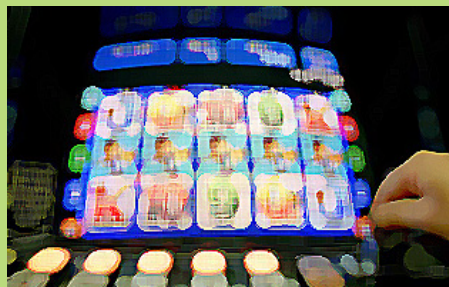# schottler consulting

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Factors that influence gambler adherence to pre-commitment decisions

**Prepared for
Gambling Research Australia**

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The views expressed in this report are solely those of the author/s.

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The exploratory nature of the research should also naturally be considered in this context.

Authorised by: Gambling Research Australia

Contents

Major findings of the study

Purpose

The purpose of the current report is to present major findings relating to an analysis of the factors which influence gambler precommitment behaviour. Precommitment was defined as the ability to keep to or below monetary and other limits set for gambling. Electronic gaming machine (EGM) play was the only type of gambling studied in the research.

Specific research objectives were to identify:

- aspects of gaming machine design that may influence a consumer to change or adhere to precommitment decisions
- determine activities and features offered by and at venues that support or undermine precommitment decisions
- other factors that may influence a consumer precommitment decision (eg. social support networks, financial literacy, comorbid conditions etc.)

Methodology

As past research has only examined precommitment on an attitudinal level, the current study set out to explore the topic through both further attitudinal research and *also* from a behavioural perspective. For this purpose, the current study had both attitudinal and live EGM play observational components. This was to help shift the body of knowledge about precommitment from a solely attitudinal (and self-report) perspective, to a more in-depth 'intra-player' transactional and behavioural perspective.

Subjects

Participants in the study were 200 EGM players across three states of Australia - Victoria, Queensland and South Australia. Interviewers travelled to 200 venues across the three jurisdictions to 'shadow' players and observe their live play behaviour. All players gave informed consent to having their play observed.

As a new research methodology in an exploratory field (as there are no known prior studies exploring precommitment during live EGM play), results should be considered indicative and emerging, rather than definitive.

Within this context, the following major findings are summarised.

WHAT FACTORS DIRECTLY INFLUENCE ADHERENCE TO PRECOMMITMENTS?

Study findings showed that only a relatively small set of variables <u>directly</u> influence player adherence to precommitments during EGM play. Direct predictors related to:

- (1) EGM play dynamics
- (2) EGM spin rates
- (3) Life events and daily hassles (as experienced by players)

(1) EGM play dynamics

Players were more likely to exceed their EGM expenditure limit, if they experienced the following during EGM play (controlling for risk for problem gambling) (Figure 1):

- an increased number of free spins (after moving from the first to the second EGM) (r=.253, p<.001)
- being highly absorbed and involved in EGM play (r=.145, p<.05)
- experienced stronger 'urges to continue' during EGM play (r=.140, p<.05)
- experienced high excitement after receiving features during EGM play (r=.252, p<.05)

This may suggest that free spins, the excitement from features, play involvement and feeling urges to continue each play some role in EGM players <u>not</u> keeping to precommitments.

Figure 1. Factors directly predicting players exceeding expenditure limits during EGM play

Factors which directly predict EGM players **exceeding spend limits**

Increase in free spins from EGM1-2
Increase in the free spins received from the 1st to 2nd EGM played (r=.253, p<.001)

Involvement in EGM play
How absorbed and involved player was in EGM play (r=.145, p<.05)

Overall urge to continue play
The greater the overall urge to continue EGM play (r=.140, p<.05)

Excitement from features
The greater the excitement from features (r=.252, p<.05)

Tending towards significance
A smaller number of other players being within a 2m radius of player (r=-.135, p=.057)

Total free spins recorded during the live observation (r=.119, p=.09)

Based on online limit as the dependent variable

Extent spend limits were exceeded

Controlling for risk for problem gambling

Based on the monetary limit value reported directly after play unless noted

(2) EGM spin rates

Findings also showed that problem gamblers who exceeded expenditure limits tended to play at a faster rate of play (mean=12.0) than low risk gamblers (mean=5.1) (p<.05) (Figure 2). This may suggest that higher risk gamblers exceed limits in part due to a faster rate of EGM play.

Figure 2. Mean spins per minute of EGM play and whether players adhered to spent limits - by risk for problem gambling (N=200, December 2009)[a]

EGM spins per minute of play (excluding free spins, features and use of double-up)
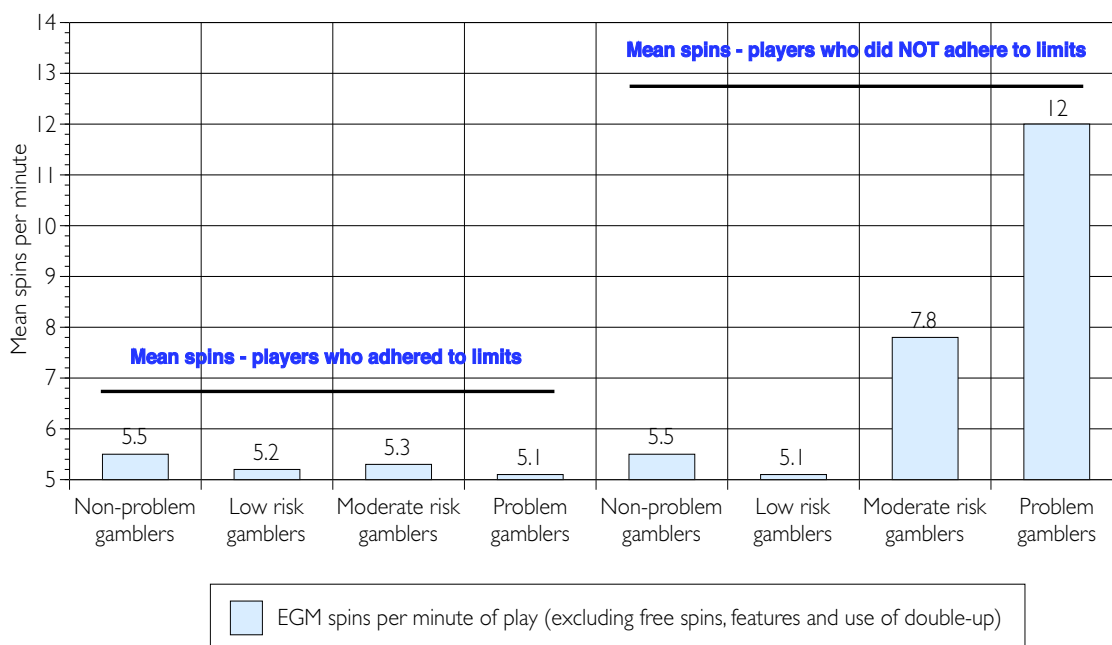
a. Mean spins associated with wins/losses recorded by observers, along with time spent at EGMs (not a pure measure of just time spent on EGM play as includes note/coin feeds and other activities) (Limit adherence based on limits reported during the online study)

(3) Life events and daily hassles

Findings showed that recent retirement increased the likelihood that players exceeded their expenditure limit during play (controlling for risk for problem gambling) (OR=7.91, p<.01). This may suggest that retirement presents a risk factor for players exceeding precommitments.

In comparison, players <u>less likely</u> to exceed expenditure limits tended to have 'money worries' and reported that the following had occurred in the previous 12 months:

- •• taking on a mortgage, loan or making a large purchase (OR=.21, p<.01)
- •• experiencing daily money hassles - Relating to basics (OR=.41, p<.05) housing (OR=.36, p<.05) or recreation (OR=.13, p<.15)
- •• being concerned about owing money or debts (OR=.46, p<.05)
- •• being concerned about job security (OR=.39, p<.05)

INDIRECT INFLUENCES IN PLAYER ADHERENCE TO PRECOMMITMENTS

While only a small set of variables were <u>directly</u> related to player adherence to expenditure precommitments, other important variables were found to be related to either the 'urge to continue' EGM play or EGM play excitement (two related precommitment constructs).

Predictors of urges to continue EGM play

Predictors most strongly related to 'urges to continue' EGM play were the excitement experienced during features, overall excitement from EGM play and excitement from free spins (controlling for risk for problem gambling).

Other important predictors of the 'urge to continue' included total features or free spins received, visiting a venue for loyalty points and incentives and venue staff friendliness (Coin drops in the background were also significant, although the result was not statistically reliable).

Significant predictors of the urge to continue EGM play are shown in Figure 3.

Figure 3. Factors which predict urge to continue during EGM play (controlling for risk for problem gambling)

Factors which predict **urge to continue** during EGM play

Excitement from features
The higher excitement ratings when features were received during play (r=.599, p<.001)

Overall play excitement
The higher the overall play excitement (r=.526, p<.001)

Excitement from free spins
The higher the excitement ratings when free spins were received (r=.322, p<.01)

Total features during session
The more features recorded during the live observation (r=.247, p<.001)

Total free spins during session
The total free spins recorded during the live observation (r=.216, p<.01)

Loyalty points/incentives
The more players visited venue for loyalty points/incentives (r=.214, p<.01)

Coin drops in background
The more players heard coin drops in the background (r=.196, p<.01)

Friendliness of venue staff
The friendlier the staff were at the EGM venue (r=.178, p<.05)

Higher number of multi-credits
The total multi-credit bets made during EGM play (r=.166, p<.05)

Money won - free spins/features
The more money won by players following free spins/features (r=.164, p<.05)

Tending towards significance
Player desire for wins (r=.13, p=.07)
The more players had wins from $10-20 (r=.272, p=.09) or 1c-$5 (r=.13, p=.07)
The more spins associated with money lost (r=.14, p=.06)

Controlling for risk for problem gambling

Higher urge to continue EGM play

Key predictors of EGM play 'excitement' included being very involved in EGM play, available player promotions and prizes, loyalty points and incentives offered to players, dreaming or desiring to win, the amount of money won on the day of play, venue staff friendliness and the total free spins obtained during play (controlling for risk for problem gambling).

Significant predictors of play excitement are in Figure 4.

Figure 4. Factors which predict player excitement during EGM play (controlling for risk for problem gambling)

Factors which predict player **excitement** during EGM play

Involvement in EGM play
How absorbed and involved player was in playing pokies (r=.363, p<.001)

Player promotions/prizes
Promotions/prizes offered to EGM players (r=.25, p<.001)

Loyalty points/incentives
Good loyalty points or incentives offered to players (r=.221, p<.01)

Player desire to win on pokies
Player tendency to think it would be nice to win in 24hrs pre-play (r=.193, p<.01)

Total won/lost on pokies
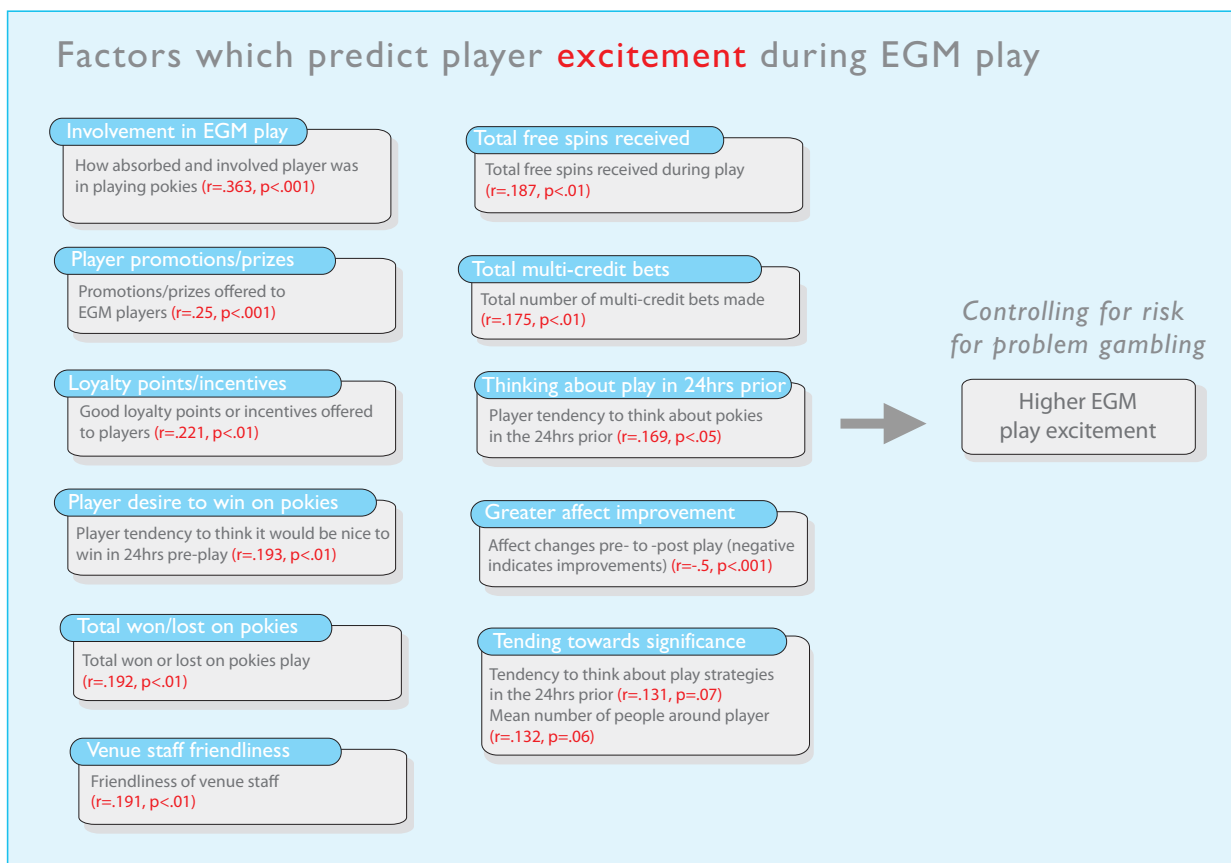Total won or lost on pokies play (r=.192, p<.01)

Venue staff friendliness
Friendliness of venue staff (r=.191, p<.01)

Total free spins received
Total free spins received during play (r=.187, p<.01)

Total multi-credit bets
Total number of multi-credit bets made (r=.175, p<.01)

Thinking about play in 24hrs prior
Player tendency to think about pokies in the 24hrs prior (r=.169, p<.05)

Greater affect improvement
Affect changes pre- to -post play (negative indicates improvements) (r=-.5, p<.001)

Tending towards significance
Tendency to think about play strategies in the 24hrs prior (r=.131, p=.07)
Mean number of people around player (r=.132, p=.06)

Controlling for risk for problem gambling

Higher EGM play excitement

Prospective analysis using a longitudinal design was undertaken using 'excitement' and 'urge to continue' ratings made for the first and second EGM played during live observations.

Analysis showed that:

- the greater the change in play excitement (from EGM 1 to 2), the more likely the player experienced an increase in the urge to continue play (r=.53, p<.001). This may suggest that players who increased in excitement (from EGM 1 to EGM 2) tended to *also* experience an increased urge to gamble
- player tendencies to think about 'strategies to win' (in the 24hrs prior to play) was significantly associated with an increase in play excitement (from EGM 1 to 2) (r=.318, p=.005)
- players visiting venues to obtain loyalty points and incentives were more likely to experience increased excitement (from EGM 1 to EGM 2) (r=.277, p=.015) *(perhaps due to players becoming increasingly 'stimulated', as they win bonus points)*

Together, findings highlight a possible role of play excitement in driving the urge to continue during EGM play and point to a potential role for both cognitive distortions about gambling and loyalty points and incentives in driving EGM play excitement.

