NP/LR gambler groups, the Intervention participants intended to spend 20% less than Control but they actually spent 38% less. For MR/PG, both Control and Intervention participants intended to spend similarly (median intended spend $200), both spent more actual dollars than intended (not significant for the control group), but the Intervention group (median actual spend $290) spent 41% less than the Control group (median actual spend $500). Compared to the amount spent during the pre-intervention 30 days (A), the amount spent during the post-intervention 30 days (C) was similar across all groups except for the MR/PG intervention group who spent significantly less on average (W=0.47; lower IQRs).

Venue	Total		No Problem / Low Risk		Moderate Risk / Problem Gambling	
Cohort	**Control** **(n=83)**	**Intervention** **(n=77)**	**Control** **(n=35)**	**Intervention** **(n=33)**	**Control** **(n=19)**	**Intervention** **(n=17)**
Intend to stick to limits M (SD)	6.78 (0.78)	6.55 (1.21)	6.94 (0.24)	6.88 (0.48)	6.53 (1.39)	6.05 (1.43)
	t(158)=1.49, p=0.14		*t(66)=0.67, p=0.50*		*t(34)=0.99, p=0.33*	
Intend to spend $ Median (IQR)	50 (20, 100)	50 (30, 100)	45 (20, 50)	50 (25, 70)	50 (20, 100)	100 (30, 150)
	$\chi^2(1)=0.50, p=.48$		*$\chi^2(1)=1.22, p=.27$*		*$\chi^2(1)=.04, p=.84$*	
Actual spend $	40 (20, 100)	50 (20, 100)	35 (13, 50)	49 (20, 70)	50 (20, 200)	40 (20, 180)
	$\chi^2(1)=1.33, p=.25$		*$\chi^2(1)=2.64, p=.10$*		*$\chi^2(1)=0.17, p=.68$*	
Ratio of intend to actual spend Median (IQR)	N=80 100 (100, 143)	N=75 100 (100, 102)	N=32 100 (100, 148)	N=33 100 (100, 100)	N=19 100 (100, 100)	N=16 100 (74, 113)
	$\chi^2(1)=1.40, p=.24$		*$\chi^2(1)=0.38, p=.54$*		*$\chi^2(1)=0.03, p=.87$*	
Stuck to limit in venue = Yes If ratio >100	n=72/80 90%	n=63/75 84%	n=29/32 91%	n=30/33 91%	n=15/19 79%	n=11/16 69%
	$\chi^2(1)=1.24, p=.27$		*$\chi^2(1)=0.00, p=.97$*		*$\chi^2(1)=0.47, p=.49$*	
Primary outcome – comparing intention and actual spend	$\chi^2(1)=145.03$, W=0.88,p=.00	$\chi^2(1)=132.35$, W=0.87,p=.00	$\chi^2(1)=48.41$, W=0.73,p=.00	$\chi^2(1)=58.66$, W=0.88,p=.00	$\chi^2(1)=34.51$, W=0.96,p=.01	**$\chi^2(1)=26.13$, W=0.82,p=.05**

Table 3: Comparing single session intention and actual spend by total and gambling severity sub-groups

Note: SD=standard deviation. IQR=inter-quartile range. Comparisons between Control and Intervention groups are in italics; comparisons between intended and actual spend within groups are not italicised Non-significant W (i.e., $p\geq.05$) indicates no agreement/concordance between median values, and therefore differences exist between intended and actual spend. These have been bolded.

Venue	Total		No Problem / Low Risk		Moderate Risk / Problem Gambling	
Cohort	Control (n=83)	Intervention (n=77)	Control (n=35)	Intervention (n=33)	Control (n=19)	Intervention (n=17)
A. Prior 30 days to venue session $, median (IQR)	220 (110, 425)	170 (92, 340)	150 (80, 220)	120 (70, 230)	400 (60, 1110)	300 (155, 530)
	$\chi^2(1)=0.82, p=.36$		$\chi^2(1)=0.27, p=.60$		$\chi^2(1)=0.09, p=.76$	
B. Intending to spend in next 30 days $, median (IQR)	180 (75, 300)	100 (50, 200)	100 (40, 200)	80 (50, 130)	200 (100, 500)	200 (100, 300)
	$\chi^2(1)=1.09, p=.30$		$\chi^2(1)=1.60, p=.21$		$\chi^2(1)=0.06, p=.81$	
C. Prior 30 days to follow-up spend $, median (IQR)	200 (50, 500)	100 (45, 300)	110 (30, 240)	75 (40, 110)	500 (105, 1000)	290 (110, 500)
	$\chi^2(1)=1.58, p=.21$		$\chi^2(1)=0.93, p=.33$		$\chi^2(1)=0.93, p=.33$	
Stuck to limit in 30-day post-venue Ratio >=100 = Yes, median (IQR)	N=45 80 (33, 114)	N=43 100 (40,133)	N=28 85 (33, 126)	N=28 100 (45, 147)	N=17 71 (33, 89)	N=17 69 (27, 100)
	$\chi^2(1)=0.55, p=.46$		$\chi^2(1)=0.41, p=.52$		$\chi^2(1)=0.03, p=.87$	
Stuck to limit in 30-day post-venue Yes	N=36/44 82%	N=34/41 83%	N=23/27 85%	N=24/26 92%	N=13/17 77%	N=10/15 67%
	$\chi^2(1)=0.29, p=.87$		$\chi^2(2)=2.00, p=.37$		$\chi^2(2)=1.27, p=.53$	
Intended $ and actual $ 30 days (B to C)	$\chi^2(1)=83.51, W=0.80,p=.00$	$\chi^2(1)=76.69, W=0.78,p=.01$	$\chi^2(1)=48.41, W=0.73,p=.04$	$\chi^2(1)=50.77, W=0.79,p=.01$	$\chi^2(1)=31.04, W=0.86,p=.03$	**$\chi^2(1)=17.39, W=0.54,p=.36$**
Comparing prior 30-day actual with post 30 day actual (A to C)	$\chi^2(1)=84.63, W=0.81,p=.003$	$\chi^2(1)=70.61, W=0.72,p=.02$	$\chi^2(1)=49.83, W=0.76,p=.03$	$\chi^2(1)=51.94, W=0.81,p=.01$	$\chi^2(1)=29.76, W=0.83,p=.04$	**$\chi^2(1)=14.96, W=0.47,p=.53$**
Comparing intended next 30 days with prior 30 days actual (A to B)	$\chi^2(1)=139.72, W=0.86,p=.00$	$\chi^2(1)=118.93, W=0.78,p=.001$	$\chi^2(1)=60.04, W=0.91,p=.003$	**$\chi^2(1)=43.96, W=0.69,p=.08$**	$\chi^2(1)=30.25, W=0.84,p=.04$	**$\chi^2(1)=22.60, W=0.71,p=.12$**

Table 4: Comparing 30-day pre and post venue intervention by Total and gambling severity sub-samples

Note: IQR=inter-quartile range. Comparisons between Control and Intervention groups are in italics; comparisons between intention and actual spend within groups are not italicised. Non-significant W (i.e., $p \geq .05$) indicates no agreement/concordance between median values, and therefore differences exist between intended and actual spend. These have been bolded.

	1. Venue Intended Spend	2. Venue Actual Spend	3. Venue limit Ratio	4. 30 Day Intended Spend	5. 30-Day Actual	6. 30-Day limit Ratio	7. Age	8. Gender	9. Ready	10. Willing	11. Confidence	12. Resume	13. PGSI Cat	14. PGSI Total Score	15. In Venue Strategy	16. Cohort
2.	0.81***	-														
3.	0.21*	-0.08	-													
4.	0.14	0.26**	-0.04	-												
5.	0.27**	0.53***	-0.11	0.51***	-											
6.	-0.02	-0.10	0.32**	0.40***	-0.19	-										
7.	-0.18	-0.10	0.04	0.10	-0.02	0.00	-									
8.	-0.12	-0.05	-0.14	-0.13	-0.10	-0.19	0.15	-								
9.	-0.05	-0.16	-0.01	0.04	-0.14	0.08	0.06	0.13	-							
10.	-0.11	-0.16	-0.05	0.03	0.18	0.04	-0.02	0.05	0.65***	-						
11.	-0.01	-0.09	-0.03	0.02	-0.16	0.00	0.17	0.05	0.72***	0.58***	-					
12.	-0.06	-0.21*	-0.04	-0.01	-0.23	0.06	0.13	0.01	0.50***	0.34***	0.55***	-				
13.	0.20*	0.29**	-0.07	0.19*	0.41***	-0.07	-0.26**	-0.04	-0.21*	-0.33***	-0.29**	-0.20*	-			
14.	0.18	0.18	-0.04	0.11	0.31**	-0.14	-0.36***	-0.05	-0.23*	-0.33***	-0.28**	-0.23*	0.82***	-		
I5.	0.12	0.15	-0.01	0.11	0.05	0.11	0.09	-0.13	0.01	0.02	0.03	-0.03	-0.14	-0.20*	-	
16.	0.09	0.07	-0.04	-0.10	-0.11	0.07	-0.10	-0.03	0.13	0.14	0.12	0.22*	-0.01	-0.02	0.09	-

Table 5. Correlations between intended spend, actual spend and stuck to limits for venue and follow-up, PGSI and Intervention variables

Notes: Gender (male=0, female =1). Rulers related to sticking to strategy (not limit), PGSI Category – no problem=0, problem=1. N varies due to PGSI only collected at follow-up and missing data. *p<.05, ** p<.01, ***p<.001

Predictors of sticking to limits

For the total in venue sample, the amount gamblers intended to spend in the venue (r=0.89***) and during the subsequent 30-day period (r=0.51***) was strongly and positively correlated with their actual spend (Table 5). Sticking to their limits during the venue session was significantly and positively correlated with sticking to the limits during the follow-up period (r=0.31**).

PGSI scores were negatively correlated with readiness rulers. Higher severity was correlated with lower readiness to stick to a strategy, willingness to stick to a strategy and confidence to stick to strategies. PGSI was also positively correlated with the use of an in-venue strategy. This latter result suggests those with higher severity scores were more likely to have an in-venue strategy (and vice versa).

There was one significant positive predictor of sticking to limits over the next 30 days which was the amount intended to spend. Negative predictors were intention to use a strategy (meaning not using a strategy was associated with sticking to limits) and PGSI Category (meaning lower PGSI scores were more strongly associated with sticking to limits) (Table 6; F (13,74) = 3.31, p<.001; RMSE=103.1, Adjusted R^2=0.26). Amount intended to spend was moderated by PGSI Category whereby those with NP/LR gambling stuck to their limit while MR/PG did not. Intervention participation was not significant, however there was a smaller than optimal sample (N should be 146, compared to N=88).

Table 6: Predicting sticking to limit in next 30 days

Path / Predictor Variable for Stuck to limit Ratio in 30 days $	Standardised Beta coefficient	Beta Coefficient	SE	(95% Confidence Interval)
Amount intended spend next 30 days ($)	0.78***	0.17***	0.03	0.10, 0.23
Intended to use a strategy	-0.31*	-45.33*	21.99	-89.16, -1.50
Age (years)	-1.55	-1.12	0.76	-2.64, 0.39
Gender (female)	-1.09	-25.91	23.55	-72.83, 21.00
Amount spent in prior 30 days ($)	-0.14	-0.02	0.02	-0.07, 0.02
In venue strategy used (yes)	0.02	5.83	23.43	-40.86, 52.51
Cohort Intervention (yes)	-1.33	-315.38	245.53	-804.61, 173.84
PGSI score	-0.43*	-12.19*	5.21	-22.57, -1.81
PGSI Category (problem) x Cohort	0.09	27.98	52.16	-75.96, 131.92
Intended to use Strategy x Cohort	1.42	49.11	35.72	-22.06, 120.27
Amount intended to Spend x Cohort	0.06	0.02	0.07	-0.12, 0.16
Intended to use Strategy x PGSI Category	0.28	10.51	7.98	-5.40, 26.40
Amount intended to Spend x PGSI Category	-0.53*	-0.16*	0.07	-0.29., -.03

Notes: N=88. p<.05, **p<.01, ***p<.001.

Aim 3: Determine the uptake of strategies for EGM gambling

Aim 3 was to determine the uptake of strategies to limit gambling (by level of risk) in venues and over a 30-day period.

Overall uptake of strategies

Cronbach's alpha results showed strong internal consistency for the original 30 items, α = 0.84. There was no increase in alpha with the removal of any item. The mean score across the 30 items was 68.8 (SD=17.5, range 30-124). The mean number of strategies used over the 30-day period was 14.0 (SD=5.5, range 0-30, mode=10). Just one participant reported not using any strategies across the 30-day period.

As indicated on Table 7, over the 30-day period, the most frequently used strategies were to *use only the money brought into the venue* and *only play low denomination poker machines.* This was followed by *planned in advance the exact amount of money spent* and *using willpower to stick to my money limit.* The least frequently used strategies involved *not drinking alcohol, avoid borrowing* and *the involvement of family members* (i.e., getting someone to remind you to leave and asking someone to hold cash cards while in the venue).

Uptake of strategies by level of risk

There was a significant difference between the number of strategies used according to problem gambling status. NP/LR used an average of 13.6 strategies (SD=5.2, range 4-30, Mode=10), which was fewer but not significantly different to the number of strategies used by MR/PG (M=14.6, SD=5.8, range 0-26, Mode=13). We also examined the four levels of gambling severity separately and found no difference in the mean number of strategies used (p=.37). There was a significant difference between NP/LR and MR/PG in terms of the frequency of use of seven individual strategies. Compared to MR/PG, NP/LR gamblers more frequently avoided chasing losses, set cues to keep track of time, used only the money brought into the venue, planned in advance their spending, and viewed gambling as entertainment. MR/PGs more frequently asked family or friends to look after cards or cash in the venue than NP/LR gamblers.

Table 7: Uptake and frequency of strategy use over a 30-day period

Strategy items	Total Uptake (n=104) n (%)	Frequency of use (1=never to 5=always)		
		NP/LR (n=68) M (SD)	MR/PG (n=38) M (SD)	Sig (p)
Use only the money that I've brought into the venue today (i.e., no EFTPOS).	95 (91.3)	4.2 (1.3)	3.5 (1.4)	0.01
Only play low denomination poker machines.	94 (90.4)	4.1 (1.3)	3.6 (1.5)	0.09
Planned in advance the exact amount of money I would spend today.	88 (84.6)	4.1 (1.4)	3.4 (1.7)	0.03
Used willpower to stick to my money limit (i.e., be strong)	84 (80.8)	3.7 (1.6)	3.1 (1.5)	0.08
Viewed gambling as entertainment and for fun, not to win money	82 (78.8)	3.8 (1.6)	2.8 (1.5)	0.001

Strategy items	Total Uptake (n=104) n (%)	Frequency of use (1=never to 5=always)		
		NP/LR (n=68) M (SD)	MR/PG (n=38) M (SD)	Sig (p)
Cash out all or some of the winnings and not gamble winnings later in the session.	81 (77.9)	3.2 (1.6)	3.0 (1.5)	0.58
Planned my gambling today so it did not get in the way of other activities.	70 (67.3)	3.1 (1.7)	2.7 (1.5)	0.21
Avoid chasing losses - If I lose my money, I will not spend more to try and win it back.	**68 (65.4)**	**3.2 (1.8)**	**2.3 (1.4)**	**0.01**
If I am losing, I will not increase or change my bet size.	**66 (63.5)**	**2.9 (1.8)**	**2.3 (1.1)**	**0.07**
Brought into the venue the exact amount of money I will spend.	64 (61.5)	2.9 (1.7)	3.0 (1.8)	0.77
If I am winning, I will not increase or change the size of my bet	63 (60.6)	2.8 (1.8)	2.4 (1.4)	0.26
Do other activities offered by the venue such as watch sport or have a meal.	62 (59.6)	2.3 (1.4)	2.0 (1.3)	0.27
Take a regular break while I am gambling today (e.g., take a walk, get a drink).	**58 (55.8)**	**2.5 (1.5)**	**2.0 (1.3)**	**0.09**
Put any winnings from gambling away (e.g., in a different pocket or the back of my purse).	55 (52.9)	2.3 (1.6)	2.4 (1.5)	0.75
Plan other activities after gambling so that I can't stay at the venue and gamble.	54 (51.9)	2.3 (1.6)	2.2 (1.4)	0.21
Used specific machines only and left or did not play when they were in use	51 (49.0)	2.2 (1.5)	2.2 (1.5)	0.81
Planned in advance the exact amount of time I would gamble today.	49 (47.1)	2.3 (1.6)	2.1 (1.4)	0.46
Use coins rather than notes for gambling.	46 (44.2)	1.9 (1.1)	1.9 (1.3)	0.98
Left bank or cash cards at home so as to limit spending	34 (32.7)	1.8 (1.5)	2.0 (1.4)	0.46
Give any winnings to someone else such as my partner or friend while gambling.	33 (31.7)	1.6 (1.3)	1.9 (1.3)	0.21
Set up cues to keep track of time (e.g., set a timer on my phone).	**23 (22.1)**	**1.8 (1.5)**	**1.2 (0.7)**	**0.02**
Had someone with you who made you stick to your limits (e.g., they told you when to stop).	22 (21.1)	1.3 (0.7)	1.4 (0.7)	0.42
Keep track of my play by using a card-based limit setter (e.g., YourPlay or loyalty card).	16 (15.4)	1.4 (1.0)	1.4 (1.1)	0.66
Ask family or a friend to hold my cash that is not for gambling.	**15 (14.4)**	**1.2 (0.6)**	**1.5 (1.2)**	**0.03**
Don't gamble with people that gamble heavily.	15 (14.4)	1.4 (1.3)	1.4 (1.0)	0.99
Not drink too much alcohol when gambling today.	15 (14.4)	1.4 (1.2)	1.4 (1.1)	0.94
Avoid borrowing money for gambling from friends or family.	13 (12.5)	1.3 (1.0)	1.6 (1.4)	0.20
Not drink any alcohol when gambling today.	12 (11.5)	1.3 (0.9)	1.4 (1.1)	0.54

Strategy items	Total Uptake (n=104) n (%)	Frequency of use (1=never to 5=always)		
		NP/LR (n=68) M (SD)	MR/PG (n=38) M (SD)	Sig (p)
Ask someone to call me at a designated time and remind me to leave.	8 (7.8)	1.2 (0.6)	1.2 (0.7)	0.57
Ask family or a friend to hold my cash card while in the venue.	**6 (5.8)**	**1.0 (0.2)**	**1.3 (0.7)**	**0.02**

Note: Significant results have been bolded.

Aim 4: Undertake a qualitative evaluation of the GISC

The GISC was developed from the available literature; however it was limited in terms of knowing exactly what the detail of each strategy entailed (i.e., there was little information provided on the specifics). Furthermore, we noticed in our quantitative study that gamblers reported the use of strategies that had not previously been included in the GISC. As such Aim 4 was to undertake a qualitative evaluation of the GISC and at the same time ask gamblers for their recommended strategies and those to avoid for sticking to limits in gambling venues.

To undertake this work we developed a data dictionary to capture the recommendations of gamblers for sticking to limits in gambling venues. As indicated on Table 8, the dictionary included 19 strategies that were grouped into six different themes (i.e., cash limits, expectations, time limits, manner of gambling, harm minimisation and broad behaviour change strategies). Additional strategies emerged including budgeting, limiting cash carried, altering game play (e.g., different sized bank notes, using or avoiding the same machine, varying the bet size), applying willpower and walking away when money is spent. We identified nuance in strategies that also appeared in the GISC. This included setting a monetary limit (implemented as a loss limit, upper limit or spending limit), expectations around winning (relevant pre-gambling) and the role of others (gambling alone was viewed as a problem).

Recommended strategies

The data dictionary was then applied to the recommendations of 102 participants (two participants could not recommend any strategies). This identified 201 different recommendations, whereby 34 gamblers recommended a single strategy (33%), 45 (44%) recommended two strategies and 23 recommended three or more strategies (23%). Strategies implemented before gambling included setting money and time limits as well as expectations about winning (n=134, 67%). Strategies implemented during gambling included the manner of gambling (don't exceed limit, walk away, willpower, machine play) and harm minimisation, such as avoid borrowing money or using a cash machine (n=52, 26%), with 15 participants recommending broad behaviour change strategies related to alternative activities and avoidance. Participants recommended an average of two strategies (range 1-6) (e.g., *plan in advance how much to gamble and leave after you've spent that*). As indicated on Table 8, the most frequent strategies recommended were *bring in the exact amount of cash* (20%) followed by *not taking cards* (15%) and *setting a money limit* (9%). Overall, the least frequently recommended strategies were *not to use ATM card, don't chase losses, take a break and don't borrow from others.*

Main strategies to avoid in EGM venues

A total of 43 out of 97 (44%) participants made at least one recommendation as to the most important strategies to avoid if trying to limit gambling spending (seven participants did not respond to this question). Of the 54 (56%) who did not make a recommendation of strategies to avoid, 44 were unable to recommend a strategy (i.e., "don't know" "none" "didn't have any strategies that didn't work"). A further three participants said that they were unable to advise others and that it was up to the individual which ones worked for them. Seven participants recommended behaviour change strategies (i.e., avoid gambling altogether).

Twenty-one participants (22%) recommended strategies related to limiting time and money spent gambling. This was not related to the strategy per se, rather a failure to enact strategies. For instance, nine participants said that taking bank or cash cards to a venue was a mistake. This was because it was too tempting, or made it possible to withdraw unplanned cash from an automatic teller machine. A further nine participants thought it was a mistake to take too much money or extra money into the venue. One participant noted that for them it was the easy access to money that caused them to exceed their limits. Similarly, another participant recommended against bringing all of their available money because it would be spent. Interestingly, one participant noted that leaving money or cards in the car (instead of bringing them into the venue) was a problem: *Leaving money in the car – it's too easy to just walk out and get it.* (Female, 33, PGSI 13)

Similarly, 10 participants (10%) recommended against specific in-venue strategies. These included *increasing the bet in an attempt to win, playing maximum lines, putting in large denomination notes* and *increasing the bet when losing.* Two participants stated that thinking you were going to win was a faulty strategy. They recommended against gambling as a way to win money and instead recommended viewing it as entertainment. Harm reduction strategies (n=14, 14%) were associated with *not gambling when in a bad mood, avoiding alcohol when gambling,* and *not chasing losses.* Five participants specifically stated that willpower does not work or that it works only some of the time.

Table 8: Data dictionary and number and percentage of most helpful strategies over a 30-day period

Theme	Code	Definitions	NP/LR	MR/PG	Total
Cash limits	Brought in the exact amount of cash	Brought in the exact amount of cash refers to bringing or taking cash to the venue that is intended for gambling. It includes the exact amount that can be lost or spent as well as the exact amount that the person can afford to lose or spend. This item also includes taking only so much money or taking cash only.	29 (21)	11 (18)	40 (20)
	Budgeting	Budgeting refers to determining the amount of money that can be spent on gambling. This may be by directly working on a budget, identifying extra money that could be spent on gambling, paying bills first or only spending what can be afforded.	8 (6)	-	8 (4)
	Don't take cards	Don't take cards refers to credit, bank or cash cards whereby money can be withdrawn for gambling. This item includes leaving the cards at home or in the car.	18 (13)	12 (20)	30 (15)
	Limit cash carried	Limit cash carried refers to leaving money or wallet at home or in the car. It also refers to going to the venue with a limited	4 (3)	8 (13)	12 (6)