While causal linkages could not be established in the small study sample, such factors may clearly also play an indirect role in player adherence to precommitments.

Findings revealed a number of other important insights about how players select precommitments and player tendencies to exceed precommitments during live EGM play.

Player selection of precommitments

Insights relating to how players select precommitments included:

•• in addition to expenditure limits, around 80% of players selected a bet size limit and 28% used some form of time limit (which may suggest that bet size limits are useful for many players and that time limits appeal to a much smaller segment)

•• only 52% of EGM players reported setting expenditure limits more than a day before play (while the remainder set limits closer to play)

•• while 55% of EGM players reported 'always' setting an expenditure limit for EGM play, problem gamblers were less likely to report 'always' setting limits, compared to non-problem gamblers (OR=.038, p<.001)

•• when asked to report limits at three different points in time, problem gamblers were found to report widely variable limits. In comparison, other gambling risk segments reported fairly similar limits across time (Figure 5)

Specifically, problem gamblers reported their spend limits were a mean of:
• $105 per day - when limits were reported in an online survey (~ 1 week before play)
• $124 per day - when limits were reported directly before play (at the venue) (p<.05)
• $69 per day - when limits were reported after play

•• problem gamblers reported a wide range of financial stresses and were more likely to report loans and IOUs, compared to non-problem gamblers (p<.05)

•• higher-risk gambling segments used fewer (less detailed) budget categories when reporting their household budget (suggesting that expenses may be less 'top-of-mind')

•• problem gamblers were more likely to overspend general household budgets, compared to non-problem gamblers (especially food, car and cigarette budgets) (p<.05)

•• when based on self-reported limits after play, problem gamblers were significantly more likely to report exceeding their limit, compared to non-problem gamblers (p<.05)

•• players who tended to report different limits over time tended to have difficulty tracking their expenditure during live EGM play (χ^2=9.62, p<.01) (possibly an indication that some players have difficulty processing EGM expenditure information)

Figure 5. Self-reported mean EGM spend limits estimated by players at different points in time (N=194, December 2009)[a]
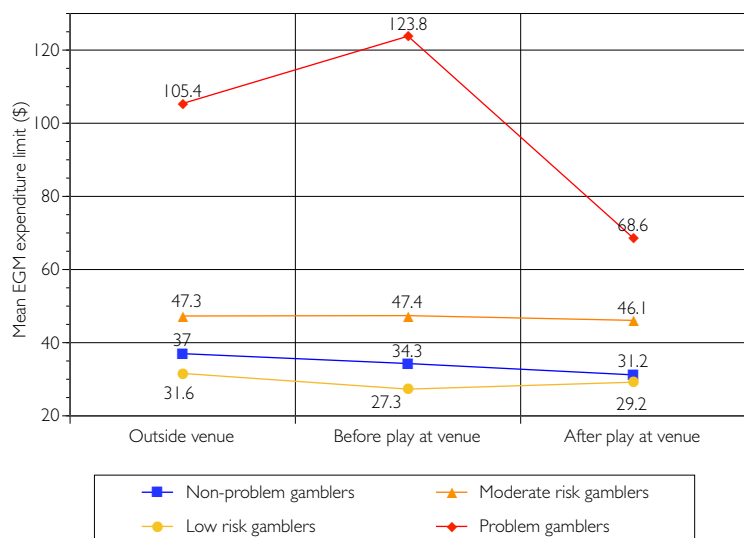
a. Question - In relation to just your pokies play, What is your typical daily pokies spend limit - that is, the amount you prefer not to spend over (even if you don't keep to it) (Base: All EGM players)

- • when <u>bet limits</u> were set for EGM play:
  - • 61% of EGM players set a bet size limit of a single credit, 25% set two credits and 13% set more than two credits
  - • problem gamblers were more likely to set bet size limits, compared to non-problem gamblers (based on mean comparisons) (p<.05)
  - • 42% of problem gamblers set a bet size limit on more than two credits per line (compared to only 15% of non-problem gamblers) (although this trend was only tending towards significance - p=.07)

- • when <u>time limits</u> were set for EGM play:
  - • the mean time limit for EGM players was 62 minutes
  - • low risk, moderate risk and problem gamblers combined were less likely to set a time limit than non-problem gamblers (p<.05)
  - • when a time limit was set, problem gamblers set a significantly higher time limit (eg. non-problem gamblers - mean of 50.3 v 81.3 minutes for problem gamblers) (p<.05)

Player adherence to precommitments

As part of the study, the percentage of players adhering to precommitments was measured. Based on observation of actual player expenditure, findings showed that between 12-16% of EGM players exceeded their spending precommitment following a single session of play. Curiously, though, when based on <u>self-report</u> post-play, only around 7% of players reported exceeding their precommitment.

The observed difference reflects that adherence to precommitments may vary depending on the location and time when precommitments are reported. For instance, when based on spend limits reported by players away from venues, 16% of players exceeded their spending precommitment. When based on a self-reported assessment, this same figure was only 7%.

This trend raises two key questions about precommitment:

- • *How should adherence to precommitments be measured?*
- • *How often and where should EGM players select precommitments?*

Additional findings relating to player adherence to precommitments showed that:

- • when reported bet size limits were compared against actual credits used, only 7% of players exceeded their bet size precommitments
- • 17% of players reporting a time limit exceeded the time limit during play (or only 2% players if based on a self-report scale post-play)
- • when risk for problem gambling was controlled, players who set spend limits <u>closer</u> to the time of play were more likely to <u>not</u> adhere to those limits (r=.15, p<.05) (highlighting some possible risks for limits set at EGMs)
- • players exceeding <u>expenditure limits</u> (along with at-risk gamblers) were significantly less likely to set a <u>time limit</u> for EGM play (p<.05)
- • 30% of EGM players used control strategies to keep to precommitments and players who did <u>not</u> use control strategies were more likely to exceed their precommitments (p<.05) (suggesting a possible benefit of control strategies)
- • 48% of players rated card-based gaming as of some value in helping players keep to precommitments and players who exceeded limits were more likely to rate such a card as useful (r=.25, p<.001)
- • players exceeding expenditure limits were less likely to notice gambling harm-minimisation signage in gaming venues (r=.19, p<.01) and players who did not notice signage were more involved and absorbed in EGM play (r=.17, p<.05)
- • players exceeding expenditure limits were more likely to feel that they were 'due' for a win (r=.12, p<.01) and were more likely to report chasing EGM losses (r=.27, p<.001)
- • players exceeding expenditure limits were also more likely to feel 'due' for a win after a feature (p<.05) (15% of players exceeding limits versus 4% of those who didn't)

A reflection on key findings and possible implications

Overview

Findings of the current study raise a number of issues for future consideration with respect to precommitment. These are further discussed as follows:

- *(1) Where and when should EGM players set their precommitments?*
- *(2) What value may precommitment offer to EGM players?*
- *(3) What factors influence EGM players to adhere to their precommitments?*

(1) Where and when should EGM players set their precommitments?

One interesting area of investigation in the current study explored the question of where and when EGM players should set limits for gambling. Findings suggested that, for all EGM players, setting limits close to the time of play may be associated with players exceeding limits and that problem gamblers reported considerably variable limits over different periods of time (while other players were more consistent in the limits reported).

This also showed that the highest limit was reported by problem gamblers directly <u>before</u> play (at the venue), while the lowest was reported just <u>after</u> play. This not only suggests that problem gamblers have considerably variable limits, but also raises question about whether such groups have a firm mental schema about how much they *should* precommit for gambling.

While there is limited research on this topic, Cheema and Soman (2006) proposed that mental accounts are used as self-control devices to prevent excessive spending. On this basis, it was proposed that not having a 'firm budget' may be associated with over-consumption.

Other data outlining how problem gamblers overspend in other areas of life similarly highlights the importance of player education about how to select affordable and realistic precommitments.

The location of when limits are set was shown as a key issue of relevance to all EGM players. Results suggested that setting limits *closer* to the time of play may pose some risk to all gamblers (and especially problem gamblers). This may be because limits are not well-considered if they are set close to the time of play (eg. are affected by excitement in the venue, as originally proposed by Dickerson, 2003).

Such findings may have implications for the design of precommitment systems and the associated player education materials about precommitment.

While further research is needed, early findings of the study may point to the value of:

- providing EGM players with access to mechanisms to select limits away from gaming venues *(eg. setting limits online at home or at other locations away from venues)*
- supplying EGM players with tools or materials to ensure that affordable, realistic and well-considered limits are set for gambling

Based on the problem gambler inclination to report less detailed budget categories for household expenditure, players may additionally benefit from budgeting tools, which break down expenditure and assist players to arrive at affordable precommitment decisions.

(2) What value may precommitment offer to EGM players?

As the first observational study of precommitment during live EGM play, results provide emerging insight into the tendency of EGM players to set and exceed different types of precommitments.

One notable insight was that certain types of precommitments were more important to players than others. For instance, while past research suggests that expenditure limits are one of the more important types of limits for players (McDonnell-Phillips, 2005), 80% of observed players in the current study set a bet size limit and 28% set a time limit.

This appears to suggest that there is lower perceived value of time limits to EGM players. However, other results showed that having a time limit, along with a spend limit, may help promote adherence to spending precommitments. This may therefore suggest that, while time is not as meaningful to players, use of both monetary and time limits <u>may</u> have benefits.

One difficulty with time limits, of course, is that some players report having a 'time limit' when they are merely having to leave a venue for a certain reason. From a construct validity perspective, this may be different to a player who sets an EGM play time limit for their own protection. Accordingly, further refining the construct definition of time limits may be a potential avenue for further exploration.

Another finding of the study suggested that between 7% and 16% of EGM players exceeded their spend limit (ie. depending on the limit reported and how it was measured). As 16% is not a small proportion of players, this highlights the relevance of precommitment as a tool for general consumer protection.

The tendency of players who reported 'variable' limits to *also* have difficulty tracking gaming expenditure may similarly point to some value of player tracking systems for this segment. Indeed, this may explain why players *not* adhering to precommitments were also more likely to endorse card-based gaming.

Finally, the possible value of precommitment for 'at-risk' gamblers is emphasised by segment trends. This showed that up to 22% of moderate risk gamblers and 17% of problem gamblers may exceed spend limits in a single session of play, compared to only 13% of non-problem gamblers and 15% of low risk gamblers.

This may point to higher benefits of limits for at-risk players (particularly moderate risk gamblers). However, one issue for higher-risk segments will also be ensuring that such players select affordable precommitments.

Accordingly, study findings in summary highlight that:

- • while precommitment may be of value to many EGM players, it may offer increased value to higher-risk players
- • however, this value will be in part influenced by the ability and motivation of such players to set affordable and realistic precommitments

Further research should additionally explore whether expenditure limits set are 'typical' expenditure, very high 'safety nets' or lower than typical gaming expenditure.

(3) What factors influence EGM players to adhere to their precommitments?

As part of the study, exploratory analyses examined the factors which predicted players exceeding spending precommitments. While an extensive range of analyses was undertaken, findings interestingly showed that only a small set of variables were directly linked to players exceeding their spend limits.

Role of speed of EGM play

The first minor finding of interest related to a significant interaction between risk for problem gambling and the speed of EGM play (as predictors of non-adherence to expenditure limits). While the result for only problem gamblers was statistically significant, general trends suggested that at-risk gamblers exceeding limits may have a faster rate of play than those same segments who did not exceed limits.

This raises the issue that one risk factor for exceeding precommitments may be a faster rate of EGM play. While reasons for this finding are not clear, it points to a need to further understand why higher-risk EGM players may play at a faster rate than others.

From a consumer-protection viewpoint, this could also be addressed through possible refinements to EGM game design. This does not necessarily imply the need to reduce reel spin, however, may imply the potential to design 'responsible gaming features' (RGFs) which raise player awareness of behaviour during play.

This may, for instance, involve setting a threshold for speed of play, such that players receive warnings when they exhibit significantly faster levels of play. This would then allow players to make an informed decision of whether to continue play at this rate and in turn, be advised about how fast rates of play may be associated with non-adherence to precommitments.

Major predictors of players exceeding precommitments

Direct predictors of players exceeding precommitments (above and beyond a player's risk for problem gambling) tended to cluster around variables which were essentially characteristics of EGM game design. In addition, several personal situation variables were also direct predictors.

It was interesting to note that life circumstance variables (eg. recent loans/large purchases, daily money hassles, concerns over money/debts, concerns over job security) were actually associated with a reduced likelihood that players exceeded limits. This is perhaps a positive finding in that it suggests that some financial issues are taken into consideration when people gamble.

It was similarly of interest that retirement presented as a possible risk factor for players exceeding precommitments. This may highlight some potential to particularly encourage older players to set limits for gaming and to undertake further research on the specific reasons for this finding.

Findings relating to game design showed emerging evidence of the effects of free spins, player's being involved in play and feeling 'irresistible urges' during play in non-adherence to precommitments. The other predictor related to 'excitement' from features[1].

Bonus features of EGM (eg. free spins and features) were proposed by Walker (2003) as attractive to EGM players and this study supports this finding. In addition, it suggests that such factors may play some role in players exceeding their precommitments.

Urges to continue and excitement during play

With few variables directly predicting adherence to precommitments, there is also the possibility that pathways of influence are less direct or more complex. For instance, while further research is needed, it is plausible that the 'urge to continue' influences adherence to precommitments (a finding of the study) and in turn that 'urge to continue' is more directly influenced by 'play excitement'. Indeed, study findings did show that 'excitement' related variables were actually the strongest predictors of 'urge to continue' gambling.

| Excitement during play | → | Urge to continue during play | → | Players exceed precommitments |
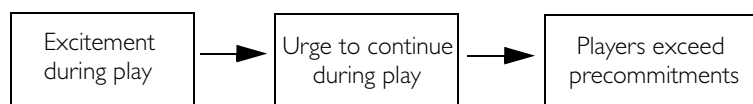
. . . .
1. Although based on the online limit

Role of prizes and incentives

While mostly aspects of EGM game design predicted urges to continue play (eg. excitement from features, play excitement, excitement from free spins and features/free spins received), the role of prizes and incentives in increasing both (1) play 'excitement' and (2) the 'urges to continue' was an interesting additional finding. Indeed, results suggested that players may become more excited or motivated to continue gambling due to promotions, prizes, loyalty points and incentives.

While prizes and incentives are an important part of attracting patrons to venues (and may be important for commercial success of venues), the role of loyalty schemes and incentives in posing some possible harm to players needs further research consideration.

It is similarly noteworthy that loyalty points and incentives were found to be associated with increasing play excitement from the first and second EGM played (possibly indicating that some players become increasingly more excited as loyalty points are awarded). Accordingly, while the study could not confirm a direct influence, the possibility of an indirect pathway is plausible.