Theme	Code	Definitions	NP/LR	MR/PG	Total
		or minimal amount of money or only taking enough money for drinks or meals.			
	Set a money limit	Set a money limit refers to any limit that is not specifically associated with time (e.g., have a limit). It includes nominating, creating, making, setting or committing to a limit in advance of gambling. This may be related to a loss limit, upper limit or spend limit. It may also include a specific amount (e.g., $20 limit).	17 (12)	2 (3)	19 (9)
Expect	Expectations of winning and losing	Expectations about gambling include gambling for entertainment rather than a way of winning money. It includes not gambling with the expectation of winning or making money. It also includes being prepared to lose money.	10 (7)	3 (5)	13 (6)
Time limits	Plan other activities before or after gambling	Time limits can be supported by the planning of other activities before or after gambling. This includes having someone collect the person from the venue, making a commitment post gambling or scheduling gambling so that it is between activities.	3 (2)	3 (5)	6 (3)
	Set time limits	Set a time limit is an action that occurs prior to gambling. This may be setting a time limit for the duration of the gambling session or a time limit on when to leave the venue.	4 (3)	2 (3)	6 (3)
Manner of gambling	Don't exceed limit	Stick to limit occurs in venue and is related to not exceeding the set limit. The limit may be specific (e.g., $20) or an unspecified planned amount (e.g., stick with what you planned). It also includes spending only the cash brought into the venue.	14 (10)	1 (2)	15 (7)
	Walk away	Walk away refers to stopping gambling if on a winning or losing streak. Leave when the money intended to be spent has gone or the limit has been reached.	9 (6)	3 (5)	12 (6)
	Willpower	Willpower includes being strong or applying self-control in order to stick to limits.	4 (3)	2 (3)	6 (3)
	Game play	Game play includes any action is in relation to using an EGM. This includes taking out winnings, the use of the same machine, using different sized bank notes, varying or not varying the amount of bet size, thoughts around winning while gambling.	5 (4)	2 (3)	7 (3)
Harm min	Avoid borrowing	Don't borrow refers to not borrowing money in the venue for gambling.	4 (3)	-	4 (2)
	Avoid chasing	Don't chase losses refers to not chasing money or trying to win back lost money.	2 (1)	-	2 (1)
	Avoid the ATM	Don't use ATM card refers to the use of a card in the venue to obtain money for gambling.	1 (1)	-	1 (<1)

Theme	Code	Definitions	NP/LR	MR/PG	Total
	Gamble with another	Avoid going to the venue alone or take a person who can support sticking to limits. This includes gambling with the person when in the venue or asking them to look after cash.	2 (1)	2 (3)	4 (2)
	Take a break	Take a break refers to leaving the gaming machine or area and engaging in another activity in the venue.	-	1 (2)	1 (<1)
Broad behaviour change strategies	Alternative activity	Alternative activities are those that occur outside of the venue and are in place of gambling. This includes choosing a different type of entertainment or hobby, games, shopping or free gambling activities.	1 (1)	4 (7)	5 (2)
	Avoid gambling	Avoid gambling means no gambling at all or avoid certain gambling venues. It includes self-exclusion (barring self from venue).	5 (4)	5 (8)	10 (5)

Aim 5: Reasons limits are exceeded

Aim 5 sought to understand the experiences of gamblers when at least one strategy to limit gambling was not implemented and where this resulted in exceeding monetary limits.

Proportion of gamblers who had a bust

Over the previous 12 months period 47/104 (45%) gamblers reported having a bust whereby they exceeded their limit in a single episode of gambling. Self-reported busts ranged from $20 to $1500 (M=$446, SD=$402). Similar number of sessions and hours spent gambling over the previous 30 days were reported for those who did and those who did not have a bust (Table 9). Compared with those who had not had a bust, those who reported a bust spent more money over the previous 30 days compared with those who had not had a bust. Those who reported a bust had more severe gambling problems on the PGSI and also more frequent gambling harms. Based on the PGSI, the proportion of gamblers who had a bust ranged from NP=9/45 (20%), LR=8/23 (35%), MR=15/18 (83%) and PG=15/18 (83%).

Table 9: Comparison of expenditure, severity and harms by presence of bust (M, SD)

Variable	No bust	Bust	F	Sig
Amount of money spent over the past 30 days ($)	**186 (245)**	**495 (789)**	**7.82**	**.006**
Amount of time spent over the past 30 days (hours)	6.6 (10.7)	6.8 (5.5)	.021	.884
Number of gambling episodes over the past 30 days	4.1 (4.5)	4.3 (3.3)	.112	.738
Gambling Harms (SGHS)	**.86 (1.7)**	**4.26 (2.9)**	**36.25**	**<.001**
Gambling Severity (PGSI)	**1.0 (2.1)**	**5.3 (4.9)**	**55.10**	**<.001**

Note: SGHS=Short Gambling Harms Scale, PGSI=Problem Gambling Severity Index

Pre-gambling reasons for a bust

Of the 47 (46%) participants who had a bust (i.e., not sticking to their limits), 45 (96%) reported a reason for their bust (two participants stated that they had a bust but did not provide a reason); Table 10. Of these participants, 20 reported pre-venue triggers for not sticking to limits in gambling venues and 25 reported triggers that occurred in the gambling venue. The most frequent reason for a bust reported by NP or LR gamblers was not setting time limits, followed by thinking a win will happen and social facilitation (influence of others). The most frequent reason for a bust reported by MR or PG was chasing losses, wins or spins (in-session) followed by negative affect and thinking a win will happen.

Table 10: Pre-venue and in-venue reasons for a bust (number and percentage)

Setting	Reason for bust	NP/LR (n)	MR/PG (n)	Total (%)
Pre-venue (distal)	Negative affect	1	6	7 (16)
	Not setting money limits	1	3	4 (9)
	Not setting time limits	4	-	4 (9)
	Not leaving cash at home	1	2	3 (7)
	Need to win money	-	2	2 (4)
In-venue (proximal)	Chasing losses, wins or spins	2	8	10 (22)
	Thinking a win will happen	3	5	8 (17)
	Social facilitation	3	1	4 (9)
	Money lost too quickly	2	1	3 (7)

Pre-venue: Negative affect

Seven participants reported that co-occurring negative affect and a desire to escape or be alone was a reason for their bust. Negative affect associated with depressed mood and a desire to get away from the situation was reported by three participants. One stated:

I have a daughter who is very ill, and we were having a rough time from it, I got very depressed, and just wanted to get away from it all. (Female, 49, $100 PGSI 9)

Three participants reported negative affect was associated with loss or grief and two participants explicitly stated they had lost a parent or sibling at the time of the bust. Two participants stated the reason for the bust was feeling in a "bad mood" and "not caring" what happened at that moment.

Pre-venue: Failure to implement a strategy

Eleven participants failed to implement a strategy to limit their time or money spent gambling and this was the main reason for the bust. Three participants who failed to set a spending limit in advance reported they had a bust because they spent much more money than they normally would (even though they did not have a clearly stated intention). Each participant reported a different

reason for failing to set a spending limit. One participant stated that they did not set a limit and that led to them getting caught in chasing the free spins:

"It was terrible. I didn't set a limit - just seeing what would happen – but I ended up trying to get the free spins." (Female, 55, $1000, PGSI 7)

Another participant reported that they used to have a problem but stopped and now occasionally gambled. They said *"I went way over because I didn't set a dollar limit (Female, 65, $200, PGSI 1)"*. Another reported they spent more than their normal amount because they had some additional money. Three participants stated they busted because of a failure to set a time limit which was because they were filling or "wasting" time. A further three participants reported busting because they did not leave their cash or cards at home. For one participant the impact of not leaving cards at home meant they drank and gambled more than intended:

I took the ATM card - went back to the EFTPOS machine a few times too many. I regret it. There was nothing going and I got caught up and gambling and drinking (Male, 45, $450, PGSI 3).

Participants also stated that they had a bust because they wanted to win money. One reported that they had extra money that had been allocated for expenses and wanted to win. This was because they had not won for a while and wanted to gamble for a longer period to get the win. Another participant stated they had borrowed money to cover gambling debt and needed to recoup those losses. They reported that multiple visits meant that they lost that money has well. Rather than a single episode this participant described a series of episodes that constituted a bust.

In-venue reasons for a bust

In-venue: Erroneous cognitions about winning

The most frequently reported reason for having a bust was thinking that a win would happen. Two participants referred to a belief that they thought they could win. In contrast, four participants said this was because they thought the machine was close to paying out (e.g., jackpot or continue winning streak). For instance, two participants had received a win and thought that they would continue to win. For one participant this was related to feeling lucky.

I thought I'd be able to get the jackpot, so I ended up going to the bank and taking more money out. (Female, 48, $400, PGSI 2)

You go on a machine, and you think that machine is going to pay, like the jackpot; it kind of gives you a little money, and then takes it all away, and you don't want to lose that machine, and so you go and get more money out, to try and win. (Female, 67, $100, PGSI 1)

One participant stated that the problem was staying on one machine whereby they had spent so much money that they did not want to leave. Another participant stated that they felt angry because they were not winning. This was attributed to the gaming machine:

The problem is staying on same machine. I put so much money in that I don't want to leave. I get stuck on one machine. (Male, 66, $1000, PGSI 5)

About two months ago I spent way over my limit. When they don't pay they eat the money. When the machines are not paying it made me angry. (Female, 58, $500, PGSI 13)

In-venue: Chasing losses, wins and spins

Ten participants reported they were chasing losses, wins or free spins in the gambling session and this resulted in a bust. Four participants stated they were trying to win back their money:

I was losing the money, so then I went home and got more, and then I went back to the venue to win my money back. (Male, 29, $1000. PGSI 11)

Similarly other participants stated that they were: "fed up with losing", "feeling anxious about losing" or "feeling out of control." Two participants reported that they had a bust when attempting to win back their winnings which led to more money being spent. For instance, one participant stated:

I initially had a win and then played that down and lost it and then spent rest of my money trying to win again but didn't. All up I spent the whole lot I had on me that's not including the winnings I played back down. (Female, 33, $300, PGSI 13)

One participant was chasing losses and reported that the problem was increasing the bet whereby they lost even more money. Another participant stated they were chasing because of a desire to get the free spins. They stated:

It has to do with the machine - once I get the free game, you can get something back. I was trying to chase my lost money (Female, 67, $40, PGSI 2).

In-venue: Social facilitation

Four participants reported that they had a bust when gambling with friends. All of these participants noted that it was rare for them to gamble with others and that it was also rare for them to exceed their limits. For one participant, the bust was associated with having a good time and wanting to stay and gamble for longer. For others, it was something that naturally occurred as a result of being in a group and in a gambling venue.

I was with my mates and had couple of drinks and not sure how it happened. (Male, 53, $70, PGSI 2)

I was not ready to go home, I wanted to stay longer and I wanted to play more. I had good time there with her friends. (Female, 78, $100, PGSI 3)

In-venue: Money lost too quickly

Three participants reported that they had lost their money too quickly. In part this was because they did not want to go home or wanted to spend more time in the venue. One participant described the conflict between the effort involved in preparing to gamble (e.g., planning the visit, getting to the venue) and the speed to which the money is spent:

It takes time to get there, and the money goes very quickly. You have made the effort for a night out, so I don't feel I can leave my cards at home or leave quickly - even if we take a break for dinner. So we tend to start with a certain amount, but always end up going to the ATM to withdraw more cash to continue the evening. (Female, 64, $500, PGSI 1)

Recommended pre-venue strategies to avoid a bust

Of the 47 participants who had a bust, all responded to the request for recommendations on how to avoid a bust. Seven (15%) participants stated that they did not know how to avoid a bust

(NP/LR=2, MR/PG=5). Four (8%) participants stated that it was an individual problem that each person needed to identify and develop their own solutions. These participants indicated that it was not the concern of others (e.g., *you can't tell people what to do it's their business*). Three (6%) participants said they did not know how to manage a bust and that this was evidenced by their own bust and loss of control over gambling.

As indicated in Table 11, pre-venue strategies were recommended by 30 (75%) participants and in-venue strategies were recommended by 10 participants (25%). The most frequent strategies recommended by NP/LR were to avoid gambling, leave cards or cash at home and to walk away when losing. The most frequent strategies recommended by MR/PG was to avoid gambling altogether.

Table 11: Strategies used pre-venue and in-venue for avoiding a bust (number and percentage)

Setting	Recommendation for avoiding a bust	NP/LR	MR/PG	Total (%)
Pre-venue (distal)	Avoid gambling altogether or certain venues	3	9	12 (30)
	Leave cards or cash at home	3	2	5 (13)
	Set a time or money limit	2	2	4 (10)
	Only money that you can afford to lose	2	2	4 (10)
	Arrange social support for gambling	-	3	3 (7)
	Don't gamble when experiencing negative affect	-	2	2 (5)
In-venue (proximal)	Walk away when losing (don't chase losses)	3	3	6 (15)
	Change the manner of gambling (change machines)	1	2	3 (7)
	Take a break	-	1	1 (3)

Pre-venue: Avoid gambling

Twelve participants recommended a strategy to avoid gambling as a way of minimising busts. Five participants recommended avoiding gambling altogether suggesting the best option is to just not go. One of these participants recommended self-exclusion as a way to ensure that gambling is avoided. Four participants suggested alternatives instead of gambling. These included focusing on other activities, sleep, buying a lottery ticket or to just do something else. Two participants recommended avoiding gambling when there were money concerns. They suggested that if there is no money budgeted for gambling then it is best to avoid gambling altogether.

If you only have a certain amount of money left in your budget and that is all you have to live on avoid going to the pokies at all. The temptation is hard to resist and self-control can easily be lost. (Female, 33, $300, PGSI 13)

Another participant suggested it was best to avoid specific types of gambling venues especially those where they are considered a night out. For this participant, specific venues were seen as more enticing and exciting which may lead to a loss of control. A further two participants recommended a strategy to avoid gambling when feeling depressed or emotional.

Pre-venue: Leave cards at home and limit setting

Five participants recommended leaving cards or cash at home and not taking them into the venue. Four participants recommended setting a limit and then sticking with it. Three limits were associated with money and one limit was associated with setting a time to leave.

Set a time limit to my gambling and leave when my time is up (Male, 85, $60, PGSI 0).

Four participants recommended only taking into the venue the amount of money that they can afford to lose. For these participants avoiding a bust was associated with not putting themselves into a position where they could bust. Two participants also related this approach to understanding that gambling was for entertainment and there should not be an expectation of winning.

Only take what you can afford, don't expect to win. Go there to have some entertainment, if you win it's a bonus. (Male, 49, $200, PGSI 1)

Only bring the amount in that you can afford to lose; remember that it's for entertainment, and set yourself a limit even before you leave home. (Male, 38, $70, PGSI 6)

Pre-venue: Social support

To avoid a bust, three participants recommended social support strategies. One participant recommended talking to friends about them all changing their patterns of gambling and stated it was difficult to stop when everyone gambled.

My boyfriend didn't gamble and it helped me to stay away. If you have friends who play it's hard to stay away. Having social support may help. If my sister and my other friends whom I gamble with stopped and supported each other, it would work for all of us. (Female, 76, $200, PGSI 8)

Contrary views were reported on social support. One participant stated it was best to not gamble alone. Conversely another stated that it was best to go on your own. This was because of opportunities to borrow money from others. This participant suggested that if you did gamble with friends then it was important to ask them beforehand not to lend money for gambling.

Recommended in-venue strategies to avoid a bust

In-venue: Walk away or change the manner of gambling

Ten strategies were recommended for use in venues for avoiding a bust. Six participants recommended walking away at a specific point. This included walking away when the planned amount of money was spent. Participants also recommended stopping when losing. For instance, if noticing that they are constantly losing then use willpower to stop. Conversely another participant recommended stopping after a win and not trying to win more money.

Be pragmatic - you're not going to win - know when to walk away - once the money is gone you can't think you are going to get it back - always walk away. (Female, 66, $500, PGSI 3)

Just have enough willpower to walk away, when you've reached your limit. (Female, 67, $100, PGSI 1)

One participant recommended not chasing losses within the session. They suggested it was important to remember gambling was not a way of making money and to stick with betting the minimum amount (i.e., not increasing the bet when losing). Four participants recommended altering the manner of gambling. This include cashing in winnings and leaving the venue as well as tracking the amount of money going into the machine and coming out. One participant recommended not using the same machine (i.e., changing machines) and another suggested taking a break was important whereby the person should try to engage socially with other people.

Aim 6: Low-risk gambling limits

Aim 6 was to determine whether current gambling intentions and expenditure are within the Australian low-risk gambling guidelines and to examine attitudes towards these guidelines.

Intended and actual expenditure

We examined intended expenditure before gambling and also actual spending post gambling. Half of the sample intended to spend more than the low-risk gambling limit. Post session, half of the sample reported expenditure greater than the recommended limit.

On average, the total sample spent a median of $50 in this single session which exceeded the recommended low-risk session guidelines of $35 for EGM gambling (Table 12). Even though on average NP/LR gamblers intended and spent less than MR/PG, there was no significant difference in the proportion of NP/LR and MR/PG intending to spend or actually spending more than the recommended session limit ($\chi^2(1)=0.06$, p=0.81).

Table 12: Intended and actual amounts spent in venue and attitudes towards low-risk gambling guidelines

Variable	NP/LR	MR/PG
Intended expenditure in venue Median (IQRs)	50 (20, 50)	75 (25, 150)
Actual expenditure in venue Median (IQRs)	40 (20, 50)	50 (20, 190)
Intention to spend more than $40 per session %, n = YES	56% (n=38)	58% (n=21)
Spent >$40 weekly limit in that single venue session? %, n = YES	44% (n=30)	53% (n=19)
Attitudes towards a $40 spending limit per week. 1 = too low, 4 = just right, 7 = too high Mean (SD), [95% CIs]	3.63 (1.54) [3.27-4.00]	2.64 (1.31) [2.19-3.08]
Willingness to stick to these limits 1 = not willing at all and 7 = extremely willing Mean (SD), [95% CIs]	N=68 5.50 (2.14) [4.98-6.02]	N=36 3.61 (2.09) [2.91-4.32]

Attitudes towards low-risk gambling limits

Overall, the total sample indicated that spending no more than $40 per week on EGM gambling was slightly on the low side but about right (M=3.29, SD=1.50); MR/PG indicated this value was more conservative than NP/LR gamblers (t(1)=0.06, p=0.81). The sample indicated they were moderately willing to stick to spending no more than $40 per week on gambling, MR/PG indicated that they were significantly less likely to stick to this limit than NP/LR (t(102)=4.32, p=0.000).

Conclusions

This is the first exploratory study to administer an action and coping planning intervention in a gambling venue with the aim of assisting gamblers to stick to their EGM limits. Our exploratory aims were to determine the feasibility of deploying this type of intervention in a gambling venue and determine the impact of such an intervention on sticking to limits in the venue and then over a subsequent 30-day period.

Feasibility study

This research indicated that administering a planning intervention was feasible as demonstrated by the ease of recruitment and willingness of participants to complete pre-and post-gambling surveys. We found that around half of all gamblers selected at least one strategy that needed to be implemented before coming into the gambling venue (e.g., *planning in advance the exact amount of money I would spend today*). This meant that around half of the action plans were documenting what had already been implemented. Gamblers received facilitation in terms of completing coping plans however approximately one-third were not able to develop a coping plan. This was because many gamblers could not envisage any obstacles to the implementation of the strategy (i.e., no perceived gap between intention and behaviour). This may be because of high levels of reported confidence in the helpfulness of their strategy.

We also sought to examine whether action and coping planning increases adherence to goal intentions (sticking to expenditure limit) in the venue and then 30-days later. We found no significant difference between the intervention and control groups whereby, on average, all participants stuck to their goal intention or did better than intended. While this again indicates that there may not be an intention-behaviour gap (thereby rendering planning irrelevant), we did find a trend whereby fewer people with MR/PG stuck to their limits compared with NP/LR gamblers. Engaging in the intervention did make a difference to goal intentions over the next 30 days, whereby MR/PG in the intervention group intended to spend less than they had in the previous 30-days. Despite the change in goal intentions, MR/PG exceeded their intentions in the following 30-days, but those in the intervention group spent 41% less than MR/PG in the control group. This is an important finding because it may indicate that even though intentions did not significantly shift as a consequence of the intervention, the actual amount spent by MR/PG did change. These findings are consistent with previous research indicating action and coping planning may be especially helpful for those with problematic behaviour (Gollwitzer & Sheeran, 2006), but may have limited effectiveness for those at NP/LR.

Strategies for sticking to limits when EGM gambling

We also sought to determine the uptake of strategies people used within an EGM gambling venue over a 30-day period. Drawing on three different literatures, we identified 30 different strategies that could be used by gamblers to stick to limits in EGM venues. Despite the literature differences, identified strategies overlapped and were frequently similar. Combining these strategies means that the GISC could potentially be administered as a single tool covering all three literatures. The number of strategies identified for sticking to limits in EGM venues is the most comprehensive list published to date. Importantly, it includes strategies that gamblers could use before gambling (e.g., set spending in advance), during gambling (e.g., play low denomination machines) and after gambling (e.g., not chasing losses). Overall, the check-list had good internal consistency.

In terms of frequency of use, the average number of strategies used over 30 days was 14 strategies, which was higher than previously reported (Hing et al., 2017; Lostutter et al., 2014). This higher frequency could be due to providing a more comprehensive list of strategies, the inclusion criteria of the study (we only surveyed gamblers who were intending to set a limit) or because the administration time window meant participants were more easily able to recall their use of strategies. The most frequently used strategies were to *use only money brought into venue, only play low denomination poker machines* and *planned in advance the exact amount of money I would spend today.* These findings are similar to other studies across RG, PBS and behaviour change strategies research (Hing et al., 2017; Lostutter et al., 2014; Rodda et al., 2018a), except these previous seminal studies did not include low denomination betting (Hing et al., 2017; Lostutter et al., 2014; Moore et al., 2012; Rodda et al., 2018a). This exclusion is perhaps a critical oversight, as low denomination betting was endorsed in the current study by most gamblers as a way of sticking to limits.

The average number of strategies used did not differ according to levels of gambling severity. These findings are different to other studies reporting differences in the uptake of strategies by level of gambling severity (Hing et al., 2017; Moore et al., 2012; Rodda et al., 2018a). This contrasting result is in part explained by the use of our comprehensive check-list that includes a wide range of strategies. It is also perhaps explained by the focus on strategies to stick to limits, which encompasses maintaining control (RG, PBS) and reducing gambling (behaviour change strategies). There was however, a significant difference in the frequency in the use of individual strategies. NP/LR gamblers more frequently (than MR/PG) *used only the money they brought in the venue (i.e., no cash withdrawals), planned their spending in advance, viewed gambling as entertainment, avoided chasing losses,* and *kept track of time.* MR/PGs more frequently (than NP/LR) involved family or friends in looking after cash or cards while in the venue. This means the overall the uptake of strategies does not vary by level of gambling risk, but some strategies are more likely to be implemented by NP/LR gamblers than MR/PGs. Future research investigating the effectiveness of strategies may focus more on the relationship between frequency of strategies use (i.e., sometimes versus always) and change in gambling outcomes (e.g., severity, harms). This nuance is because some strategies may work some of the time, but it is when the strategy is not implemented that harms occur. The current study examined the frequency of strategies used across a 30-day period but we are not able to say whether every session of gambling was associated with the use of a strategy. Future research should examine the relationship between gambling sessions and the use of strategies and level of harms as measured by the SGHS.

We sought to understand the strategies gamblers recommended to use or avoid when limiting gambling in EGM venues. Qualitative analysis indicated 67% of recommended strategies were implemented before gambling. The most frequently recommended strategies were *bring in the exact amount of cash* followed by *not taking cards* and *setting a money limit.* Although contained in the GISC, no gamblers recommended strategies associated with alcohol consumption, use of loyalty cards, uptake of other in-venue activities, setting cues (e.g., reminders or alarms) to keep track of time or getting friends to hold cash/cards. The lack of recommendation may be because these strategies do not work well or merely are under-utilised. It is perhaps surprising that alcohol was infrequently mentioned. This may be because gamblers often only brought into the venue the exact amount of money needed for gambling or a small amount to cover drinks and meals. When asked to name a recommendation on strategies to avoid, gamblers for the most part made recommendations on how to prevent strategy failure (e.g., taking cards or cash into the venue caused limits to be breached). Other research has also identified the importance of improving the implementation of strategies to ensure they are not easily overturned or abandoned (Rodda et al., 2016a). Interestingly, almost half of the sample could not nominate strategies to avoid. This is

reflective of the absence of research investigating the effectiveness of specific strategies whereby gamblers have no information on strategies that may not be helpful. Future research needs to urgently investigate the effectiveness of individual strategies and their relationship to sticking to limits.

Exceeding limits and the nature of limits

This exploratory research also sought to examine how frequently gamblers fail to implement strategies and the reasons gamblers' strategies to limit EGM gambling fail. We also sought to understand the recommendations of gamblers on how to avoid a bust when gambling in EGM venues. Just under half of participants self-reported a bust over the past 12 months which ranged between $20 and $1500. Busts occurred across the continuum of gambling and the proportion of participants who experienced a bust increased with the level of gambling severity.