This is also an area which may warrant a longitudinal study design. Players joining loyalty schemes could be followed over time to examine the extent to which such schemes increase risk for players.

Responsible gaming features (RGFs)

The possible roles of free spins and features in adherence to precommitments also raises the related issue about how EGMs may be best designed to protect consumers. For instance, if features and free spins are known to increase the likelihood that players exceed limits, it may highlight potential to include messaging features to encourage player reflection on their own play behaviour.

The concept of RGFs also seems important, given that high play involvement in EGM play was <u>directly</u> associated with players exceeding limits (eg. perhaps they are not focused on their spending and too fixated on the game).

Other findings which may highlight potential future roles of RGFs include:

- •• players not adhering to precommitments were less likely to notice harm-minimisation signage in venues (possibly in part due to 'high involvement' in gaming)
- •• players exceeding expenditure limits were more likely to feel that they were 'due' for a win and were more likely to report chasing EGM losses (highlighting that players could be occasionally warned about the role of erroneous beliefs in play behaviour)

Accordingly, this may highlight potential to deliver responsible gambling messages through EGMs and target messages to the changing behaviour of players.

This could include occasional messages to keep to limits or reminders about the possible effects of features and free spins, messages after critical events (eg. double-ups, use of multi-credits) and messages relating to amounts loaded onto credit meters (eg. if players loaded more than the 'average' player, they could be reminded of possible effects). Such messages would naturally also need to be balanced with play satisfaction and enjoyment.

Conclusion	Findings of the current study provide a range of important insights into the factors which may be associated with gamblers exceeding gambling precommitments. The study has also shown that, while complex and challenging to design and implement, it is possible to develop a workable methodology to record and measure dynamic features of live play, along with player experiences during gaming (and in the absence of an EGM player tracking system).

While the study has identified a range of emerging insights, it should be considered that the study is exploratory and based on a conservative sample. From this perspective, it presents a first step in a new direction, which needs much further analysis and investigation.

Further research where possible should continue to examine the influence of EGM design characteristics in real play situations and where possible, use data recorded through player tracking or live observations. While concording live play behaviours with player perceptions is difficult, this is clearly an emerging area of research priority.

In future studies, it would also be worthwhile developing a methodology to monitor play behaviour, whilst minimising possible observation effects on players. Insights from such studies have great potential to extend both the body of knowledge about how gaming affects players and how games can be 'safely' designed to prevent players from exceeding precommitments.

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INTRODUCTION & METHODOLOGY

This section includes the report introduction, background on the study and description of the research methodology, data collection approach and the approach to sample selection. A brief literature review is also presented to set the context of the study.

Sections	Page
Introduction	15
Background to the study	16
Methodologies used to support study data collection	18
Literature review and rationale for research design	25
Report structure	33

Introduction

Purpose

The purpose of the current report is to present key findings relating to an analysis of the factors which influence gambler precommitment behaviour. A project commissioned by Gambling Research Australia (GRA), the key objective of the research was to identify and measure a range of factors within players and within the gaming environment, which may influence the ability of gamblers to adhere to precommitted limits.

Precommitment in this context was defined as the ability to keep to or below monetary and other limits set for gambling. Electronic gaming machine (EGM) play was the only type of gambling studied in the research. This mode of gambling was selected on the basis of past evidence, which suggests that EGM play may be associated with at-risk gambling (eg. Hare, 2009).

Specific research objectives were to:

- •• identify aspects of gaming machine design that may influence a consumer to change or adhere to a precommitment decision (eg. bet size, denominations, game dynamics, free spins etc.)
- •• determine activities and features offered by and at venues that support or undermine a precommitment decision (eg. jackpots, ambience, staff interaction, responsible gambling messages, access to cash)
- •• identify other factors that may influence a consumer precommitment decision (eg. social support networks, financial literacy, presence of comorbid conditions etc.)

Gambling Research Australia

Gambling Research Australia is an initiative of the Ministerial Council on Gambling. The Ministerial Council on Gambling is comprised of the Ministers responsible for gambling in each State and Territory Government and the Australian Government. While not formally part of the Ministerial Council, New Zealand plays an important role as observer on GRA in recognition of the increasing importance of transnational research collaboration.

The objective of the Council is to minimise the adverse consequences of problem gambling via the exchange of information on responsible gambling measures and by acting as a forum for discussion and facilitation of the development of an effective interventions framework.

The current project falls within the **second** and **third** research priority areas nominated by the Ministerial Council on Gambling - specifically:

- •• Feasibility and consequences of changes to gaming machine operation such as precommitment of loss limits, phasing out note-acceptors, imposition of mandatory breaks in play and impact of linked jackpots; and
- •• Best approaches to early intervention and prevention to avoid problem gambling

A subsequent study

The current research follows from a major previous national study commissioned by Gambling Research Australia examining gambler precommitment strategies and behaviours at a national level (McDonnell-Phillips, 2005). This study was based on an attitudinal telephone survey methodology and explored self-reported gambler precommitment behaviours.

Driven originally by assertions of the Productivity Commission, early national interest in precommitment is in part based on research by Dickerson (2003), which purported that regular EGM players experience some degree of impaired control during poker machine play. It was proposed that players may experience an irresistible urge to continue to play EGMs during ordinary gaming, high levels of excitement and that this cognitive and emotive state is characteristic of many players.

Within this context, there is a clear need to better understand the factors which trigger players to exceed limits while playing EGMs, along with other factors which may influence gambler adherence to precommitment decisions.

Background to the study

Rationale for study design

As most past research has only examined precommitment on an attitudinal level, the current study set out to explore the topic through both further attitudinal research and also from a behavioural perspective. For this purpose, the current study had both attitudinal and live EGM play observational components.

Attitudinal data was gathered from EGM players using online and face-to-face data collection methods. Observations were then undertaken with the same EGM players during poker machine play and a range of live play behaviours was recorded.

While extremely complex and challenging to design and implement in-field, observation of live EGM play was seen as important to furthering understanding of the intra-play factors which may influence gambler precommitment. This was also to help shift the body of knowledge about precommitment from a solely attitudinal (and self-report) perspective, to a more in-depth 'intra-player' transactional and behavioural perspective.

This was also very challenging in that a 'shadowing' method, which recorded live EGM play data in the manner used in the study had not been developed or attempted in previous research (even developing the data recording collection methodology required six separate drafts of the live data collection instrument).

Subjects

Participants in the study were 200 EGM players across three states of Australia - Victoria, Queensland and South Australia. While originally part of the study, the NSW sample was withdrawn from the study to minimise venue sensitivities (as some NSW venues felt that observations may disrupt play of other patrons). This preference was accommodated and led to sample being redistributed across other participating jurisdictions. This approach was supported by Gambling Research Australia and was deemed to meet project requirements. Only hotels and clubs were included in the research.

Jurisdictions were selected to provide a range of different jurisdictional circumstances and venues in the context of the study, whilst allowing a manageable scope for recruiting and observing players. Coverage of three jurisdictions with different gaming regulatory environments also permitted a range of different EGM types, venues and players to be studied. In this context, given the exploratory nature of the research (as the methodology had never previously been attempted), this was deemed appropriate as a first-step study.

Players were recruited through an online research panel following informed consent to research obtained through screening questions. All participants were regular gamblers who were already playing EGMs at the minimum frequency of at least once per month.

Participants were screened using the nine-item Problem Gambling Severity Index (PGSI) from the Canadian Problem Gambling Index (CPGI) and selected in line with target quotas representing the major gambling risk segments. This included a selection of non-problem, low risk, moderate risk and problem gamblers and respondents of different ages and genders.

While a range of different age and gender groups were included in the study, as frequently experienced in many methodologically complex studies, some difficulties were experienced in recruiting a 'perfect' sample frame by jurisdiction. Weighting, however, was undertaken to correct by age, gender and risk for problem gambling.

The breakdown of sample participating in the study is presented in Table 84.

Participants who gave consent to taking part in the study were offered a $50 shopping voucher for their participation. Cash incentives were not provided for ethical reasons (as cash may encourage further EGM play). Players used their own money to play the pokies during the observational component and were encouraged to play as they normally would play (as they were already EGM players and the purpose was merely to 'shadow' the player).

It was also clearly emphasised to players that they should only play as much as they wished and were advised that they could stop play at any point in time, with no minimum play requirement. Discussions suggested that all players were happy to participate in the study.

Field interviewers were briefed to offer information on gambling help resources as part of the study to ensure that players were aware of available options, should they ever feel that gambling was becoming an issue.

Sample size

A sample of 200 EGM players was selected as the sample for the study. Given the time-consuming and complex nature of lengthy observational research, a sample of 200 players was used as a 'starting sample' for an exploratory observational study. It was also seen to provide a starting sample for trialing and testing a new methodology, which had never been previously implemented. In this context, the research methodology was very involved and complex.

The study methodology was also resource-intensive, given the need for interviewers to travel to 200 venues across three states (as venues were of the respondent's choice) and due to the need to provide sizable voucher incentives to players to take part ($50 per player). Interviewers travelled up to 1hr each way to accommodate preferred venue play locations of respondents.

Interviewer training was similarly complex, as interviewers needed to be extensively tested to validate their ability to handle multiple data recording tasks in the context of fast-moving, live EGM play.

Data entry was also substantial, with each observational survey requiring approximately 1hr for data entry, with survey instruments randomly double-entered for data checking (to provide a mechanism for checking the entry of completely manually-entered data). Manual recording and data entry was also necessary, given that computer aided personal interviewing was not feasible due to the fast-moving nature of EGM play.

While all smaller sample studies are naturally challenged by sample power (implying some potential difficulties in establishing 'statistically significant' trends), trialing a new exploratory observational methodology implied a range of significant complexities.

For this reason, a sample of 200 observations at a venue of choice of EGM players was seen as a useful 'starting sample' to develop and trial a new methodology for live EGM play observation and to commence the journey towards understanding more about possible factors which may influence adherence to precommitments during live play.

Online recruitment of EGM players

While alternative methodologies could have been used for recruitment (eg. in-venue or general random population recruitment), online recruitment was viewed as a manageable and unintrusive methodology to screen and recruit regular EGM players.

Online research panels consist of potential respondents, who are interested in taking part in a range of different research studies and receive rewards for research participation (eg. points, vouchers). While there are naturally some limitations in taking players from a research panel, this recruitment methodology was used for a range of practical and ethical reasons.

Specifically:

- online panel members had already provided informed consent to taking part in research and were happy to volunteer to have their play observed
- a written description of the observational study could be provided to raise player awareness of what was involved in the observational component from a participant's perspective - this also allowed players to make sure that they were happy to have their play observed without persuasion from recruiters (Phone discussions also further ensured that true informed consent was achieved prior to observation of play)
- those who participated in EGM play at least once per month are relatively low in prevalence in the general population (implying difficulties with general population recruitment) and an online methodology offered a means to pre-screen players and to include a selection of players of different problem gambling risk levels (including being able to recruit a range of ages, genders and demographic backgrounds)

- •• recruiting online helped manage player acquiescence by allowing the early study intent to be 'disguised' - For instance, instead of asking respondents whether they played EGMs from the outset (which may elicit a confirmatory response, if respondent motivations are to gain research incentives), the study initially asked whether respondents participated in a range of different leisure activities. While not a guarantee, this helped ensure that respondents were already playing EGMs at the minimum required frequency level of at least once per month. This was also verbally confirmed during the initial recruitment discussion via telephone
- •• gaining consent from players at a venue may have potentially been confronting to players (and venues) - this also ensured that patrons at venues did not have to be interrupted from play for recruitment purposes (also minimising venue disruptions)
- •• online recruitment permitted a selection of players across several jurisdictions within Australia including a cross-section of different types of gaming venues and locations

Methodologies used to support study data collection

A series of qualitative cognitive interviews, along with a literature review, was used to shape the observational study design and data gathering methodologies. In addition, there were three discrete stages in the quantitative stage of the study (the live play observational component).

(A) Cognitive interviews

The cognitive interviewing approach to the design of measurement instruments is a well-established method of reducing response and measurement error in surveys. It was developed in the 1980s through an interdisciplinary effort of survey methodologists and psychologists (Caspar, Lessler and Willis, 1999). A range of literature has emerged in the previous decades on the value of cognitive interviewing in the design of research methodologies and measurement instruments (eg. Sirken, Herrmann, Schechter, Schwarz, Tanur, and Tourangeau, 1999; Willis, DeMaio, and Harris-Kojetin, 1999).

Cognitive interviewing involved observing players, while they were playing EGMs and asking players to verbalise their cognitions and emotions during the process (with all players consenting to observations). The protocol used to guide cognitive interviewing during the early design phase of the study is presented in the APPENDIX.

In total, 45 cognitive interviews were undertaken prior to the main study of N=200 to develop the observational instrument and to shape the design of study measures (including development of response code frames). These were also determined as necessary to develop the observational instrument, given the significant challenge of manually recording live play behaviour in a complex play environment. The challenge of methodology development was also so significant, that more cognitive interviews than originally anticipated had to be undertaken to develop a workable live data recording methodology.

As aptly summarised by Tanur (2001), cognitive research design refers to the use of techniques to ensure that data from surveys of human populations are valid and reliable. It is also frequently undertaken in new areas of research to understand potential threats to study reliability and validity.

While a model for cognitive interviewing was originally proposed by Tourangeau (1984), Caspar et. al (1999) advocate four roles for use of cognitive interviewing. Cognitive interviewing was also used for these reasons in the context of the current study:

- •• **Comprehension of survey questions**
  - • Question intent - What does the respondent believe the question to be asking?
  - • Language - What do specific words/phrases mean to the respondent?

- •• **Retrieval from memory of relevant information**
  - • Recall of information - What types of information does the respondent need to recall in order to answer the question?
  - • Recall strategy - What type of strategies are used to retrieve information? For example, does the respondent tend to count events by recalling each one individually, or does he/she use an estimation strategy?

- •• Decision processes
  - • Motivation - Does the respondent devote sufficient mental effort to answer the question accurately and thoughtfully?
  - • Sensitivity/social desirability - Does the respondent want to tell the truth? Does he/she say something that makes him/her look better?

- •• Response processes
  - • Mapping the response - Can the respondent match his or her internally generated answer to the response categories given by the survey question?

In addition, cognitive interviews were undertaken for the following reasons:

- •• as a live EGM data recording methodology had never been previously developed in the manner used in the current study, cognitive interviewing assisted in the development and refinement of the data gathering methodology used in the main observational study

- •• the impact of 'shadowing' players was relatively unknown and it was important to assess the degree to which players could focus on play without feeling too distracted from play by a live observer (although in reality, this was naturally always likely to occur to some degree)

- •• verbalisation of player cognitions and emotions during play gave an indication of the extent to which such constructs could be measured live during play. For instance, as players often verbalised excitement during cognitive interviews (eg. *I got a free spin, so I'm feeling like I'm going to win!*) and indicated urges to continue play (eg. *I'll just keep going for a few more games, as I think this machine is going to pay*), it became clear that such constructs could potentially be measured in the context of live play. Further iterative trialing of specific measures during cognitive interviews also confirmed this

- •• scales developed during live play observation had to be designed and administered in a way which minimised potential interference in the EGM play experience - For instance, measures of play excitement and urge to continue play had to be developed, so that players could readily make ratings without having to 'stop and think' about their response or the scale (which would significantly disrupt the play experience)

- •• cognitive interviewing allowed issues such as social desirability to be managed through instrument design. For instance, as it was clear that players would be embarrassed to admit playing prior to the observation, a question assuming the behaviour was included in the pre-observation component (*How much money have you spent/lost on the pokies TODAY prior to starting this survey?*)

- •• cognitive interviewing allowed testing of survey length and respondent fatigue - This also led to moving some components of the study questionnaire to the online pre-observation survey, as interviewers noticed that respondents were becoming 'too fatigued' from completing all the pre-observation questions at the venue (and feedback in some cases was provided by players to this effect)

The 'think aloud' method in the context of cognitive interviewing also supports the identification of many of the above threats to survey reliability and validity. Originally derived from psychological procedures described by Ericsson and Simon (1980), the 'think-aloud' method assisted to define and refine measures in the study.

Rather than attempting to record every player verbatim during cognitive interviewing (which proved difficult in the early stages, given the need to focus on play behaviour), observers made notes about key issues which needed to be examined to develop and refine useful study measures and notes were used to develop the final observational and data gathering instrument.

While this report does not intend to present a comprehensive overview of cognitive interviewing, for interested readers, a useful review of major aspects of cognitive interviewing is provided by Schwarz (2002).

(B) EGM player interviews and observations

Following conduct of cognitive interviews and refinement of the study observational and data collection instrument, the main quantitative study was conducted.

Key components to the observational study of N=200 EGM players are described as follows:

Stage One. Stage one of the study involved participants completing a range of questions online (including the PGSI) about their gambling and general factors which may influence adherence to precommitments. This included demographic questions, typical spending at the pokies, EGM play frequency, general financial budgeting behaviours (outside gambling) and exploring possible comorbidities such as psychological distress, life events and recently experienced daily hassles (using a daily hassles scale). Questions in the online study component were specifically limited to more peripheral factors characteristic to the player's general life and emotional well-being. Online data gathering was also used to minimise respondent fatigue during the day of live play observation.

Stage Two. Stage two involved players being met at their preferred EGM venue by a trained interviewer/observer for further surveying and live observation of poker machine play. To ensure that venue visits were as realistic as possible, players were asked to notify interviewers when they were going to play at the venue (with sometimes only a couple of hours notice). This was to ensure that venue visitation was not a fully planned event and had some degree of real-life spontaneity (although there would obviously always be some planning).

Around 24% of interviews were conducted in the period prior to 12pm and 76% conducted after 12pm. Selected times were the choice of shadowed EGM players.

Typically, a period of no more than three weeks occurred between the online survey completion and meeting EGM players at a venue for further questioning and observation. Venues were given courtesy calls to inform that players had elected to have their play at the venue. In this context, there was only interest in the player's own EGM play behaviours (and the objective was not to assess the venue in any way).

Pre-observation questions completed during venue visits were limited to data which was necessary to collect <u>close</u> to the time of EGM play. This included measures such as reasons for preferring the venue on the day of attendance, player affect directly before EGM play, reasons for choosing to play pokies and the amount of money brought to pokies on the day.

Following a small number of pre-observation questions, players were then observed playing EGMs. No time limits were placed on the observational period. Interviewers recorded observations on a data recording sheet specifically designed and developed for the study. Each EGM played had a separate observational sheet.

Stage Three. Stage three was conducted following the observation of EGM play and involved player reflection on possible factors which may have influenced their ability to adhere to or exceed their gambling precommitments during play. This included reflection on points during EGM play where players believed they had started to chase losses and the like. This stage of the study also involved asking players to guess how much they had spent during play (enabling it to be compared with actual expenditure).

EGM observational recording sheet	The data recording sheet to support live observation of EGM players was developed following conduct of qualitative cognitive interviews with players and trialing of a series of six draft observational data recording sheets in field. Based on extensive field piloting, the design of the proforma was limited to a single page (per EGM played) to ensure that data could be competently recorded by interviewers (without having to turn pages). Approximately six drafts were piloted prior to the final draft to allow iterative refinement and enhancement of the data collection tool.

Data recorded live included EGM machine details (eg. denomination, style, maximum prize), money put into and taken out of the EGM, spins associated with losses or wins, free spins and features, use of double-up/gamble[1] and a range of attitudinal measures (eg. play excitement, urge to continue play, play satisfaction).

In addition, peripheral factors were recorded such as audible coin drops from other EGMs in the background (ie. winnings from other players), alcoholic beverages consumed, money obtained from ATMs/EFTPOS and the like.

The data collection instrument used in the study is presented in Appendix A.

Due to the high complexity and speed of live EGM play observation, the data recording tool had to be designed in a way to ensure that interviewers could reliably observe play behaviour. This included the use of a specially developed tally mark system, a structured data gathering framework with colour-coding to assist data recording.

Pilot interviewing (from an interviewer perspective) additionally allowed for an assessment of the level of mental workload required of observers to record live EGM play data. This allowed the data collection instrument to be designed in a way which made it possible for observers to reliably record live play data without exceeding reasonable cognitive workloads (which could introduce error).

This also led to the observational instrument being colour-coded and designed with a system of tally marks for recording of live play behaviour (as other methods were deemed too complex for observers or led to significant recording errors - eg. while EGM play lines were originally transactionally recorded, they had to be dropped, as the cognitive load for recording such information in a rapid play environment was too high).

Use of EGM system data as an alternative

While it would have been optimal to access EGM system data, this was not possible and in many cases, different EGM data logging systems do not log more dynamic features of play (eg. double up, features, free spins etc.) (and have different data recording formats). Accessing data would also have been fraught with difficulties and would not have allowed coverage of different venues and jurisdictions, nor allowed observation of EGM players at a preferred pokies venue of their choice.

Accordingly, whilst extremely challenging to design and implement in-field, live observational research was deemed an interesting new methodology to overcome such barriers.

Interviewer training

To ensure observations could be reliably recorded live, interviewers were extensively trained. The first step in training involved familiarising interviewers with the data collection methodology and unstructured observation of players in-field (ie. early practise for typically at least 2hrs to allow interviewers to build familiarity).

This also involved teaching interviewers about the various play characteristics of poker machines (eg. free spins and features). Where possible, interviewers were selected for the role of observation based on familiarity with poker machine design and play characteristics.

All interviewers were also briefed before and following the study about the need to monitor that their visitation to gaming venues did not lead to gambling problems. They were advised to discuss any concerns with their supervisor at any point and specific education about the random nature of gambling was provided as part of the project.

. . . .
1. A game during EGM play which allows players to gamble their winnings (eg. choose red or black card and if correct, the winnings may be doubled).

Once data recording skills had been developed, the next step involved having an experienced interviewer record data alongside a new interviewer to allow a comparison of inter-rater reliability. Only interviewers who had proven their ability to accurately record data live (within one tally mark accuracy) of the experienced interviewer were then permitted to shadow players live in field. This ensured that all interviewers were competent in data collection.

To ensure a consistent approach to live observations, interviewers stood to the left of EGM players. This was also deemed necessary to ensure that player button presses could be observed (visibility was actually much more difficult from the right hand side).

Interviewers were also blinded to the risk status of the gambler during conduct of the study (as risk data was collected through the online survey). This also helped to minimise the extent to which interviewers were attuned to any particular aspect of play during the live observation.

Data weighting

Data gathered from participants were weighted to the approximate age, gender and problem gambling risk profile of regular EGM players (who were already playing EGMs at least once per month). This latter distribution was estimated based on the approximate distribution of regular EGM players in the general population.

It should be noted, however, that one objective was to study and compare non-problem to at-risk gamblers and for this reason, weighted overall measures were only to assimilate broad overall trends (ie. to allow some general trends for EGM players overall to be estimated). From this perspective, data should be considered indicative rather than definitive.

Measurement of problem gambling

As in most current Australian gambling studies, the current study used the Problem Gambling Severity Index (PGSI) to measure an EGM player's risk for problem gambling (Ferris and Wynne, 2001). The PGSI measures an individual's risk for problem gambling by segmenting gamblers into four key risk categories based on a total risk score out of 27.

Categories are segmented as follows:

- •• Non-problem gamblers (a score of 0 on the CPGSI)
- •• Low risk gamblers (a score of 1-2 on the CPGSI)
- •• Moderate gamblers (a score of 3-7 on the CPGSI)
- •• Problem gamblers (a score of 8 or higher on the CPGSI)

For consistency with other states in Australia, scale anchors originally used in the Queensland Household Gambling Survey were used in lieu of the original PGSI scale anchors. Using ratings of Never *(score of 0)*, Rarely/Sometimes *(score of 1)*, Often *(score of 2)* and Always *(score of 3)*, defining items of the PGSI ask gamblers to think about the past year and rate how often they have undertaken the following:

- *Bet more than you could really afford to lose?*
- *Needed to gamble with larger amounts of money to get the same feeling of excitement?*
- *Gone back another day to try to win back the money you lost?*
- *Borrowed money or sold anything to get money to gamble?*
- *Felt that you might have a problem with gambling?*

- *Felt guilty about the way you gamble, or what happens when you gamble?*
- *Has your gambling caused any financial problems for you or your household?*
- *Had people criticize your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?*
- *Has your gambling caused you any health problems, including stress or anxiety?*

Significant trends

Findings in the study were analysed using SPSS and Stata statistical packages. In the current study, a range of multivariate statistical analyses were undertaken to establish possible trends in data. This includes tests to establish what is termed 'statistically significant' trends. Statistical significance testing allows a test of the probability of two groups being the same or an association occurring between two variables.

For instance, this may assist to inform research questions such as:

- •• What factors may predict whether an EGM player exceeds their precommitments?
- •• Is there a significant relationship between budgeting and risk for problem gambling?
- •• What predicts the urge to continue during live EGM play?

A statistically significant result suggests that the theoretical chance of two groups being the same (or a trend <u>not</u> occurring) is very low probability (with the probability indicated through a p value). For instance, a p<.05 indicates that the theoretical chance of two groups being the same is less than 5%. While only a theoretical basis, it provides some indication of the likelihood that a trend may be 'real' (although is by no means a guarantee).

Readers, however, may wish to consider the term 'statistical significance' in a general sense. That is, a statistically significant trend is likely to be a result of general 'significance'.

Odds ratios and correlations

While not used exclusively, odds ratios (OR) are presented in some sections of the report. These present a method for comparing the odds of a certain event between two groups (eg. groups such as non-problem gamblers and problem gamblers).

An odds ratio of 1 implies that a result is equally likely in both groups. An odds ratio greater than one implies that the event is more likely in the second group compared to the 'reference group'. An odds ratio less than one implies that the result is less likely in the second group (compared to the reference group).

Odds ratios in the current report have been presented to allow identification of some trends in data. While it is possible that odds ratios could be adjusted for a wide range of covariates (eg. demographics such as age and gender which in part explain trends) (ie. covariates are essentially factors which may in part explain trends), adjustments to odds ratios have not been conducted at this stage (apart from risk for problem gambling). However, a detailed study of covariates would present an useful additional type of analysis that could be pursued in the future with a larger sample study.

In addition, 'r' values are frequently reported in the report. These represent correlations or the level of association between two variables (eg. factors which are related to the urge to continue gambling), expressed as a number from -1 to +1. A positive r value indicates a positive relationship between two variables, while negative value indicates the reverse.

STATISTICAL SIGNIFICANCE
p<.05 or lower all imply statistical significance - this means that the result is worth noting and may be an interesting trend.

ODDS RATIOS
Odds ratios (OR) indicate the probability of an event occurring with:

- •• Odds ratios - Less than 1 imply that an event is less likely to occur
- •• Odds ratios - More than 1 imply that an event is more likely to occur

  (based on a comparison of one group with another group)

CORRELATIONS
Correlations indicate the strength of association between two values:

- •• positive r - Indicates a positive relationship (eg. as one measure goes up the other goes up)
- •• negative r - Indicates a negative relationship (eg. as one measure goes up the other goes down)

Important notes to readers

As the current study is exploratory in nature, trends should naturally be considered indicative rather than definitive. This is also important, given that no previous study has attempted to record live EGM play data in the precise manner used in the current study. Indeed, this study involved developing a new data recording methodology for live play data.

As a smaller sample study, it should also be considered that some trends may not always present as statistically significant. This is primarily because the sample size of all studies may affect significance through a concept called 'statistical power'. For this reason, emerging trends in data may be presented or explored.

An exploratory approach to data analysis is also important, as there is great potential in any study to explore possible insights and trends. This is particularly important in a field such as precommitment, given that very limited past research on the topic has been undertaken.

On this basis, the current study involves a first-step to understanding player behaviour in a live EGM play context. Further additional studies will thus naturally need to be undertaken to confirm and further explore the reported trends.

Literature review and rationale for research design

Background

As a comprehensive literature review was prepared on precommitment during the first national analysis of gambler precommitment behaviour (this included an in-depth literature review and jurisdictional trends well over 100 pages[1]) (McDonnell-Phillips, 2005), a further major narrative literature review was not scoped into the proposed methodology. However, a literature review informed the use of different measures in the study and assisted in the development of study measures and the data gathering methodology.

The following section provides a brief summary of literature to describe the approach to study design. As many of the study measures were new and had not been previously explored in past research (particularly in a live EGM play context), there was also the additional challenge of exploring new measurement constructs, which were not readily documented in literature.

Definition and nature of precommitment

Precommitment in the context of gambling refers to the setting of time, monetary or other types of limits by gamblers. Setting precommitments is typically associated with the goal to keep to or under limits during gambling and in turn, avoid overspending in the process.

While general experience shows that many EGM players set a wide range of different type of limits, findings of the previous Gambling Research Australia precommitment study highlighted that spend limits are the most important type of precommitment of EGM players (McDonnell-Phillips, 2005). In contrast, time limits were deemed of less significance. Findings also suggested that problem gamblers were more likely to exceed spend limits than lower risk players and reported that the greatest harm was incurred from exceeding spend limits (p17). For this reason, the extent to which gamblers exceeded expenditure limits during EGM play was a core focus of the study.

While not formally published at the time of the study, the general finding of several card-based precommitment trials has been that EGM players do not place as high importance on time or other limits during gaming and are primarily concerned with monetary expenditure (Hare, 2010).

EGM play and precommitment

Electronic gaming machine play has been the main gambling activity of interest in the context of precommitment. Authors such as Dickerson (2003) originally argued that EGM players (including non-problem gamblers) experience impaired control during gaming and this in part is due to the excitement experienced by players. Other researchers have also established that problem gamblers may be likely to lose track of money while gambling and are frequently unaware of whether they are ahead or behind during play (eg. although only based on a study of 127 players, refer Nower and Blaszczynski, 2010).

Prevalence studies across most jurisdictions have similarly shown that EGM play is possibly the most problematic form of gambling (eg. Hare, 2009), with difficulties attributed to either the fast-moving and continuous nature of play and in some studies, the reinforcement schedule of wins and losses during play (eg. Livingstone and Woolley, 2008).

. . . .
1. Unpublished (Gambling Research Australia, 2005).