These findings are consistent with previous research that identified people with problem gambling exceeded their limits more frequently than lower risk gamblers (Blaszczynski et al., 2008; Nower & Blaszczynski, 2010). In terms of more severe problems, the same proportion of MR/PG reported at least one bust over the previous 12 months. It may be that repeated busts and lapses/relapse are related but it is unclear whether MR/PGs conceptualise their experience as busts (i.e., rupturing limits) or lapses (i.e., excessive gambling after a period of abstinence or controlled gambling). This distinction is important in terms of the focus of interventions to support gamblers. For example, if repeated busts are the cause of increased gambling risk severity (because breaching limits make people more vulnerable to future breaches) then systems that support limit setting in the venue are needed (e.g., pre-commitment, pop-up messaging). If repeated busts are a manifestation of lapse or relapse then gamblers need to be supported in staying away from gambling venues (e.g., self-exclusion programs) or addressing the proximal and distal factors associated with relapse (e.g., coping strategies, managing urges, lifestyle factors).

This exploratory study identified pre-venue (distal) and in-venue (proximal) reasons for a bust. The most frequent pre-venue reasons were negative affect and not intending to set a monetary or time limit. Coping with negative emotions has been extensively reported as a reason for lapse/relapse (Blaszczynski et al., 1991; Hodgins & el-Guebaly, 2004; Marlatt & Donovan, 2005; Oakes et al., 2012a) and in the current study, gamblers reported gambling in order to be alone, escape depressed mood, avoid situations, deal with grief or loss and also because of being in a bad mood. These findings are consistent with other EGM venue studies that have also reported motivations to gamble related to escape and emotional regulation (Nower & Blaszczynski, 2010; Thomas, Allen, & Phillips, 2009a). Pre-venue factors were also associated with not intending to set a time or money limit for gambling, and curiously, not setting a time limit was exclusively reported as a problem by NP/LR gamblers. Qualitatively not setting a limit was associated with 'seeing what would happen', having extra money and filling time. Previous research suggests gamblers do set limits most of the time that they gamble (Lalande & Ladouceur, 2011; Nower & Blaszczynski, 2010; Rodda et al., 2018b) and it appears that for the occasions when limits are not set, a lack of time limits may be a factor (Thomas et al., 2009a). For instance some of our participants reported an intention to visit a gambling venue is to fill the time and this did not prompt a process of identifying a limit or strategies to stick to it.

Interestingly, 96% of gamblers could identify a bust and identify its cause but 15% were unable to identify a strategy on how to avoid it in the future. The most common recommendation by NP/LR gamblers was evenly split between avoiding gambling altogether, leaving cards at home and walking away when losing. We know very little on what NP/LR gamblers recommend to avoid a

bust and this suggests that they try a range of options including distal and proximal factors. The most common recommendation by MR/PG was overwhelmingly to avoid gambling altogether, suggesting proximal strategies were ineffective for them. These findings are consistent with previous research on how PG's manage a lapse or relapse (Hodgins & el-Guebaly, 2000).

Even though most gamblers, most of the time stick to their limits, our research indicated these limits are frequently higher than low-risk gambling guidelines (Dowling et al., 2017). This means gamblers do stick to their limits, but these limits are potentially a cause of current of future gambling harm. Dissemination of information on low-risk gambling limits is urgently required so that consumers of gambling products are fully informed of the risks.

Limitations

This is the first study to examine the administration of a brief planning intervention in gambling venues, the uptake of in-venue strategies, the reasons of exceeding limits and attitudes towards those limits and a number of valuable insights have been identified. However, as this is an initial exploration in this area, this work is not without its limitations. First, our intervention targeted gamblers intending to stick to a limit when gambling on EGMs, using an active control. The active control set their intentions prior to gambling and were asked to state their intended strategies for achieving this goal. We know with other addictive behaviours (e.g., problem drinking), answering research questions about consumption behaviour can prompt behaviour change (McCambridge & Kypri, 2011), so it is likely that prompting participants in this way had an impact on the implementation of their intentions. Future research might determine whether a very brief intervention that asks gamblers to set their intentions before coming into the venue is an effective strategy. Indeed, Papies (2017) suggest cueing interventions such as priming, nudging, or reminders of social norms can increase the impact of behaviour change interventions; bridging the intention–behaviour gap. In our research, participants interacted with an interviewer and thus social desirability effects could have influenced their behaviour (i.e., increased the reporting of intentions to use strategies reflecting 'responsible gambling').

Second, those in the intervention reduced the amount they intended to spend in the next 30 days (compared to the previous 30 days), with only the MR/PG intervention group spending more than what they intended. However, this group was the only group who spent significantly less post-intervention than the previous 30 days. While participating in the intervention did not predict sticking to limits when other factors were accounted for, this combination of results suggests that the intervention may have had an impact for MR/PG spending behaviour over time. The higher proportion of intervention participants using in-venue strategies than the control group also meant that any intervention effect may have been due to the focus of their in-venue strategy, and this should be considered in future examinations with this cohort. Future research should investigate the use of action and coping planning for MR/PG that could include plans being established away from the venue, with longer term follow-up evaluation.

Third, we excluded those who had not set a goal intention which accounted for around 10% of gamblers entering the venue. The behaviour of these gamblers in unknown, however anecdotal evidence from the venue interviews indicated some just did what they always did (i.e., spend a certain amount of money) or that they did not want to stick to a limit. Reasons were associated with wanting to escape (due to bereavement or negative affect) or wanting to have a good time. As indicated in our study, gamblers implement strategies most of the time when gambling in EGM venues, meaning that some of the time there is no intention to stick to limits. It may be that these are the times that harm is caused (e.g., binge gambling) and therefore the times that should be

targeted by a cue-response intervention such as action and coping planning (Sniehotta et al., 2005a; Sniehotta et al., 2005b).

Fourth, our in-venue method of recruitment meant we captured a potentially different cohort of gamblers than would respond to a survey outside of the venue. However, it also meant we had an attrition rate of 35% from the post-gambling survey to the 30-day evaluation. It is possible that those who did not return to the interviewer post-gambling (or the 30-day follow-up) had exceeded their limits in session or over the 30-day period. Furthermore, we reported completer only data at 30 days because intent-to-treat procedures as these are not recommended when the follow-up rate is less than 80% (Cheema, 2014; Hollis & Campbell, 1999). To address these issues, a fully powered trial is required that has a strong focus on reducing attrition at follow-up evaluation. In our current study we offered participants $50 in remuneration for completing the post gambling and follow-up surveys. This amount than is typically less than offered for follow-up evaluations to participants in gambling trials (Rodda et al., 2016b) and perhaps would be better offered only at follow-up and as a larger amount. Ideally, the PGSI should be administered at baseline assessment but its length is prohibitive in conducting in-venue research. Future studies should consider using a briefer scale that can detect low and moderate risk gambling such as the 5-item Brief Problem Gambling Screen (Dowling et al., 2018).

Fifth, participants in this study may not be representative of the wider population of gamblers internationally or in Australia. We note however that the demographics of participants were similar to EGM gamblers in the Victorian population. For example, Thomas et al. (Thomas et al., 2013) interviewed 1150 Victorian gamblers in gaming venues and reported an average age of 48 years, retired or not in the labour force (32%) and living as a single person household (20%). Our sample was slightly older and had slightly higher numbers that were retired or not in the labour force. This may reflect that timing of our data collection, whereby 60% was conducted during business hours and at a time when older people may more frequently visit gaming venues. Our proportion of risk categories on the PGSI were very similar to Thomas et al. (2013) who reported 60% as NP/LR (our study had 65% NP/LR) and 40% of gamblers classified as MR/PG (our study had 35%).

Sixth, approximately half of the sample could not develop a coping plan meaning part of the intervention was not delivered. The lack of coping plan could be attributed to the strength of goal intention whereby gamblers could not imagine any obstacles. In a systematic review of coping planning, Kwasnicka et al. (2013) also reported multiple studies whereby participants were either unable to generate a coping plan or believed such a plan irrelevant. In our study, the lack of a coping plan may be associated with the fact that there is very little information provided to gamblers on exactly how to plan for obstacles or barriers in gaming venues. Furthermore, there is currently no published research describing how to successfully implement specific behaviour change strategies in gambling venues. Future interventions should consider constructing detailed information sheets (Carraro & Gaudreau, 2013) that describe potential obstacles and potential responses to these obstacles.

Seventh, the current study identified a whole range of different strategies are used to limit expenditure in gaming venues. As a way of analysing this number of items, we grouped them into pre-venue and in-venue strategies. This approach indicated no significant relationship between sticking to limits and the use of pre- or in-venue strategies. The Intervention group was more likely than the Control group to have an in-venue strategy, likely being driven by the NP/LR, and potentially obscuring intervention effects. Future research should examine whether using particular strategies is associated with sticking to intended expenditure and if this varies by severity as measured by the PGSI. To do this larger samples are required as well as a methodology which is able to accommodate recall on how strategies were implemented and whether they were helpful.

For example, future research might use a diary methodology or ecological momentary assessment (Pearson, 2013; Rodda et al., 2018a) to determine the relationship between different conditions, and the uptake and helpfulness of strategies. There is also a need to understand how gamblers select strategies across different gambling sessions, whether they use the strategies that they intend to use in a session, and, importantly, whether the strategies they select are effective for them. This is especially important given the wide range of strategies potentially used by gamblers in EGM venues.

Eighth, we used the TLFB as it is currently the best available expenditure measurement tool (Hodgins & Makarchuk, 2003), but it is not without its limitations. First, there continues to be a discussion and indeed doubt that current self-report methods on expenditure are entirely accurate (Auer & Griffiths, 2017; Wood & Williams, 2007). Our study reported that there may be some confusion over the meaning of 'limits'. For example, gamblers reported interpreting limits as being a 'loss limit', 'upper limit' or 'spending limit'. Our qualitative findings suggest a loss limit is how much the person can tolerate losing whereas an upper limit is an amount that they person is hoping that they will not need to spend (because they will have a win and not need to spend the money). A spending limit was more related to how much could be spent in the session and did not take into account winnings. Future qualitative studies might unpack this further to better understand biases that might impact on one's ability to stick to limits.

Finally, the development and administration of the GISC requires further work. First, with our relatively small sample, we were unable to conduct a factor analysis of the GISC. This analysis would have supported the identification of item sub-sets within the check-list, similar to those we proposed in the qualitative component of this study. Based on our quantitative and qualitative findings, we propose multiple amendments to the original GISC items. An additional six strategies identified in qualitative analysis and literature should be included (see Appendix). These are related to budgeting, limiting cash carried, altering game play, applying willpower, walking away when money is spent and not gambling when bored, stressed or depressed. Future iterations of the GISC should also be considered for other types of gambling as this tool was specific to EGM venues.

Research Implications

Our research suggests that within a research trial, where participants are compensated by trained dedicated research assistants, this type of intervention is acceptable to gamblers in that they are willing and able to engage with the intervention. However, implementing this approach in-venues as routine practice requires further investigation. It may be that just having someone ask about spending limits is sufficient to change behaviour. One option could be for gamblers to nominate how much they are planning to spend as they enter the venue. This information could be collected as part of loyalty programs or via messaging on gaming machines. Anecdotally however, we noticed that when interviews were conducted close to the gaming room, participants were less eager to fully engage in interviews. It is more likely that the most effective limit setting is conducted away from the venue (through a pre-commitment program) or at least in the foyer of the venue.

This study, while being innovative and the first of its kind in this context, was exploratory in nature. We now have evidence that an in-venue intervention is acceptable and feasible which adds support to the need for a larger and more robust research design. Based on the experiences of this exploratory study, we also recommend the following issues be considered.

- **A rapid review of the literature**. A systematic approach to synthesising past literature was beyond the scope of the current project. This means there may be strategies that have been omitted or relevant literature that has not been cited. Future research should consider including within scope a rapid or systematic review of the literature. Furthermore, we expect that gambling research might benefit from a broader view on limit setting and such studies should examine strategies used in other areas of addiction such as nicotine or alcohol reduction.

- **Screening.** We excluded participants who were not intending to set a limit. This is because the aim of the study was limit setting, and it is not valid to ask gamblers (who do not have a current limit) about their strategies to adhere to limits. However, future research should investigate why around 10% of gamblers do not set limits. Anecdotal and qualitative evidence in our study indicates that most people set limits most of the time. But we need to know more about the times when limits are not set in order to prevent harm from occurring.

- **Sample size**. Our study has demonstrated that gamblers are willing to enrol in a brief intervention on limit setting. This now opens the way to conduct studies requiring larger samples. To do so will enable analysis of the association of specific action and coping plans and strategy selection with limit adherence. For studies considering sub-sample analysis based on the PGSI, a briefer version of the PGSI items should be used.