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Problem gambling and precommitment

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While there is still relatively limited evidence to support the original Dickerson (2003) proposal that players of all risk levels exceed precommitments during play (ie. including general non-problematic players), there is some evidence that problem gamblers are particularly prone to spending more than they can afford during gambling. This is also by definition a key item in the Problem Gambling Severity Index (Ferris and Wynne, 2001).

Other research has shown that problem gamblers are probably unlikely to set affordable limits (eg. McDonnell-Phillips, 2005) and recent research by Nower and Blaszczynski (2010) suggests that problem gamblers are particularly reticent to adopt strategies to limit access to money during a gaming session.

While this does not imply that non-problematic players are not susceptible to exceeding limits, it emphasises the value of understanding factors which influence adherence to precommitment in both non-problem and higher-risk gamblers.

Other evidence supporting the possible role of at-risk gambling in adherence to precommitments are findings of research which suggest that problem gamblers:

- may be more affected by certain EGM design characteristics (eg. multiple credit bets, double-up) (eg. Delfabbro, 2008; Productivity Commission, 1999; McMillan et. al, 2003)
- set limits closer to the time of play (eg. at the venue instead of at home) and this behaviour may be associated with an increased tendency to exceed limits (eg. McDonnell-Phillips, 2005)
- may present to gambling with low mood, which may increase player vulnerability to exceeding precommitments (eg. Dickerson, 2003 proposed a role for mood in adherence to precommitments)
- are predisposed to high-risk taking during gambling and show a tendency to pursue rewards, even in spite of losses during gambling (evidenced through physiological measures - eg. Hewig, Kretschmer, Trippe, Hecht, Coles, Holroyd and Miltner, 2009)
- report greater arousal increases after gambling and increases in negative mood if they lose (Brown, Rodda and Phillips, 2004)
- are more likely to report harm from exceeding limits, compared to non-problem gamblers (McDonnell-Phillips, 2005)
- are more likely to experience impulse control disorders (eg. Grant and Kym, 2003)
- report a relatively higher desire to continue gambling following wins (eg. Young, Wohl, Matheson, Baumann and Hymie, 2008)
- are more likely to gamble to 'escape' and that this characteristic can facilitate the continuation of problem gambling (eg. Woods and Griffiths, 2008)

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Precommitment and non-problem gambling

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While the above research suggests that higher-risk gamblers may be more likely to exceed precommitments, there is potential for everyday 'recreational gamblers' (non-problem gamblers) to also be influenced to spend more than their precommitments during gambling.

This has been frequently attributed to design characteristics of EGMs and the potential for such characteristics to increase player excitement and the urge to continue play. In particular, research highlighting possible effects of EGMs on gamblers more generally suggests that:

- wins may affect play rates for up to three minutes (eg. Dickerson, Hinchy, Legg England and Fabre, 1992) and EGM play rates can be maintained by small rewards (eg. Delfabbro and Winefield, 1999)
- depressed mood may be associated with greater play persistence - particularly in regular players (eg. Dickerson and Adcock, 1987)
- some players feel 'in control' of EGMs during play (eg. Griffiths, 2001)
- alcohol may lead to greater play persistence (eg. Kyngdon and Dickerson, 1999)
- high-speed EGM play may lead gamblers to underestimate the number of games played, possibly because it is difficult to 'track' play activity (eg. Ladouceur and Sevigny, 2006)
- win expectancy may be a contributing factor in the excitement associated with gambling (eg. Wulfert, Roland, Hartley, Wang and Franco, 2005)

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It was additionally purported by Livingstone and Woolley (2008) that various measures may reduce the potential for excessive EGM play including:

- • Modification of machine reinforcement schedules
- • Eliminating near miss effects
- • Reducing maximum bets and the maximum number of lines
- • Reducing spin rates
- • Modification of free spins

There was similarly discussion that different features of EGMs may make machines attractive to players. In particular, machine characteristics which were described as making EGMs attractive were purported to include reel symbols, multiple line betting, music and sound, colour, lights and graphics, free spins, special game features, music and lights accompanying wins, themes of games and large payouts.

Some interesting possible behavioural impacts of EGM play are also evident from the Queensland Household Gambling Survey (2001). While this study showed that 66% of problem gamblers reported that they could often not stop gambling, up to 17% of low risk gamblers reported spending more than they wanted to during gambling. Furthermore, 19% of low risk gamblers reported spending more than they perceived that they could afford.

Accordingly, such results may suggest that impaired control during gambling can affect many EGM players and that this is possibly in part due to design characteristics of EGMs.

Factors which influence adherence to precommitments

Relatively few studies to date have comprehensively explored the possible range of factors, which may influence gambler adherence to precommitment decisions. Possibly the most significant insights were from the recent analysis of gambler precommitment behaviour, commissioned by Gambling Research Australia (McDonnell-Phillips, 2005). Although only attitudinal in nature, this study was one of the first studies to examine precommitment in Australian EGM players, along with the control strategies used by players to keep to precommitments during EGM play.

Amongst its many findings, this study identified that several factors are likely to influence whether gamblers keep to expenditure limits during EGM play. Top triggers for exceeding precommitments during EGM play (based on player report) were described to include:

- access to cash on person
- access to ATM at venue
- small wins ($20) and much larger win ($100-$200)
- consumption of alcohol
- play without any feature/free spin
- availability of machines offering top payouts or prizes
- availability of large linked jackpots
- feeling bored or lonely

The limitation of this study was that it was only attitudinal in nature. While this was appropriate at the time (as precommitment had not been examined at an Australian national level), to extend knowledge of precommitment, the need for behavioural research was emphasised.

This was also a rationale for conceiving and developing a methodology to examine the behaviours of EGM players in a live EGM play setting. Live EGM play observation has been undertaken in a very small number of studies, however, such studies have been typically either over only a small number of venues or have had a very narrow research objective.

Examples of observational studies of EGM players include:

- •• Svetieva, Walker, Blaszczynski and Sharpe (2006) - studied the behaviours of 102 EGM players. This study explored whether problem gamblers differed from non-problem gamblers in terms of play behaviour. The study showed that problem gamblers played significantly longer and for more days of the week. However, no differences were observed in terms of the extent players moved around machines, play persistence on a single machine or how players gambled

- •• Walker (2003) - examined use of double-up during EGM play and found that double-up was infrequently used by players (although only 20 trials per player were observed). In a second study, Walker tracked 56 EGM players at a large club and showed that 80% of play sessions lasted only for a short period (5-10 minutes)

- •• Blaszczynski, Sharpe and Walker (2001) - examined the impact of EGM machine reconfigurations in clubs and hotels. This involved manipulations to machine characteristics (eg. slowing reel spins, reducing maximum bets and lowering the value of note acceptors) and attitudinal ratings of player enjoyment, excitement and play satisfaction.

  Findings showed somewhat lower player excitement and enjoyment for slower reel spin machines and reduced enjoyment from restrictions on bet size (but not satisfaction). Changes involving note acceptors, however, did not affect player ratings. A further observational study showed that problem gamblers were more likely to insert higher denomination notes, were slightly more likely to bet more than $1 per spin, played longer sessions and smoked and consumed more alcohol during play.

Value of observational research

Such studies highlight the value of observational research and point to differences in the behaviours of high-risk players in the context of EGM play. Delfabbro (2008) also emphasises that further observational studies such as those of Walker (2003) should be undertaken and should make clear attempts to compare results across problem gamblers and other EGM players. This was also posited as critical in the development of effective regulatory responses that influence problem gambling.

While the current study did not set out to look solely at precommitment in problem gamblers alone, the previous review provides some evidence that problem gamblers may be more likely to exceed precommitments during EGM play. They may similarly also be more likely to be affected by EGM design characteristics. Indeed, as identified in the previous study of precommitment behaviour, many behaviours of EGM players are associated with a player's risk for problem gambling (McDonnell-Phillips, 2005).

For this reason, to understand possible factors that influence precommitment, it was deemed critical to explore how problem gamblers may differ from non-problem gamblers in a live play setting. This included examination of differences in players before and after play and in their response to different characteristics of the venue and play environments.

Importance of alternative constructs

It was also deemed important to understand which characteristics of EGMs may influence adherence to precommitments and related constructs, above and beyond a player's risk level. Related constructs of interest included those variables, which may be related to precommitment in the context of EGM play.

Based on past research, these were deemed to include constructs such as:

- •• **EGM play excitement** - which has been proposed to lead players to exceed precommitments (eg. Dickerson, 2003)

- •• **Urges to continue during gambling** - which have been described as the basis of impaired control during EGM play and form part of the Scale of Gambling Choices (eg. Baron, Dickerson and Blaszczynski, 1995)

- •• **EGM play satisfaction** - which could be hypothesised to lead to continued play, if players are not feeling 'rewarded' by their play experience (eg. McDonnell-Phillips 2005)

Examining related constructs is also important, given that adherence to 'precommitments' alone is not the only criterion which indicates control over gambling behaviour. Indeed, as suggested in previous research, problem gamblers may have difficulty selecting affordable and realistic precommitments and in many cases, do not consider affordability in arriving at their precommitment decisions (McDonnell-Phillips, 2005).

Accordingly, exploring adherence to precommitment alone may be naive, in that it may represent an investigation of the extent to which a problematic player is adhering to an unrealistic or unaffordable limit (that they had set during their gaming).

Study measures

Within this context, the current study explored a range of measures with potential to shed light on the factors which may influence adherence to precommitments during EGM play. The conceptual framework showing study measures is presented in Figure 6.

As only very limited published research has examined precommitment in the context of gaming, inclusion of many study measures was exploratory. Studies examining the attitudes, cognitions and behaviours of problem gamblers, however, have identified a range of possible factors which may influence adherence to precommitment decisions.

Example literature supporting the inclusion of major study measures is presented in Table 1.

Figure 6. Factors which influence adherence to precommitment: Study measures

Factors which influence adherence to precommitments: *Study measures*

Pre-play factors

EGM precommitments
- Self-reported limits on three occasions
- When limits are generally set
- Amounts selected

Budgeting approaches/debts
- Categories players used to budget
- Clarity of budgets selected
- Overspending of budgets
- Player debts

Psychological factors/affect
- Psychological wellbeing of players
- Recent life events
- Recent hassles in daily life
- Motivations to gamble
- Pre-play cognitions
- Pre-play affect (mood)

Venue-based factors
- Why players visit preferred venue
- Recent play activity

Intra-play factors

Access to cash/credit cards
- Money brought to venue on day of play
- Whether brought EFTPOS/credit cards
- Access to cash pre-and during play

EGM seating/EGM preferences
- Where players prefer to sit
- Preference for company
- Favourite EGM branding/theme
- Other favourite EGM characteristics

Live EGM play behaviour
- Characteristics of EGMs played
- Wins and losses experienced
- Free spins and features recorded
- Events during play (eg. alcohol, breaks etc.)
- Use of multiple credit bets
- Excitement/urges to continue during play
- Excitement from free spins and features
- Play satisfaction and post-play affect

Influence of peripheral factors
- Attention to and usefulness of responsible gambling signage in venues

Post-play analysis

Player reflection on EGM play
- When urges to continue occurred
- Points at which players felt 'due' for a win
- Chasing of EGM losses
- Feelings of being in control of EGM
- Feeling absorbed/involved in play
- Reasons for multiple credit bets
- Player adherence to precommitments
- Strategies to keep to precommitments

Multivariate analysis

Influences on PC adherence
- Factors which predicted adherence to precommitments
- Factors which predicted urges to continue
- Factors which predicted play excitement
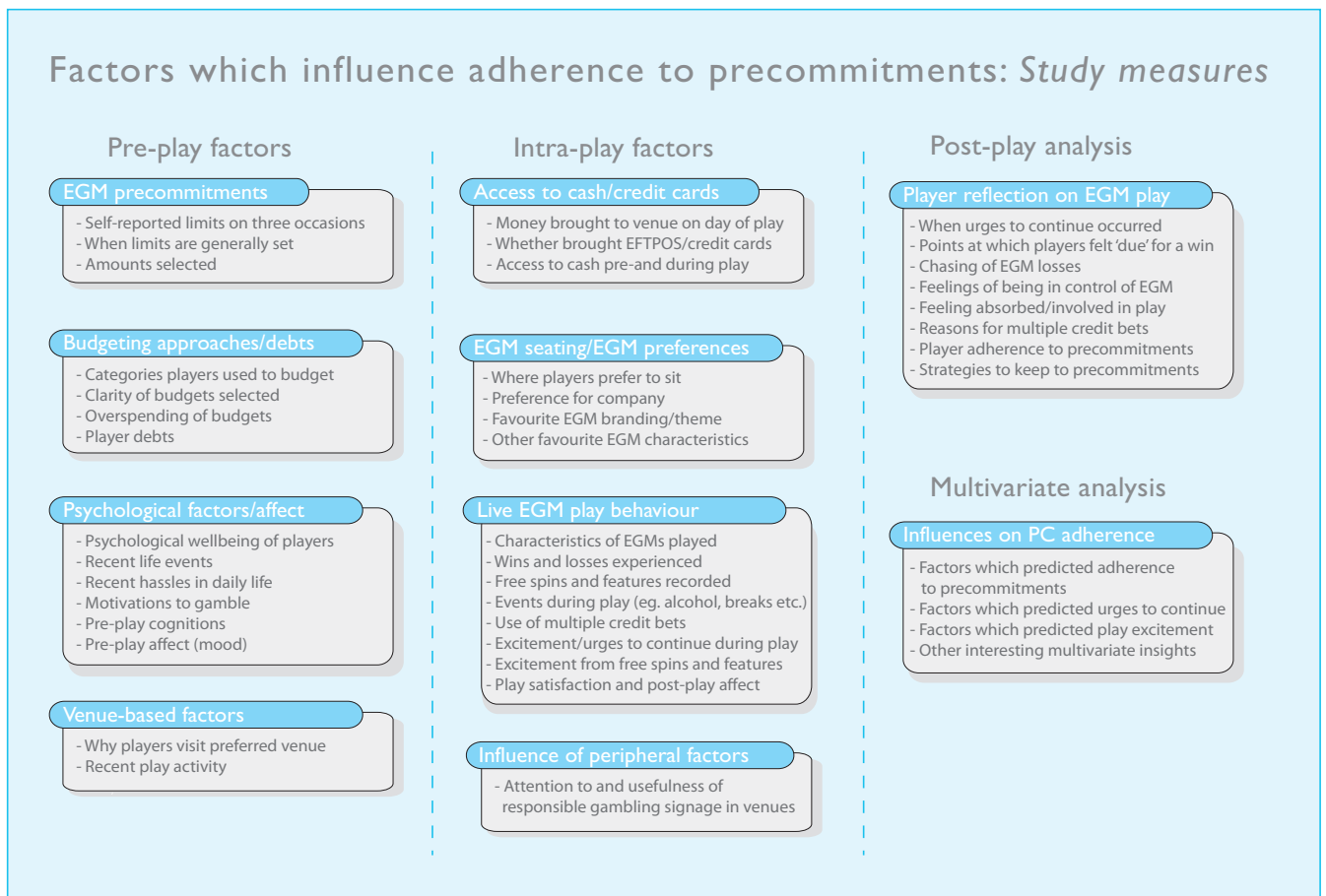- Other interesting multivariate insights

Table 1. Rationale for use of study measures - Factors which influence gambler adherence to precommitment[a]

Major measures	Basis for exploration in the study	Example literature highlighting possible impacts
PRE-PLAY FACTORS		
Self-reported limits and when limits were selected Budgeting approaches and debts	• Locations where limits were set were explored to assess how limits varied by risk for problem gambling • Gambler budgeting behaviours were examined to understand how players budget and to explore any possible link between budgeting behaviours and precommitment • The salience of budgets was explored based on propositions that mental accounts may assist with self-control and prevent excessive spending	• McDonnell-Phillips (2005) identified that players selecting limits closer to play may exceed precommitments and additionally, purported that some limits may not always be affordable, as they may be intuitively set without mental calculation • Cheema and Soman (2006) - found that mental accounts are often characterised as self-control devices that consumers employ to prevent excess spending and consumption. Under conditions of ambiguity, it was proposed that the mental accounting process may be 'malleable' (ie. consumers have flexibility in assigning expenses to different mental accounts)
Psychological factors/affect[b]	• The role of life events, psychological distress, daily hassles and mood were explored to examined possible associations with precommitment • This also explored whether low pre-play mood had potential to influence adherence to precommitment or related constructs (such as play excitement), building on the work of Dickerson (2003)	• Jacobs (1988) - found gambling may be associated with relief of dysphoria in problem gamblers • Hare (2009) - identified a link between life events and psychological distress and problem gambling • Matthew, Farnsworth and Griffiths (2009) - identified a role of mood in problem gambling • Dickerson and Adcock (1987) - found that depressed mood was associated with greater play persistence, particularly in regular players
Venue-based factors	• This involved examining why gamblers attended venues on the day of play. The role of loyalty points, promotions and other factors (eg. venue decor, staff) were explored to assess linkages with exceeding precommitments	• Nower and Blaszczynski (2010) - examined motivations for gaming attendance and found that problem gamblers were motivated to gamble to escape problems, rather than for fun or enjoyment • Barr and Standish (2002) - purported how venue facilities, location and their general attractiveness can influence markets to gamble • Morris, Young, Barnes and Stevens (2006) - proposed that destination venues can provide safe and attractive spaces for otherwise socially marginalised groups within communities
INTRA-PLAY FACTORS		
Access to cash/credit cards	• The role of ATMs, EFTPOS, access to cash and credit cards in adherence to precommitments was examined, based on evidence that access to cash at venues may be associated with problem gambling or exceeding precommitments	• McDonnell-Phillips (2005) - reported that EGM players cited access to cash as a factor in exceeding precommitments • Hare (2009) - found that the more money gamblers brought to gambling, the higher the risk of the gambler, with problem gamblers more likely to bring their EFTPOS/ATM card and more likely to use their cards during play
EGM seating/ EGM (design) preferences	• EGM branding preferences were examined to assess the extent to which themes of EGMs influenced players • The role of characteristics such as EGM colours, lights, music/sound on player behaviour was explored	• Spenwyn, Barrett and Griffiths (2009) - explored the effect of music and lights on EGM play and found that music tempo had an effect on gambling, but the effect of lights was non-significant. Fast tempo music under red light also resulted in faster gambling • Griffiths and Parke (2005) - examined the psychological impacts of gambling machine music during play and found that music produces important impressions about gambling activities • To the best of our knowledge, seating preferences of EGM players have not been comprehensively explored in past research

Table 1. Rationale for use of study measures - Factors which influence gambler adherence to precommitment[a]

Major measures	Basis for exploration in the study	Example literature highlighting possible impacts
Live EGM play behaviour	• The influence of EGM characteristics on adherence to precommitment was examined and their influence on related constructs such as 'player excitement' and the 'urge to continue play' • Investigation of the latter constructs was supported through past research examining impaired control and the influence of EGMs and game characteristics on player behaviour	• Dickerson (2003) - found that a typical EGM player can make ~830 odd continuous purchase decisions in an average game of play and 44% of players experienced an irresistible urge to continue during play • Livingstone and Woolley (2008) - emphasised the need to examine factors such as the role of game design, artwork and sound-effects, impact of machine speed, impact of features, wins, venue type, EGM density on player behaviour • Griffiths (2001) - argues that EGM structural characteristics in combination with biological, psychological and situational parameters may result in individuals 'losing control' and developing problem gambling. Example relevant dimensions included stake size, prize size, near miss opportunities, light sound and colour effects and perceptions of skill (ie. controlling the EGMs) • Delfabbro (2008) - purported that EGM players are motivated to obtain bonus features and these contribute to persistent behaviour • Wulfert, Roland, Hartley, Wang and Franco (2005) - found that win expectancy contributed to 'excitement' during gambling • Dickerson, Hinchy, Legg England and Fabre (1992) - identified that wins affect play rates and recorded excitement every five minutes of play • Sharpe (2004) - found that social gamblers became more aroused in reactions to winning than losing, whereas problem gamblers became equally aroused in response to both. It was purposed that responses to losing, rather than winning, play a role in the development of problem gambling • Delfabbro and Winefield (1999) - found that typical EGM sessions lasted for 18 minutes with players making 225 responses at a mean rate of 12-13 responses per minute • Ladouceur and Sevigny (2006) - found participants in a high speed play condition played 2.5 more games than low-speed participants and underestimated the number of games
	• Measures of interest were wide-ranging and included the impact of features/free spins and associated winnings, jackpots, use of multiple credit bets, wins (by different sizes), use of double-up and money won and linked jackpots	• Baumann and Hymie (2008) - identified that among high-risk gamblers, winning resulted in a greater increase in the desire to continue gambling than losing. High-risk gamblers who experienced a large win reported a greater desire to gamble than those who experienced a series of small wins • Loxton, Nguyen, Casey and Dawe (2008) - identified problem gamblers as being reward-driven and more sensitive to punishment than non-problem gamblers • Kyngdon and Dickerson (1999) - found that players given alcohol persisted for twice as many gaming trials as a placebo group • Walker (2003) - found that players are reluctant to use the double-up feature on machines, as it was seen as 'too risky' (even though that the odds are better than for regular EGM play)

Table 1. Rationale for use of study measures - Factors which influence gambler adherence to precommitment[a]

Major measures	Basis for exploration in the study	Example literature highlighting possible impacts
Peripheral factors	• This involved examination of the effects of harm-minimisation signage in venues and attention to that signage on EGM player adherence to precommitment	• Hing (2003) - in a survey of club members, found that signage advising patrons of the risks of gambling had been noticed by 86% of respondents. However, in of all the areas where clubs had introduced responsible gambling measures, signage and information were perceived to be the least likely to encourage responsible gambling Players criticised the signs for being non-confrontational, too familiar and easily ignored • Monaghan and Blaszczynski (2009) - found that (pop-up) harm-minimisation messages were recalled more than static messages and pop-up messages reportedly had a greater impact on within-session thoughts and behaviors. Messages encouraging self-appraisal were more effective
POST-PLAY FACTORS		
Player reflection on EGM play	• This examined EGM player reflections on their play behaviour such as the experience of urges to continue during play, reports of chasing losses, involvement in play and how such factors may be related to exceeding precommitments	• Diskin and Hodgins (1999) - found that pathological gamblers had a greater 'narrowing' of attention than occasional gamblers during play • Baron and Dickerson (1999) -investigated the influence of alcohol on impaired control of EGM players and found that involvement in gambling was linked to the experience of impaired control • O'Connor and Dickerson (2004) - found that chasing losses was strongly related to indicators of excessive gambling and impaired control during EGM play

a. Refer Appendix for each measure in detail

b. Affect is a term used to describe a player's mood

Report structure

Key insights from the exploratory research are presented in line with the following headings.

Detailed findings are findings which directly relate to the study of factors promoting gambler adherence to precommitment decisions.

Other findings relate to research results from the current study which may shed light on precommitment in an indirect way. This latter section also includes descriptive information on the live play behaviour trends of gamblers of different problem gambling risk segments.

DETAILED FINDINGS

This section presents detailed findings relating to the study of the factors which predict adherence to gambler precommitments in the context of EGM play and includes the following sections. These findings are directly related to core research objectives.

Sections	Page
A. Detailed findings - Player precommitment and budgeting history	35
B. Detailed findings - Player access to cash and credit cards	47
C. Detailed findings - Player adherence to precommitments during live EGM play	53
D. Detailed findings - Factors directly predicting whether EGM players exceeded precommitments	66
E. Detailed findings - Role of play excitement, urges to continue and mood in adherence to precommitments	80
F. Detailed findings - Strategies used to support adherence to precommitments	94
G. Detailed findings - Player reflection on their urges to continue EGM play and related issues	100

A. Detailed findings - *Player precommitment and budgeting history*

Precommitment involves EGM players making a decision about what they plan to spend during EGM play. In this context, findings of the past GRA precommitment research has suggested that problem gamblers particularly may not always set affordable limits and may struggle with some forms of household budgeting (eg. McDonnell-Phillips, 2005). In addition, problem gamblers may be more likely to set limits closer to the time of EGM play such as in the context of the gaming environment.

On this basis, the first section of the report explores the frequency of limit setting by EGM players, the locations of where limits were set and the approaches taken by players to other forms of household budgeting.

This also includes an examination of the types of limits selected by players in a range of different settings (ie. away from the gaming environment, before play at the venue and after play at the venue). Understanding how limits may vary depending on their location of selection is critical, in view of past research which suggests that problem gamblers may have difficulty arriving at affordable limits (McDonnell-Phillips, 2005).

Within this context, the current section includes findings relating to:

- •• EGM player tendency to precommitment
- •• Budgeting approaches and current debts of EGM players
- •• Summary of findings

EGM player tendency to precommitment

Reported tendency to set EGM play limits

The reported tendency of EGM players to set expenditure limits for pokies play generally is shown in Figure 7. This is based on the players who took part in the live EGM play observations and was essentially a question about general play behaviour.

A total of 55% of EGM players reported 'always' setting an expenditure limit for pokies play. There were no differences between players who exceeded limits and those who did not (based on the limit reported in the online survey - refer page 55 for limit definitions).

Compared to non-problem gamblers, problem gamblers were less likely to report always setting a spend limit prior to EGM play (OR=0.038, p<.001).

This converges with findings of past research, which has shown that higher risk EGM players may not always precommit prior to each session of play. This may have implications for social marketing strategies to encourage all EGM players to set precommitments.

Figure 7. Self-reported frequency of setting spend limits prior to EGM play - by risk for problem gambling REPORTED BEFORE PLAY (N=194, December 2009)[a]
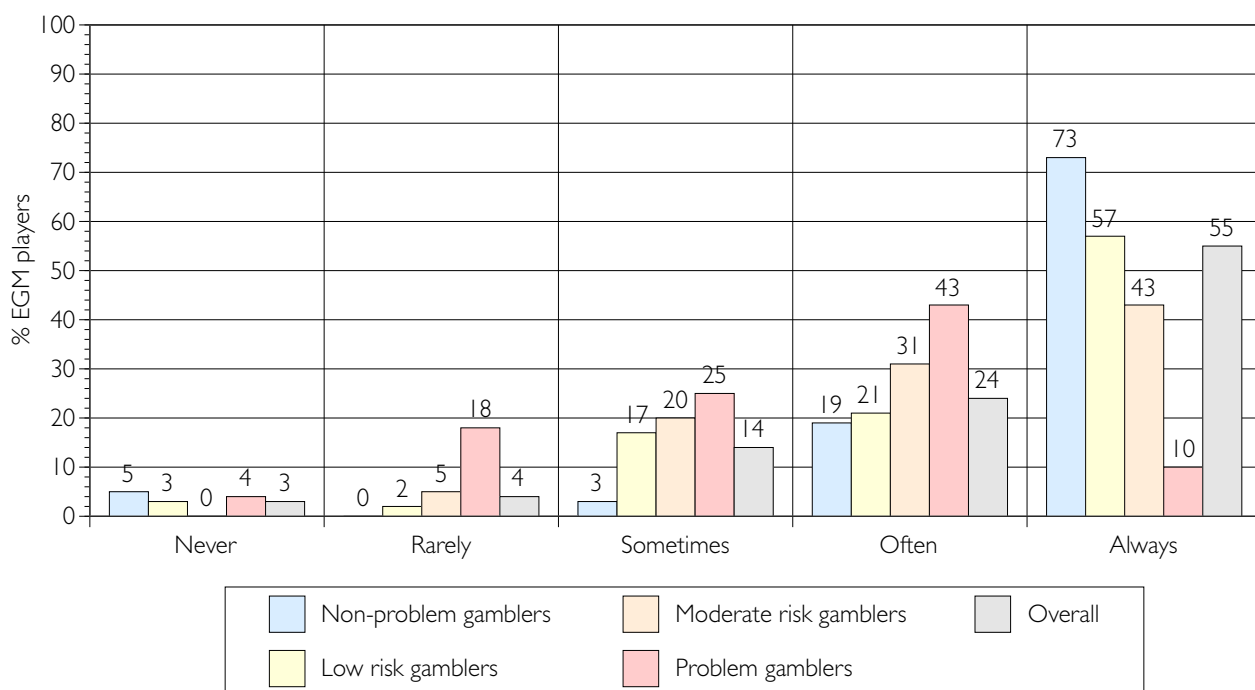
a. Question - How often do you set yourself a pokies spend limit when you play the pokies (an amount which you try not to spend over)? (Base: All EGM players)

Where and when players set precommitments

Where and when EGM players reported setting spend limits for pokies play is shown in Table 2 and Figure 8. As shown, 52% of players reported setting a limit more than a day before playing the pokies and 34% of players set their limits on the day of play.

Findings showed that players who set limits <u>closer</u> to the time of play (or not set limits at all) were significantly more likely to NOT adhere to those limits during play. This was also statistically significant, even when risk for problem gambling was controlled (r=.15, p<.05) *(based on the continuous scale measure of adherence to limits post-survey).*

While low risk, moderate risk and problem gamblers appeared somewhat more likely to set limits on the day of play (respectively 40%, 36% and 35%), compared to non-problem gamblers (24%), this trend was not significant.