- **Participant retention**. Our study remunerated participants at the venue and then also at follow-up evaluation (total $50). Given the median spend was $50 per visit this amount appears to be inadequate as an incentive for completing follow-up evaluations. We recommend participant remuneration be increased in future studies.

- **More concrete coping plans.** The identification of obstacles and associated coping plans were guided by the interviewer, but were for the most part developed by the participant. It may be the participants need assistance in identifying barriers and plans (Carraro & Gaudreau, 2013). Other research in alcohol, for example, has used volitional help sheets which document in advance common barriers and solutions to these barriers. In these studies, participants select those barriers and solutions that are relevant to their own personal situation (Arden & Armitage, 2012; Armitage & Arden, 2012). Future research should examine the implementation barriers that are common in gambling venues. It should also identify evidence-based solutions that have been tested for their effectiveness.

- **Understand how limits are set.** Participants in our study set limits in excess of recommended guidelines. It may be that there is a pattern of spending in excess of the limits. Future research might examine session-specific factors that impact on spending more than the prescribed limits. In terms of assisting people to spend within the limits, our research suggests that expenditure intentions should be targeted. Future studies should examine the development of goal intentions related to gambling expenditure and the role of attitudes, subjective norms and perceived behavioural control in setting monetary limits.

- **Understand limit setting across a continuum of risk**. Our study highlights the need to study the experience of gambling limits across the gambling continuum. Future research should investigate the severity of busts in more detail. For instance, participants reported a range of between $20 and $1500 per bust but we know little of the consistency of experience across this continuum (e.g., do people who report a $20 bust experience this the same as a person reporting a bust of over $1000?).

Responsible Gambling Implications

The top strategies recommended by gamblers were to only take in the money that is intended to be spent or lost, not taking bank or cash cards into the venue, and having a clear monetary limit. These recommendations support recent moves in Australia (Victoria) to remove automatic cash machines from EGM venues (Thomas et al., 2013), thereby increasing the barriers to accessing cash beyond intended limits. Indeed, the removal of automatic cash machines appears to have resulted in a reduction in gambling expenditure (Thomas et al., 2013). For the most part however, gamblers are unsupported by operators and governments in the implementation of their own strategies. According to RG guidelines, it is the responsibility of the individual to act on information provided (Blaszczynski et al., 2011). It is therefore imperative that the information provided is accurate and effective.

Historically, RG guidelines have been qualitative (meaning they describe strategies that may support responsible gambling rather than gambling less than a specified amount) and included strategies such as those detailed in the current research (e.g., leave cards at home). There are very few published studies investigating the effectiveness of these kinds of limit setting guidelines. This is because it has been challenging to estimate the relationship between the uptake of a range of strategies in these guidelines and responsible gambling. There are now quantitative guidelines which offer empirically derived monetary limits for all forms of gambling. These low risk expenditure guidelines recently released in Australia recommended limits for EGM gambling of no more than 10 times per year and a total spend of no more than AUD$300 per year (Dowling et al., 2017). An important reason why gamblers may have stuck to their goal intentions is that their spending limits in this study were around AUD$50 per visit, with a median intended spend over the next 30 days for those NP/LR AUD$175 and almost AUD$400 for MR/PG. The current sample was on average intending to spend around seven to 16 times the recommended limit. RG has a responsibility to disseminate this evidence-based information to ensure that all gamblers are aware and fully informed on these safe gambling limits.

Our study also reported that gamblers use strategies to set their limits before gambling and during gambling. RG must respond to this need and offer ALL gamblers support in ensuring that this strategy is carried out as intended. Such support should include advice and guidance on how to set time and money limits, and also a system whereby limits can be implemented before entering the venue (ideally without requiring cash or bank cards within venues). Operationalising these recommendations should support what gamblers are currently doing and ensure that they continue to implement these strategies all of the time. This is important, as our current research indicates around 50% of all gamblers abandon their strategies and exceed their limits at least once over a 12-month period.

This study found around half of participants set a strategy that required them to take action before arriving at the venue. When asked to develop a back-up plan for how they respond to an obstacle or barrier to this plan, one-third were unable to develop such a plan. This has practical implications in terms of supporting gamblers in venues. First, many gamblers in our study selected a strategy such as only bringing in the amount of money they want to spend. The main obstacle to this strategy is access to cash machines in or near gambling venues as well as the absence of a technological solution to this barrier.

The view in the literature is that the best way to support gamblers in sticking to their limits is with pre-commitment technology. Pre-commitment refers to the use of technology to set time and money limits on EGM expenditure in advance of a gambling session with the option to use a card-

based system for gambling (Ladouceur et al., 2012). Discussions have focused on whether this system should be mandatory or voluntary, partial or full as well as the timing of limit setting (daily or weekly) (Thomas et al., 2016). A systematic review by Ladouceur et al., (2012) reported inconclusive findings as to whether pre-commitment assisted gamblers to stick to their limits. A central problem with pre-commitment is the promotion of one solution for many problems. As demonstrated by our research, gamblers need to be supported before gambling and then while gambling. They need support in how to set limits and exactly how to evaluate how their limit compares against evidence-based guidelines. To do this we need a comprehensive system of supports that wrap around people that choose to engage in EGM gambling. Similar to driving, where enforcement ensures drivers obey the road rules and at the same time roads and machine are rendered safer. At the same time drivers receive regular enforcement direction to keep themselves safe. Central to such a system for problem gambling is supporting gamblers own decision-making and autonomy. Such a system might include:

- **Evidence based information on strategies to limit gambling**. This means conducting research examining the associations between specific strategies and sticking to limits.

- **Access to low-risk gambling guidelines.** This means using community education to promote the guidelines in such a way that they are able to be implemented by gamblers.

- **Access to self-assessment**. This means providing personalised normative feedback on low risk gambling guidelines so that the individual has information relevant to their decision making.

- **Self-help to change gambling limits.** It is unrealistic to expect gamblers to automatically change their attitudes towards gambling limits without guidance. We know that intentions can be altered through changing attitudes, subjective norms and personal behavioural control and this information should be used to develop an appropriate brief intervention.

- **Access to an expenditure calculator.** Gamblers are currently offered no advice on how to calculate a safe amount that should be spent on gambling. Calculators offered on websites focus on current spending not safe spending. Such a tool would be like a mortgage calculator whereby the person can work out how much the person can afford.

- **An app to set personal limits**. Ideally gamblers receive information on their time and money spent in the venue and this is presented back as personalised feedback. An app linked to loyalty cards could provide this information.

- **No access to additional cash in or near gambling venues**. Getting more cash while gambling and therefore exceeding limits was by far was the biggest problem for gamblers in venue. This means venues should not have facilities to draw additional cash for gambling. Patrons would still be able to use cards to pay for meals and drinks but not withdraw cash for gambling.

In addition to the above measures, more information is needed on how to prevent busts in gambling venues. Mandatory pre-commitment is suggested as a way of helping people stick to their limits and has been suggested is a way of reducing expenditure (Thomas et al., 2016). Pre-commitment is however just one part of the solution and our study suggests it should not be viewed as the sole means of reducing expenditure. Instead it offers support to gamblers in sticking to limits and it is the setting of limits that needs to be addressed. Furthermore, most gamblers in our study did stick to their limits, but for those who had a rare and harmful bust, mandatory pre-commitment may have helped prevent that situation (akin to wearing seatbelts for that rare accident). Further work is needed in terms of whether this is the right approach to targeting times when lapses occur.

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Appendices

The Gambling In-venue Strategies Checklist (GISC)

The GISC is designed to measure the use of strategies to limit the amount of time or money spent on gambling. Thinking about your gambling, how frequently have you planned to do the following as a way of limiting your gambling in a pokies venue? Score each item as 1=never used, 2=sometimes, 3=about half of the time, 4=most of the time, 5=always used.

Items	1	2	3	4	5
1. Use only the money that I've brought into the venue today (i.e., no EFTPOS).					
2. Only play low denomination poker machines.					
3. Planned in advance the exact amount of money I would spend today.					
4. Used willpower to stick to my money limit (i.e., be strong)					
5. Viewed gambling as entertainment and for fun, not to win money					
6. Cash out all or some of the winnings and not gamble winnings later in the session.					
7. Planned my gambling today so it did not get in the way of other activities.					
8. Avoid chasing losses - If I lose my money, I will not spend more to try and win it back.					
9. If I am losing, I will not increase or change my bet size.					
10. Brought into the venue the exact amount of money I will spend.					
11. If I am winning, I will not increase or change the size of my bet					
12. Do other activities offered by the venue such as watch sport or have a meal.					
13. Take a regular break while I am gambling today (e.g., take a walk, get a drink).					
14. Put any winnings from gambling away (e.g., in a different pocket or the back of my purse).					
15. Plan other activities after gambling so that I can't stay at the venue and gamble.					
16. Used specific machines only and left or did not play when they were in use					
17. Planned in advance the exact amount of time I would gamble today.					
18. Use coins rather than notes for gambling.					
19. Left bank or cash cards at home so as to limit spending					
20. Give any winnings to someone else such as my partner or friend while gambling.					

Items	1	2	3	4	5
21. Set up cues to keep track of time (e.g., set a timer on my phone).					
22. Had someone with you who made you stick to your limits (e.g., they told you when to stop).					
23. Keep track of my play by using a card-based limit setter (e.g., YourPlay or loyalty card).					
24. Ask family or a friend to hold my cash that is not for gambling.					
25. Don't gamble with people that gamble heavily.					
26. Not drink too much alcohol when gambling today.					
27. Avoid borrowing money for gambling from friends or family.					
28. Not drink any alcohol when gambling today.					
29. Ask someone to call me at a designated time and remind me to leave.					
30. Ask family or a friend to hold my cash card while in the venue.					
31. Avoid gambling when bored, stressed or depressed.					
32. Go into the venue expecting to lose money and not expecting to win.					
33. Calculated how much money can be allocated to gambling.					
34. Limited the amount of cash carried when going to a gambling venue.					
35. Had a rule never to exceed personal limits when in the venue.					
36. Walk away when on a winning or losing streak or when time limits have been reached.					

INVESTIGATION OF STRATEGIES PEOPLE USE TO STICK TO THEIR LIMITS IN GAMING VENUES

> *This pre-intervention screen should be administered to as many people as possible when they are entering the venue. Interviewers should not select participants but rather approach and offer it to anyone that is entering the venue.*

Pre-intervention screening tool	
We are doing a study on poker machine gambling, just wondering if you are going to play the pokies here in the next hour? Yes *(continue)* No *(discontinue – mark on recruitment sheet).* Thank you. We are doing a study on how people limit the amount of money spent playing the pokies. Can I ask you a few questions to see if you are eligible to participate?	
1. Have you played the pokies in the last 30 days?	*Yes – continue* *No - discontinue*
2. How much do you agree with the following statement: Over the past 30 days, I did something to limit how much I spent playing the pokies. 1= never to 7 = always	/7
3. How much do you agree with the following statement: I intend to do something to limit my spending on the pokies today? 1 = completely disagree, 7 = completely agree.	/7 *If 1 not eligible to participate*

FOR THOSE NOT ELIGIBLE

- Thank you for your time. We are looking for people who have played the pokies in the last 30 days, so you can continue on. Have a good day.
OR

- Thank you for your time. We are looking for people who have a limit to their spending on the pokies today. Have a good day.

FOR ELIGIBLE PARTICIPANTS

- Because you are intending to set a limit on your gambling today you are eligible for the study.
- The research involves a brief survey before and after you gamble today. We will ask you some questions about how you will limit your money spent on the pokies today.
- After gambling we ask that you come back and see us and tell us how your strategies worked and we will sort out a $20 shopping voucher for participating.
- We would also like to follow you up by email in 30 days to see how the strategies are still working and you would receive a $30 shopping voucher for helping us out.

Take the participant to the quiet area for interview and conduct interview or pass them over to another RA. If only 2 RAs on site, then conduct the interview yourself. Please tell the participant your name and then say you will get the envelope with the survey. While you are doing this give the participant the information sheet. Ask the participant to read through it and then offer them the consent form to sign.