Table 2. When players reported setting their EGM spend limits -
by risk for problem gambling (N=200, December 2009)[a]

When spend limits were decided	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
More than a day before playing the pokies	63	47	47	54	52
On the day of play - but before arriving at venue	24	40	36	35	34
After arriving at the venue - but before play	5	9	12	8	8
During play at the venue	9	1	3	2	4
Didn't set any limit at all	0	2	3	0	1

a. Question - When did you decide on your pokies spend limit for today? (Base: All EGM players)

Figure 8. When players reported setting their EGM spend limits -
by risk for problem gambling (N=200, December 2009)[a]
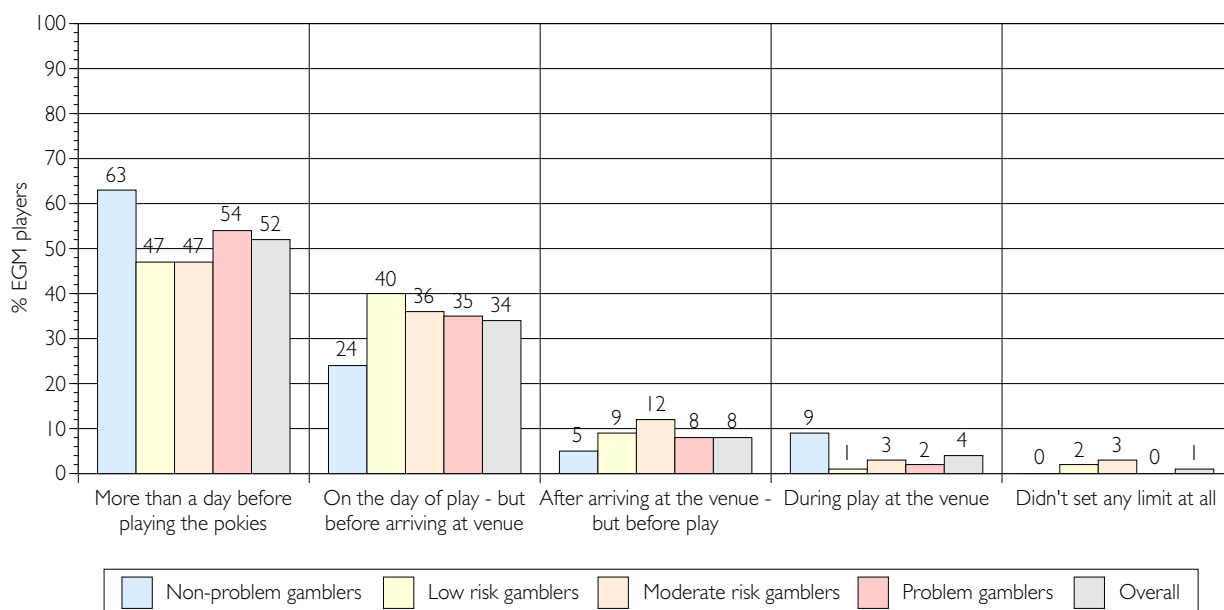
a. Question - When did you decide on your pokies spend limit for today? (Base: All EGM players)

Self-reported monetary limit

Self-reported (daily) monetary limits of players were recorded at three different points in time during the study. This included asking players to report their daily spend limit outside the venue (in the online survey questions), before play at the venue and after play (also at the venue).

While spend limits could vary depending on the time they are reported, it would be reasonable to expect that most players should report a fairly similar limit across each location (especially given that each limit was typically reported in a 1-3 week period).

Problem gamblers, however, have been found to not set spending precommitments and may even choose unaffordable limits (eg. McDonnell-Phillips, 2005). On this basis, analysis explored whether the size of spend limits would vary depending on the location they are set and whether this varied by risk for problem gambling.

Specific limits reported by players are shown in Table 3 and Figure 9. While there were no significant differences in the mean limit amounts estimated by non-problem, low risk and moderate risk gamblers, problem gamblers consistently estimated significantly different amounts at each time point ($p<.05$). This may suggest that problem gamblers do not have a constant limit in mind for play, as do other risk segments.

It is also particularly interesting to note that problem gamblers were more likely to report a relatively lower limit <u>after</u> playing EGMs ($68.60, compared to a very large $123.80 at the venue). This may indicate some level of reflection on their expenditure following play.

The finding that problem gamblers, in particular, are not clear on their play expenditure limits may have implications for future campaigns to educate and inform players about when and where to best set EGM spend limits.

While the affordability of each limit cannot naturally be assessed in the current study (as affordability will vary for each player), such findings point to a need to examine the most optimal location for players to set precommitments.

While this early finding is only <u>indicative</u>, results may suggest that precommitment systems, which require players to set limits before EGM play may be associated with high-risk players selecting higher spend limits.

Table 3. Self-reported EGM spend limits estimated by players at different points in time - by risk for problem gambling (N=194, December 2009)[a]

Risk for problem gambling	Limits reported outside venue			Limits reported before play at venue			Limits reported after play at venue		
	Mean expenditure ($)	Median expenditure ($)	Range in $	Mean expenditure ($)	Median expenditure ($)	Range in $	Mean expenditure ($)	Median expenditure ($)	Range in $
Non-problem gamblers	37	30	95	34.3	30	93	31.2	20	95
Low risk gamblers	31.6	20	198	27.3	20	195	29.2	20	195
Moderate risk gamblers	47.3	30	495	47.4	30	500	46.1	30	497
Problem gamblers	105.4	60	480	123.8	100	580	68.6	50	390
Overall	42.2	20	498	41.1	20	600	35.9	20	497

a. Question - In relation to just your pokies play, What is your typical daily pokies spend limit - that is, the amount you prefer not to spend over (even if you don't keep to it) (Base: All EGM players)

Figure 9. Self-reported mean EGM spend limits estimated by players at different points in time - by risk for problem gambling (N=194, December 2009)[a]
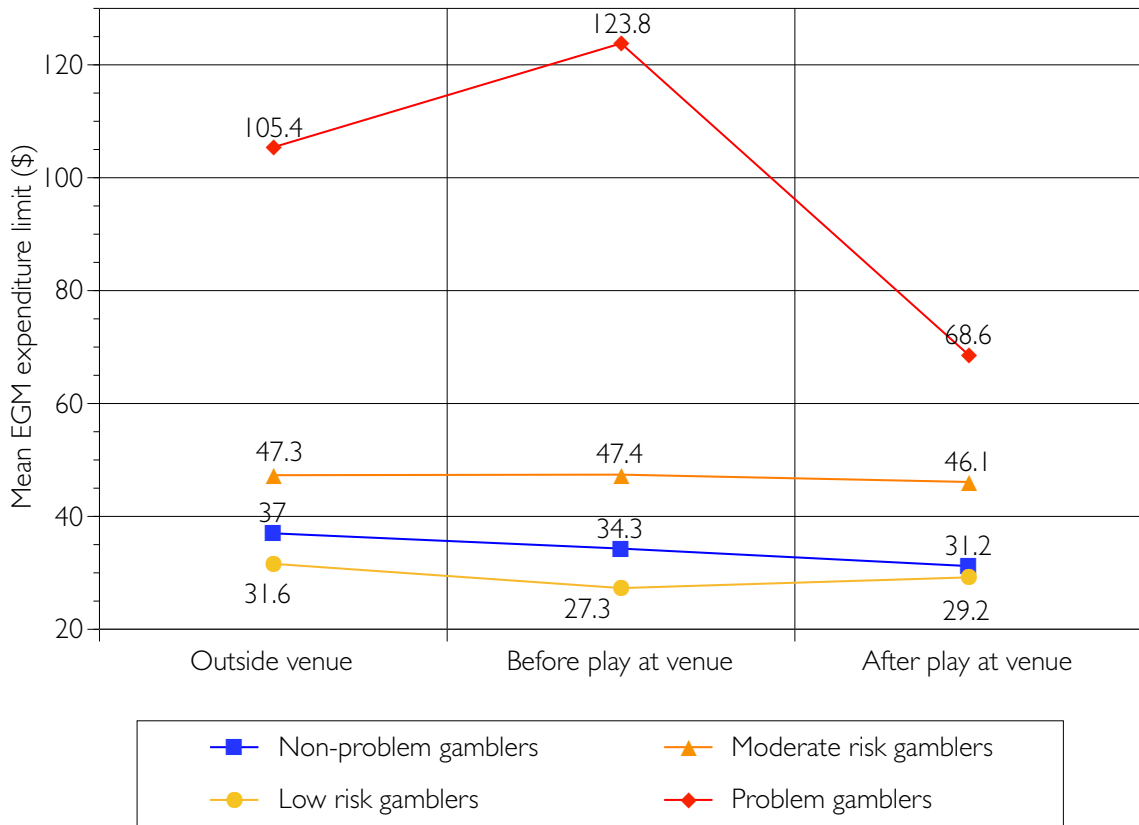
a. Question - In relation to just your pokies play, What is your typical daily pokies spend limit - that is, the amount you prefer not to spend over (even if you don't keep to it) (Base: All EGM players)

Budgeting approaches and current debts of EGM players

Budget categories

As part of the study, players were asked to state the categories they used to plan their household expenditure. This was to explore how EGM players of different risk segments budget for household expenses and in turn, to explore possible links between financial literacy and the setting of EGM precommitments.

With problem gamblers setting higher spending precommitments for EGM play (refer page 38), it was expected that their household budgeting practices may be different from non-problem gamblers. This was also for exploratory interest and somewhat guided by research by Cheema and Soman (2006), which suggests that mental accounts may be used as self-control devices (ie. to prevent excessive spending).

Household budgeting information was collected online when EGM players were at home to ensure that quality data was gathered (as was envisaged that players may have been too 'excited' about EGM play to report detailed information while at the venue).

The budget categories reported by EGM players as being used to manage household expenditure are presented in Table 4. This presents a summarised format, based on (coded) budgeting categories mentioned through unprompted questioning.

Non-problem gamblers reported a significantly higher number of budget categories, compared to the higher gambling risk segments (mean of 5.7 categories, compared to 5.0 for the at-risk groups) (p<.05).

While the reason for the difference is not entirely clear, it may suggest that problem gamblers have a different mental schema of household expenses, compared to non-problem gamblers. An alternative explanation may be that problem gamblers have fewer budget categories, as they have less available income (and aim to spend in as few areas as possible). A review of median incomes in Table 4, however, suggests that more influences may be possible (ie. as trends were not linear).

In addition, compared to non-problem gamblers, at-risk gamblers were less likely to mention safety/security related budget items (OR=.35, p<.05). This included anything which was designed to provide protection and security in life - such as having an emergency fund, insurance policies or just even maintaining some general savings.

While the reason for the trend is speculative, it may suggest that players at-risk are less likely to use strategies to manage risks in life, similar to their behaviour during gambling. This would also converge with findings of authors such as Hewig et. al (2009), which propose that problem gamblers may have a greater risk orientation.

Table 4. Budget categories reported as being used to manage household expenditure - by risk for problem gambling - MULTIPLE RESPONSES (N=200, December 2009)[a]

Budget categories	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Food	98	93	95	100	96
Loans/debts	39	15	36	47	28
General household expenses (eg. bills, rates, rent, utility bills)	88	80	84	88	84
Car expenses	76	76	69	81	75
Items nice to have, but non-essential (eg. mobile, internet, pay TV)	30	26	25	14	26
Addictive substances (alcohol, cigarettes)	10	15	14	16	13

Table 4. Budget categories reported as being used to manage household expenditure -
by risk for problem gambling - MULTIPLE RESPONSES (N=200, December 2009)[a]

Budget categories	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Special circumstance expenses (eg. child care, pet care, baby items, gifts)	8	10	16	14	11
Safety/security expenses (insurance, savings, emergency funds)	44	25	14	21	28
Recreation and eating out	21	32	23	34	28
Health, medicines and fitness	7	6	6	21	8
Gambling	8	3	4	8	5
Other miscellaneous	0	5	0	0	2
Mean number of budget categories mentioned (three categories was set as a minimum)	5.7	5.0	4.8	5.2	5.2
Median weekly income ($)	1299	799	399	999	599

a. Question - If you had to break down your weekly expenditure, what are the main items that you need to budget for in an average week? (Minimum of three categories required) (Base: All EGM players)

Detailed categories

While many budget categories were mentioned by EGM players, a range of detailed categories of special interest are presented in Figure 10. These are some of the categories prior to further roll-up and summarisation of themes and are only presented for exploratory interest.

As shown, relative to other risk segments, problem gamblers seem to have a higher tendency to report categories such as mortgages (37%), bills (42%), credit card bills and debts (21%), health/medicines (21%), cigarettes (16%) and leisure expenses (34%).

The leisure expense trend is interesting and may indicate that the segment has a more prominent mental schema oriented towards leisure and recreation. An increased tendency to report health expenditure and debts may also be explained by other research, which suggests that problem gamblers experience a range of health and financial issues (eg. Hare, 2009).

In comparison, compared to non-problem gamblers, problem gamblers were somewhat less likely to report specific categories such as utilities (only 36%), phone (13%), alcohol (0%), insurances (14%), car expenses (15%), petrol (57%) and unplanned expenses (0%). Qualitatively, this may suggest that, in some respect, very detailed and specific types of household bills (such as utility, phone and car expenses) are less 'top-of-mind' to such groups.

An alternative explanation may be that problem gamblers cluster such items together generically as 'bills' and due to lower salience as budget categories, they show a lower inclination to plan for such expenses (ie. in comparison, if very specific categories are able to be recalled 'top-of-mind', it may imply that they are firmly part of the mental schema for money management).

Figure 10. Detailed budget categories of special interest (used to manage household expenditure) - by risk for problem gambling - MULTIPLE RESPONSES (N=200, December 2009)[a]
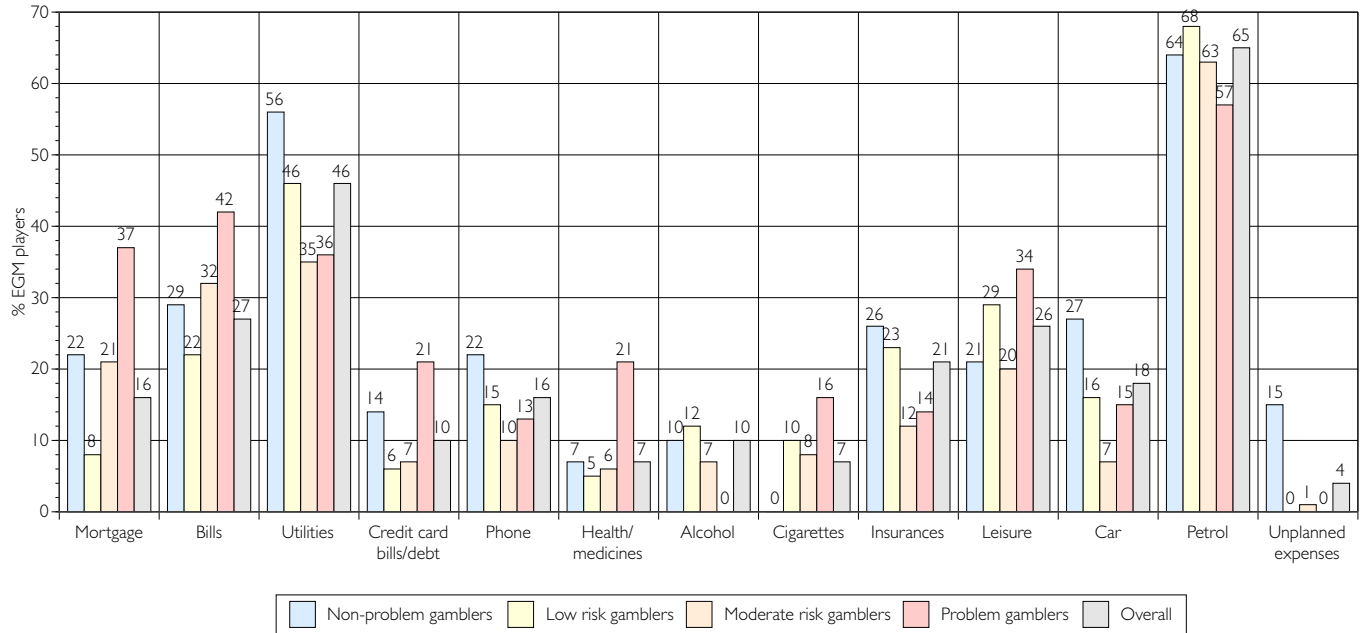
a. Question - If you had to break down your weekly expenditure, what are the main items that you need to budget for in an average week? (Minimum of three categories required) (Base: All EGM players)

Overspending of budgets

Findings of past research has suggested that players of higher-risk levels for problem gambling may show a tendency to overspend in other categories of household expenditure (McDonnell-Phillips, 2005). Accordingly, this was further explored in the current study.