PARTICIPANT INTERVENTION SHEET

PREFERRED NAME:	ENVELOPE NUMBER:	INTERVIEWER NAME:

PRE-GAMBLING SURVEY		
4. This first question is about what you intend to do to limit how much you spend playing the pokies today. Can you tell me a bit about that? *Ask again:* Is there anything else you intend to do to limit your gambling today? *Keep repeating until no more strategies are mentioned.*	*List everything mentioned by participant verbatim*	
5. Looking over your list of strategies, which ONE strategy would be most helpful in sticking to your limits?	*PLEASE CIRCLE THE STRATEGY ABOVE THAT THE PARTICIPANT HAS IDENTIFIED AS LIKELY TO BE MOST HELPFUL*	
6. How willing are you to stick to your strategies today, no matter what happens? On a scale where 1 is "not willing at all" through to 7 "extremely willing".		/7
7. How ready are you to stick to your strategies today, no matter what happens? 1 being "not at all ready" to 7 being the "extremely ready".		/7
8. How confident are you that you could stick to your strategies today, no matter what happens? 1 being "not confident at all" to 7 "extremely confident".		/7
9. Imagine something does happen and you stop using your strategies. How confident are you that you could start using them again? 1 being "not confident at all" to 7 being "extremely confident". *(clarify with strategies provided in question 1).*		/7
10. How much money are you intending to spend today?	$	
11. What gender do you most identify with?		
12. What is your age? *(if reluctant - ask approximate)*		
13. What is your highest education level completed?	(1) Post-graduate degree, (2) Bachelors degree, (3) Advanced diploma /diploma /certificate / trade qualification, (4) Completed year 12, (5) Completed year 10, (6) Completed year 8 or less, (7) No schooling (8) Other _____	
14. Are you currently employed?	(1) Employed, work full-time (2) Employed, work part-time (3) Employed - away from work (4) Unemployed, looking for FT work (5) Unemployed, looking for PT work (6) Not in labour force/not looking for work (7) Other _____	
15. Which of the following best describes your household?	(1) Single person household (no children) (2) Single with children still at home (including joint custody) (3) Single with children not living at home (4) Couple with no children (5) Couple with children still at home (6) Couple with children not living at home (7) Group or shared household (8) In some other arrangement	

Thank you for completing this survey. Please come back to us straight after playing pokies to do another short survey and get your $20 shopping voucher.

Researcher to now carry forward the strategies at Q1 to the post-gambling survey.	*Researcher record time interview ended:*

Thank you for coming back to complete your second survey. These questions are around how your strategies worked today.

Intended strategies *These are written by researcher from Q1 in the pre-session survey*	How much do you agree with the following statement: I used this strategy as I intended 1 = never to 7= always	How helpful was the strategy in stick to your limits today? 1 = not helpful at all to 7 = extremely helpful
	/7	/7
	/7	/7
	/7	/7

What other strategies did you use today? *(Prompt – Did you use anything else to limit your gambling?).*
If yes, ask what strategies were used?

Other Strategies	How much do you agree with the following statement: I used this strategy as I intended 1 = never to 7= always	How helpful was the strategy in stick to your limits today? 1 = not helpful at all to 7 = extremely helpful
	/7	/7
	/7	/7

1. How much do you agree with the following statement: When playing the pokies today I stuck to my money limit? 1 = completely disagree, 7 = completely agree.	/7
2. How much money did you spend? *(Ask follow-up prompt question to check on any forgotten spending. For example, Did you withdraw any other money?)*	$
3. How much do you agree with the following statement: Over the next 30 days, if I wanted to limit the amount of money I spend on the pokies I would use the strategies we talked about today? 1 = completely disagree, 7 = completely agree.	/7
4. Over the next 30 days, how confident are you that you could stick to your strategies when playing the pokies? This means you could stick to them no matter what. happens. 1 = not confident to 7 = extremely confident.	/7
5. How much money do you intend to spend on the pokies in the next 30 days *(Prompt with number of times planned gambling and the amount per session).*	$

We would like to talk briefly on how much time and money you spent on the pokies gambling over the past 30 days. To help you remember we can use a calendar.

Starting with today and working backwards when was the last day you played the pokies? Record the hours you played the pokies, how much money you spent and whether you stuck to your limit (1 = not at all to 7 = very much so).

Researcher circle today's date and work backwards. Also, cross out dates outside of the timeframe. Where there is a special day write it on the date.

CALENDAR							
	Sunday	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**
Date			25 July	26 July	27 July	28 July	29 July
Duration			hours	hours	hours	hours	hours
$ Spent			$	$	$	$	$
Stick to limit?							
Date	30 July	31 July	1 Aug	2 Aug	3 Aug	4 Aug	5 Aug
Duration	hours	hours	hours	hours	hours	hours	hours
Spent	$	$	$	$	$	$	$
Stick to limit?							
Date	6 Aug	7 Aug	8 Aug	9 Aug	10 Aug	11 Aug	12 Aug
Duration	hours	hours	hours	hours	hours	hours	hours
Spent	$	$	$	$	$	$	$
Stick to limit?							
Date	13 Aug	14 Aug	15 Aug	16 Aug	17 Aug	18 Aug	19 Aug
Duration	hours	hours	hours	hours	hours	hours	hours
Spent	$	$	$	$	$	$	$
Stick to limit?							
Date	20 Aug	21 Aug	22 Aug	23 Aug	24 Aug	25 Aug	26 Aug
Duration	hours	hours	hours	hours	hours	hours	hours
Spent	$	$	$	$	$	$	$
Stick to limit?							
Date	27 Aug	28 Aug	29 Aug	30 Aug	31 Aug	1 Sept	2 Sept
Duration	hours	hours	hours	hours	hours	hours	hours
Spent	$	$	$	$	$	$	$
Stick to limit?							
Date	3 Sept	4 Sept	5 Sept	6 Sept	7 Sept	8 Sept	
Duration	hours	hours	hours	hours	hours	hours	
Spent	$	$	$	$	$	$	
Stick to limit?							

Thank you for participating today. We would like to give you another survey in 30 days which would take up to 15 minutes. You can do it online or by telephone and you would receive a $30 shopping voucher.

EMAIL CONTACT _____

PHONE NUMBER _____

SIGN THAT YOU HAVE RECEIVED YOUR VOUCHER TODAY_____

PARTICIPANT INTERVENTION SHEET

Participants can read this sheet or have it read out – whatever is preferred.

PREFERRED NAME:	ENVELOPE NUMBER:	INTERVIEWER NAME INTERVIEW START TIME:

16. To start with, we have a list of strategies people use to limit their pokies gambling. For each strategy circle whether you "intend to do it today" or you "do not intend to do it today".		
Strategy *(if reading this aloud change 'I' to 'you')*	I intend to do this today	I do not intend to do this today
If I am <u>losing,</u> I will not increase or change my bet size.	Yes	No
Avoid chasing losses - If I lose my money, I will not spend more to try and win it back.	Yes	No
If I am <u>winning,</u> I will not increase or change the size of my bet	Yes	No
Give any winnings to someone else such as my partner or friend while gambling.	Yes	No
Put any winnings from gambling away (e.g., in a different pocket or the back of my purse).	Yes	No
Cash out all or some of the winnings and not gamble winnings later in the session.	Yes	No
Take a regular break while I am gambling today (e.g., take a walk, get a drink).	Yes	No
Set up cues to keep track of time (e.g., set a timer on my phone).	Yes	No
Keep track of your play by using a card based limit setter (e.g., YourPlay or loyalty card).	Yes	No
Not drink <u>any</u> alcohol when gambling today.	Yes	No
<u>Not drink too much alcohol</u> when gambling today.	Yes	No
Do other activities offered by the venue such as watch sport or have a meal.	Yes	No
Use only the money that I've brought into the venue today (i.e., no EFTPOS).	Yes	No
Ask family or a friend to hold my EFTPOS card while in the venue.	Yes	No
Ask family or a friend to hold my cash that is not for gambling.	Yes	No
Only play low denomination poker machines.	Yes	No
Use coins rather than notes for gambling.	Yes	No

Don't borrow money for gambling from friends or family.	Yes	No
Don't gamble with people that gamble heavily.	Yes	No
Some people also put strategies into place before coming into the gambling venue. Did you do any of the following for playing the pokies today?	Yes, I did this	No, I did not do this
Planned my gambling today so it did not get in the way of other activities.	Yes	No
Planed in advance the exact amount of money I would spend today.	Yes	No
Plan other activities after gambling so that I can't stay at the venue and gamble.	Yes	No
Brought into the venue the exact amount of <u>money</u> I will spend.	Yes	No
Planned in advance the exact amount of <u>time</u> I would gamble today.	Yes	No
Ask someone to call me at a designated time and remind me to leave.	Yes	No
Left bank or cash cards at home so as to limit spending	Yes	No
Other? Please specify here:	Yes	No

Next, we want to focus just on ONE strategy that you will use today. Looking over your list of strategies, which ONE strategy would be most helpful in sticking to your limits?

Strategy 1	
Plan A Tell me a bit more about how you will do that strategy *(ask for specifics – how much, how often etc). No need to overcomplicate – just make it personal.* E.g. I will take a break after 30 minutes of gambling for about 10 minutes and have a beer.	*Plan A: ONE strategy you will use today:*
What made you choose this strategy? *(Ask to clarify if needed).* E.g. It gives me a bit of perspective if I take a break. This means I get to reset by walking away.	
What might stop you from using or sticking to your strategy? *(List any number of obstacles and describe them. Ask anything else?).*	

E.g. I am winning; I am losing; the cue is too long at the bar; someone might take my machine.	
Choose one obstacle that you think could possible happen. What are some ways that you could overcome the obstacle? *(Prompt behaviour, thoughts or feelings).* *Help participants come up with ideas. If prompts needed, use "what worked in the past?"*	*One obstacle that could happen:* *Ways to overcome it:*
Plan B **Write out the Plan B** e.g. **If** I worry someone might take my machine when I have a break **then** I will remind myself that the break is more important than staying at the same pokie machine.	Plan B: Write out the backup strategy using if… then….

Participants to transfer their plan A and plan B to the postcard. They should also state they are fully committed to following the specified plan at this venue today, sign and date. Remind participants to keep the card and bring it back to the researcher after gambling.

17. How willing are you to stick to your strategies today, no matter what happens? On a scale where 1 is "not willing at all" through to 7 "extremely willing".	/7
18. How ready are you to stick to your strategies today, no matter what happens? 1 being "not at all ready" to 7 being the "extremely ready".	/7
19. How confident are you that you could stick to your strategies today, no matter what happens? 1 being "not confident at all" to 7 "extremely confident".	/7
20. Lastly, imagine something does happen and you stop using your strategies. How confident are you that you could start using your Plan A or Plan B again? 1 being "not confident at all" to 7 being "extremely confident". *(clarify with strategies provided in question 1 see FAQ).*	/7
21. How much money are you intending to spend today?	$
22. What gender do you identify as?	

23. What is your age? *(if reluctant ask approximate)*	
24. What is your highest education level?	*(1) Post-graduate degree, (2) Bachelors degree, (3) Advanced diploma /diploma /certificate / trade qualification, (4) Completed year 12, (5) Completed year 10, (6) Completed year 8 or less, (7) No schooling (8) Other _____*
25. Are you currently employed?	*(1) Employed, work full-time (2) Employed, work part-time (3) Employed - away from work (4) Unemployed, looking for FT work (5) Unemployed, looking for PT work (6) Not in labour force/not looking for work (7) Other _____*
26. Which of the following best describes your household?	(1) Single person household (no children) (2) Single with children still at home (including joint custody) (3) Single with children not living at home (4) Couple with no children (5) Couple with children still at home (6) Couple with children not living at home (7) Group or shared household (8) In some other arrangement

Thank you for completing this survey. Please come back to us straight after playing pokies to do another short survey and get your $20 shopping voucher.

Researcher to now carry forward the strategy to the post-gambling survey.	*Researcher record time survey ended:*

POST GAMBLING SURVEY (INTERVENTION) *Researcher record current time:*	

Thanks for returning to complete your second survey. Let's see how your Plan A and Plan B worked today.

Plan A	*(write here)*	
How much do you agree with the following statement: I used this strategy as I intended (1 = never to 7= always).		/7
How helpful was the strategy in sticking to your limits today? (1 = not helpful at all to 7 = extremely helpful).		/7
What helped you use the strategy?		
Was there anything that made it difficult to use?		
Did you need to adjust or change the strategy?		
How much do you agree with the following statement: Over the next 30 days, if I wanted to limit the amount of money I spend on the pokies I would use this strategy again? 1 = completely disagree, 7 = completely agree.		/7
Plan B	*(write here)*	
How much do you agree with the following statement: I used this strategy as I intended (1 = never to 7= always).		/7
How helpful was the strategy in sticking to your limits today? (1 = not helpful at all to 7 = extremely helpful).		/7
What helped you use the strategy?		

Was there something that made it difficult to use?	
Did you need to adjust or change the strategy?	
How much do you agree with the following statement: Over the next 30 days, if I wanted to limit the amount of money I spend on the pokies I would use this strategy again? 1 = completely disagree, 7 = completely agree.	/7

What other strategies did you use today? *(Prompt – did you use anything else to limit your gambling). If yes ask what strategies were used?*

Strategies	How much do you agree with the following statement: I used this strategy as I intended (1 = never to 7= always).	How helpful was the strategy in stick to your limits today? 1 = not helpful at all to 7 = extremely helpful
	/7	/7
	/7	/7
	/7	/7

6.	How much do you agree with the following statement: When playing the pokies today I stuck to my money limit? 1 = completely disagree, 7 = completely agree.	/7
7.	How much money did you spend? *(Ask follow-up prompt question to check on any forgotten spending – for example did you withdraw any other money?)*	$
8.	How much do you agree with the following statement: Over the next 30 days, if I wanted to limit the amount of money I spend on the pokies I would use the strategies we talked about today? 1 = completely disagree, 7 = completely agree.	/7
9.	Over the next 30 days, how confident are you that you could stick to your strategies when playing the pokies? This means you could stick to them no matter what happens. 1 = not confident to 7 = extremely confident.	/7
10.	How much money do you intend to spend on the pokies in the next 30 days? *(Prompt with number of times planned gambling and the amount per session).*	$

Let's check that the strategies on your postcard are what you intend to do over the next 30 days. Would you like to stick to the ones you chose today or would you like to do something else? *Refer to earlier question and response to 'would you use it again'. (If wanting to pick new ones go back to the list of strategies and select ONE. Read Plan A and Plan B).*

We would like to talk briefly on how much time and money you spent on the pokies gambling over the past 30 days. To help you remember we can use a calendar. Starting with today and working backwards when was the last day you played the pokies? Record the hours you played the pokies, how much money you spent and whether you stuck to your limit (1 = not at all to 7 = very much so).

Researcher circle today's date and work backwards. Also, cross out dates outside of the timeframe. Where there is a special day write it on the date.

CALENDAR							
	Sunday	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**
Date			25 July	26 July	27 July	28 July	29 July
Duration			hours	hours	hours	hours	hours
$ Spent			$	$	$	$	$
Stick to limit?							
Date	30 July	31 July	1 Aug	2 Aug	3 Aug	4 Aug	5 Aug
Duration	hours	hours	hours	hours	hours	hours	hours
Spent	$	$	$	$	$	$	$
Stick to limit?							
Date	6 Aug	7 Aug	8 Aug	9 Aug	10 Aug	11 Aug	12 Aug
Duration	hours	hours	hours	hours	hours	hours	hours
Spent	$	$	$	$	$	$	$
Stick to limit?							
Date	13 Aug	14 Aug	15 Aug	16 Aug	17 Aug	18 Aug	19 Aug
Duration	hours	hours	hours	hours	hours	hours	hours
Spent	$	$	$	$	$	$	$
Stick to limit?							
Date	20 Aug	21 Aug	22 Aug	23 Aug	24 Aug	25 Aug	26 Aug
Duration	hours	hours	hours	hours	hours	hours	hours
Spent	$	$	$	$	$	$	$
Stick to limit?							
Date	27 Aug	28 Aug	29 Aug	30 Aug	31 Aug	1 Sept	2 Sept
Duration	hours	hours	hours	hours	hours	hours	hours
Spent	$	$	$	$	$	$	$
Stick to limit?							
Date	3 Sept	4 Sept	5 Sept	6 Sept	7 Sept	8 Sept	
Duration	hours	hours	hours	hours	hours	hours	
Spent	$	$	$	$	$	$	
Stick to limit?							

Thank you for participating today. We would like to give you another survey in 30 days which would take up to 15 minutes. You can do it online or by telephone and you would receive a $30 shopping voucher.

EMAIL CONTACT _____

PHONE NUMBER _____

SIGN THAT YOU HAVE RECEIVED YOUR VOUCHER TODAY_____

Participant Information Sheet

Title	*Does action and coping planning assist gamblers in sticking to their limits?*
Principal Investigators	*Prof Dan Lubman, Dr Victoria Manning, Dr Simone Rodda, Dr Kathleen Bagot*
Location	*Turning Point Alcohol and Drug Centre, 54-62 Gertrude St, Fitzroy, Victoria 3065*
Investigator contacts	*03 8413 8400*

1 Introduction

You are invited to take part in this research project, which is called: *Does action and coping planning assist gamblers in sticking to their limits?* You have been invited because you are intending to set a limit on your gambling today. The research involves completing a brief survey before and after your gambling today. Half of participants will be offered additional assistance in planning the strategies they use to limit their gambling today.

2 What is the purpose of this research?

The aim of this project is to increase our understanding of the types of strategies patrons naturally use when gambling in a poker machine venue (e.g., limiting access to cash). This includes understanding which strategies are effective and for whom. We also want to know if the addition of facilitated planning (i.e., having someone help you plan how your strategies will be implemented) helps to improve the effectiveness of these strategies. This is important as there are many strategies recommended to help gamblers to stay in control but there is limited evidence on which strategies actually work.

3 What does participation in this research involve?

You will be asked to complete a confidential survey titled, "Before gambling survey" and "Post gambling survey." Both surveys involve questions that mostly require you to tell us about your strategies used to set limits on your gambling. This will include questions around the types of strategies you might use to limit your gambling. There will be a 30 day follow-up evaluation where we will also ask you to complete a screening tool for gambling behaviour. The pre-gambling survey can be self-administered or read to you by a research assistant. The before gambling survey should take up to 5 minutes to complete. The after gambling survey should take no more than 15 minutes to complete.

We are also offering additional assistance in preparing for the gambling session today. We will allocate half of participants to additional assistance, because we want to know if this improves the effectiveness of strategies that are naturally used in gambling venues. If you are allocated to receive additional assistance you will be asked to describe more information about how, what and when you will put into practice your in-venue strategies (e.g., limit access to cash). This additional assistance will take no longer than 10 minutes to complete before entering the venue.

We ask that all participants complete a follow-up evaluation 30 days and 6 months later. The researchers will contact you by email to arrange the follow-up which can be completed online or by telephone interview. The follow-up evaluation will be conducted by research staff at the University of

Auckland via an online survey platform (Qualtrics) or by telephone. Whether the follow-up is online or by phone is completely your choice and it should take no more than 15 minutes to complete.

Costs and Reimbursement: There are no costs associated with participation in this research project. You will be offered a store voucher of $20 in appreciation of your contribution today. If you complete the 30 day follow-up evaluation you will receive an additional $30 voucher in appreciation of your contribution. We also ask that you complete a 6-month follow-up evaluation but this is not associated with reimbursement.

How the research will be monitored: The research will be monitored by a Project Steering Committee chaired by the Principal Investigator and including all of the principle investigators.

4   Other relevant information about the research project

It is anticipated that approximately 160 participants will take part in this project. Participants will be recruited from around 20 gambling venues across Victoria including metropolitan and regional venues. Data will be analysed after the 30 day evaluation and then the 6-month follow-up evaluation. Participants can access a report on the Turning Point website.

5   Do I have to take part in this research project?

Participation in any research project is voluntary. If you do not wish to take part, you do not have to. If you decide to take part and later change your mind as you complete the survey, you are free to withdraw from the project. For further information on withdrawing from this project, please refer to section 8 of this information sheet. Your decision whether to take part or not to take part, or to take part and then withdraw, will not affect your relationship with the organisations involved in this study.

6   What are the possible benefits of taking part?

We cannot guarantee or promise that you will receive any benefits from this research; however, this research may improve the future capacity of venues to provide you information on the strategies that could be effective for you when gambling on poker machines. If we know which strategies are effective we may be able to help people to stick to their limits and stay in control of their gambling.

7   What are the possible risks and disadvantages of taking part?

Some of the questions include information about emotions and behaviours related to gambling, and may cause distress. You do not have to answer any questions you are uncomfortable with. You may skip questions you find distressing. You are not obliged to disclose information about illegal activities.

We believe it is unlikely for the venue survey to be upsetting, and some of the questions might not be relevant to you, but if you do feel distressed in any way, please inform the researcher, who can seek further assistance from clinical staff available. If you wish to discuss gambling-related issues with a trained professional, Gambler's Help offers free, confidential support, advice and information to gamblers, their family and friends, and the community. They can be contacted 24 hours per day, 7 days per week, by phone (1800 858 858), or online at http://www.gamblinghelponline.org.au.

8   What if I withdraw from this research project?

If you do consent to participate, you may withdraw at any time. This includes during the administration of the baseline survey or at any of the post-gambling survey time points (e.g., 30 days and 6 months post gambling). If you decide to withdraw from the project, please notify a member of the research team that you would like to withdraw.

9   What happens when the research project ends?

When the research project ends, the findings will be submitted for publication in a research journal and made available on the Turning Point website. No individuals will be identified in any reporting of this study with all findings reported at a group level using statistics like averages and percentages.

10   What will happen to information about me?

The personal information that the research team collect and use is only information gathered from the venue survey. All personal information collected as part of the study is protected in accordance with applicable privacy requirements under the Privacy and Data Protection Act (Vic) 2014. Data will be kept securely at Turning Point, with digitalised information being held on secure Turning Point servers. Data entered by you at 30 days and 6 month follow-up evaluation will be via Qualtrics online software or telephone interview. Data entered into Qualtrics is housed on a secure server in Sydney, Australia. Paper copies (e.g., surveys) will be kept in locked cupboards in secure premises. In accordance with the Australian Code for the Responsible Conduct of Research (2007), the hard copies of the data will be stored for 7 years from the date of the final report to the funder. After this period, paper copies will be shredded and electronic data stored indefinitely.

Any information obtained for this research project that can identify you will remain confidential. A serious and imminent threat to harm yourself or others may be reported to a third person where required by law. Any information about safety and protection of children is subject to reporting to relevant authorities. It is anticipated that the results of this research project will be published and/or presented in a variety of forums. In any publication and/or presentation, information will be provided in such a way that you cannot be identified. Confidentiality will be maintained because questionnaire responses will have been collected separately to your email contact details and the data combined and processed within a statistical program.

11   Who is organising and funding the research?

This research project is being organised and conducted by Dr Dan Lubman and the research team. Turning Point will receive a research grant from Victorian Responsible Gambling Foundation for undertaking this research. No member of the research team will receive personal financial benefit from your involvement in this research project (other than their ordinary wages).

12   Who has reviewed the research project?

All research in Australia involving humans is reviewed by an independent group of people called a Human Research Ethics Committee (HREC). The ethical aspects of this research project have been approved by Eastern Health HREC. This project will be carried out according to the National Statement on Ethical Conduct in Human Research (2007).

14   Further information and who to contact

If you have any concerns about this research feel free to contact Dr Dan Lubman on 03 8413 8400. viewing HREC approving this research and HREC contact detailsReviewing HREC approving this research and HREC contact details

Reviewing HREC name	Eastern Health Human Research Ethics Committee
HREC Executive Officer	Chair Person
Telephone	03 9895 3398
Email	ethics@easternhealth.org.au

Title	*Does action and coping planning assist gamblers in sticking to their limits?*
Principal Investigator(s)	*Prof Dan Lubman, Dr Victoria Manning, Dr Simone Rodda, Dr Kathleen Bagot*
Location	*Turning Point Alcohol and Drug Centre, 54-62 Gertrude St, Fitzroy, Victoria 3065*
Investigator contacts	*03 8413 8400*

Declaration by Participant

I have read the Participant Information Sheet or someone has read it to me in a language that I understand.

I understand the purposes, procedures and risks of the research described in the project.

I have had an opportunity to ask questions and I am satisfied with the answers I have received.

I freely agree to participate in this research project as described and understand that I am free to withdraw at any time during the project without affecting my future care.

I understand that I will be given a signed copy of this document to keep.

Name of Participant (please print) _____

Signature _____   Date _____

Declaration by Researcher[†]

I have given a verbal explanation of the research project, its procedures and risks and I believe that the participant has understood that explanation.

Name of Researcher[†] (please print) _____

Signature _____   Date _____

[†] An appropriately qualified member of the research team must provide the explanation of, and information concerning, the research project.

Note: All parties signing the consent section must date their own signature.

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