The mean frequency with which EGM players overspent their household budgets is shown in Table 5 and Figure 11. This involved asking players to provide a rating for the frequency of overspending of each budget category on a scale from never to always.

Findings showed that problem gamblers were more likely to overspend budgets generally compared to other segments (p<.05). In particular, compared to non-problem gamblers, problem gamblers were more likely to overspend their food, car and addictive substance budget (mainly cigarettes) (p<.05).

While a more restrictive budget may explain ratings, findings may indicate that problem gamblers have some tendency to 'over-indulge' in other aspects of life. This may also be the case, given that spending 'more than one can afford' is a recognised measure of the Problem Gambling Severity Index (this item was also significantly correlated with risk for problem gambling - r=.74, p<.001).

Table 5. Mean frequency of overspending unprompted budget categories -
by risk for problem gambling (N=200, December 2009)[a]

Budget categories	Mean frequency of overspending budget (1=Never, 5=Always) by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Gambling	1.4	n/a	2.6	3.2	1.9
Leisure	2.9	1.9	2.9	3.1	2.4
Food	2.4	3	2.7	3	2.8
Special circumstance expenses (eg. child care, pet care, baby items, gifts)	n/a	1.7	2	2.9	1.9
Addictive substances (alcohol, cigarettes)	1	3	2.6	2.8	2.5
Car expenses	1.3	2.2	2.6	2.4	2.1
General household expenses (eg. bills, rates, rent)	1.9	1.9	2	2.2	1.9
Loans/debts	2.3	1.5	1.5	1.7	1.8
Safety/security expenses (insurance, savings, emergency funds)	1.7	1.5	1.3	1.7	1.6
Health/medicines	2.5	1.3	1.3	1.6	1.9
Items nice to have, but non-essential (eg. mobile, internet, pay TV)	1.3	1.7	1.9	1.2	1.6
Unweighted mean across all categories	1.8	2.0	2.1	2.3	2.0

a. Question - How often do you overspend your preferred budget (by budget category)? (Base: All EGM players)

Figure 11. Mean frequency of overspending unprompted budget categories -
by risk for problem gambling (N=200, December 2009)[a]
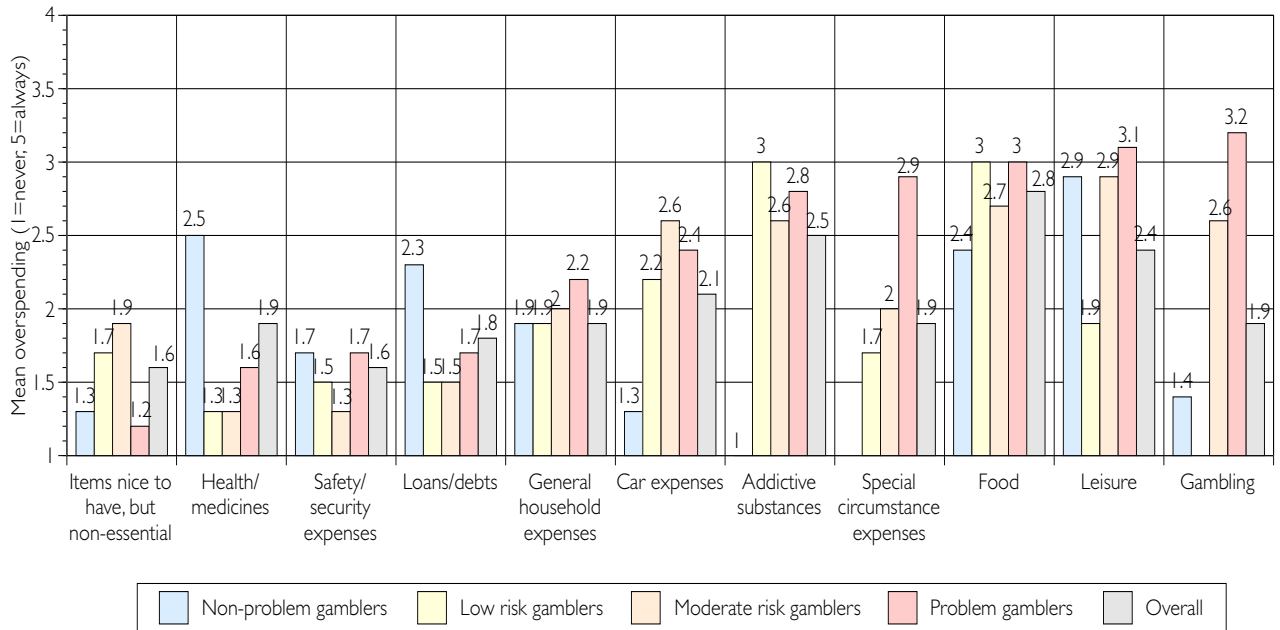
a. Question - How often do you overspend your preferred budget (by budget category)? (Base: All EGM players)

Player debts

The types of debts held by EGM players participating in the study are in Table 6 and Figure 12. Overall results showed that problem gamblers were more likely to report a range of different types of debts or loans, compared to other risk segments.

In particular, they were more likely to report personal loans (p<.05), compared to non-problem gamblers and had significantly more credit card debts than low risk gamblers (p<.05). Problem gamblers were also more likely than non-problem and low risk gamblers combined to have loans or IOUs from friends and family (p<.05).

This especially highlights the importance of ensuring that problem gamblers in particular select affordable precommitments for play. Indeed, given financial pressures on problem gamblers, setting and keeping to an unaffordable precommitment may be harmful.

In turn, this emphasises the need to educate problem gamblers about financial literacy and to educate players about how to select affordable and realistic precommitments.

Table 6. Type of debts held - by risk for problem gambling (N=200, December 2009)[a]

Type of current debts held	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
No - have none	22	50	32	7	35
Credit cards	48	35	45	62	43
Personal loans (eg. car)	12	11	29	40	16
Pay-day lender loans	0	0	3	14	2
Home loans	56	25	38	56	39
I have a loan or IOU from a friend/family member	0	4	14	18	5

a. Question - Do you currently have any debts which you are paying off? (Base: All EGM players)

Figure 12. Type of debts held by EGM players - by risk for problem gambling (N=200, December 2009)[a]
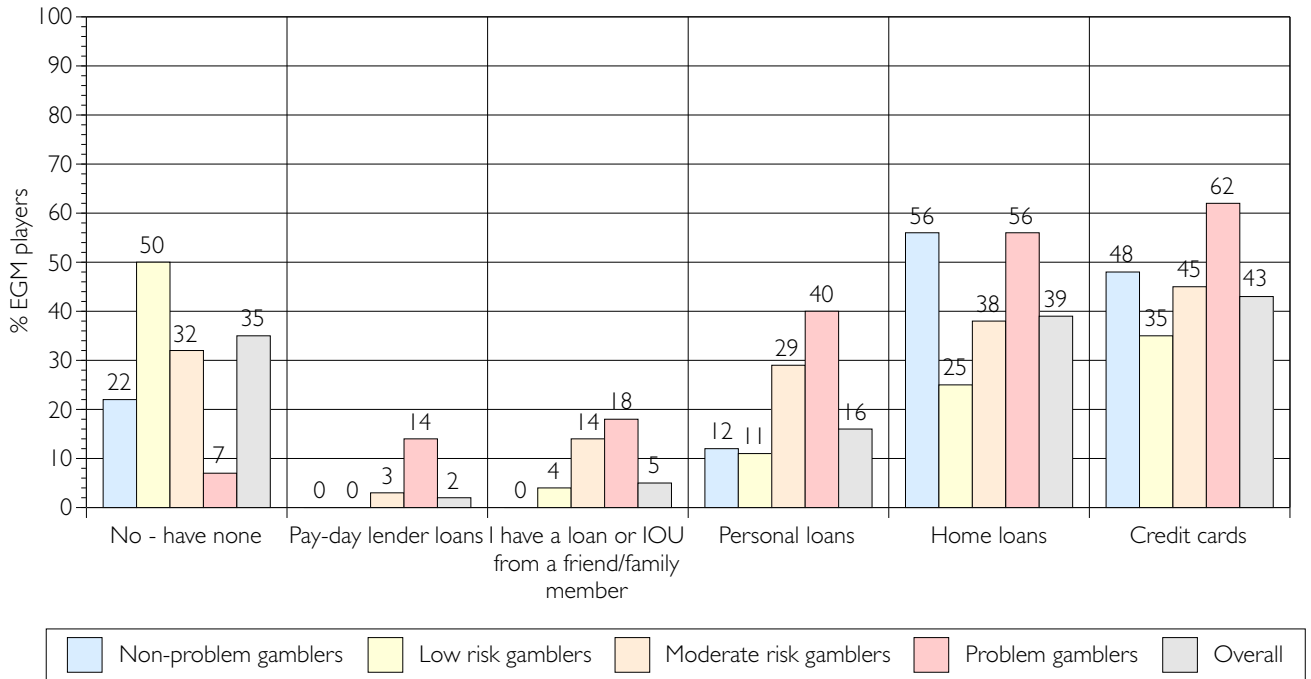
Legend: Non-problem gamblers, Low risk gamblers, Moderate risk gamblers, Problem gamblers, Overall

	No - have none	Pay-day lender loans	I have a loan or IOU from a friend/family member	Personal loans	Home loans	Credit cards
Non-problem gamblers	22	0	0	12	56	48
Low risk gamblers	50	0	4	11	25	35
Moderate risk gamblers	32	3	14	29	38	45
Problem gamblers	7	14	18	40	56	62
Overall	35	2	5	16	39	43

a. Question - Do you currently have any debts which you are paying off? (Base: All EGM players)

Summary of findings

Findings suggest that, while spending precommitments are used by many regular EGM players, problem gamblers show somewhat of a lower inclination to consistently set limits for gaming. In addition, problem gamblers may be prone to selecting variable expenditure limits depending on the location they are set (including selecting particularly high limits when at gaming venues).

While this may be due to different budgets at different times (a plausible explanation), it may also indicate that problem gamblers do not have a clear mental model of the amount they should select as an expenditure limit for gaming.

Budgeting practices also show that higher-risk players use fewer categories to manage household budgeting. While additional research is needed to further explore this issue, this may be indicative of possible issues with financial literacy. An alternative explanation may be the presence of a more restrictive household budget.

Other analyses pointing to this trend were that problem gamblers:

- • showed a lesser tendency to budget for safety and security budget items (eg. savings, insurance)
- • were more likely to overspend certain budgets (eg. food, car, addictive substances)
- • had more personal debts (eg. personal loans)

Accordingly, research highlights the need for education and financial literacy information to ensure that all players - particularly problem gamblers - make well-considered and affordable precommitment decisions. If precommitment limits are not affordable, the purpose and intent of setting precommitments may be undermined, if not potentially harmful to players.

B. Detailed findings - *Player access to cash and credit cards*

Access to cash and credit cards has been frequently identified as a risk factor for overspending during gambling (eg. Martin and Moskos, 2007). The first national study of precommitment also suggested that access to ATMs at venues may be amongst the top reported triggers for regular gamblers to exceed spending limits and had a disproportionate impact on problem and moderate risk gamblers (although this was only based on attitudinal research) (McDonnell-Phillips, 2005).

Recent evidence from a Victorian epidemiological study (Hare, 2009) also highlights that problem gamblers may be more likely to bring higher amounts of cash (on their person) to gambling and may be more likely to bring an ATM or EFTPOS card to play.

Given that access to cash could potentially be linked to overspending during gambling, the next section of the analysis explores the cash and cards which players brought to venues on the day of play observation.

While many studies rely on self-report data, to the best of our knowledge, no study has previously asked gamblers to count the cash brought to gambling on their person (in front of the interviewer) and validated whether the amount brought varies by gambling risk level. This may have implications for precommitment, given that access to cash may potentially be a risk factor for exceeding spend limits.

Within this context, the current section summarises key study findings relating to:

- •• Money brought to venue on day of the EGM observation
- •• Recent play activity (other than on the day of play) by EGM players
- •• Summary of findings

Money brought to venue on day of the EGM observation

Money brought on person

As part of the study, upon arrival at the venue, EGM players were asked to check their purse or wallet to indicate how much money they had brought to EGM play on their person.

The money which players brought to play is presented in Table 7. Players who exceeded expenditure limits during play brought $114 to the venue, while players who did not exceed their limit brought $88. However, this difference was not statistically significant.

Problem gamblers brought a significantly higher amount of money to the venue than non-problem gamblers (Mean of $135.30 in cash for problem gamblers, compared to $72.20 in cash for non-problem gamblers) ($p<.05$).

This shows an interesting behaviour of relevance to precommitment, given that additional cash may present a risk to problem gamblers for excessing spending.

Table 7. Money brought to EGM play - by risk for problem gambling (N=200, December 2009)[a]

How much cash and coins in total have you bought today	Mean or median ($) by risk for problem gambling	
	Mean	Median
Non-problem gamblers	72.20	54.20
Low risk gamblers	95.80	60.00
Moderate risk gamblers	93.10	50.00
Problem gamblers	135.30	100.00
Overall	92.20	60.00

a. Question - Now could you please check your own wallet/purse/ pocket and indicate how much cash and coins in total you have brought to pokies today? (Base: All EGM players)

EFTPOS/ credit cards

Whether players brought EFTPOS and credit cards to the venue on the day of observation was also examined. Results are in Table 8 and Figure 13.

This included results of a question about whether players sourced money from an ATM or via EFTPOS at the venue on the day of play (prior to play commencement). These are particularly interesting questions, in that interviewers had an opportunity to validate the cards which gamblers of different risk segments brought to the venue (providing useful behavioural validation evidence).

Interestingly, findings showed that players who exceeded limits were no more likely to bring credit cards or EFTPOS cards to gaming, compared to players who did not exceed limits.

Compared to non-problem gamblers, higher risk gamblers combined were significantly less likely to bring a credit card to the venue ($p<.05$). This may be because such players see that such cards present a temptation for money to be accessed during play. Problem gamblers were also more likely to report accessing money from both ATMs and EFTPOS prior to arrival at the gaming venue (each $p<.05$).

Table 8. Access to cash by EGM players -
by risk for problem gambling (N=200, December 2009)[a]

Access to cash	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Cards brought to venue					
Brought EFTPOS card	100	87	91	89	91
Brought credit card	90	60	59	66	69
Whether player stopped at ATM/EFTPOS prior to arrival at venue					
Accessed money from ATM	12	14	22	32	16
Access money from ETPOS	1	1	2	16	2

a. Question - Did you bring any of the following cards in your purse/wallet? Did you stop at an ATM or EFTPOS prior to arrival here today to get money to bring to pokies? (Base: All EGM players)

Figure 13. Access to cash by EGM players - by risk for problem gambling (N=200, December 2009)[a]
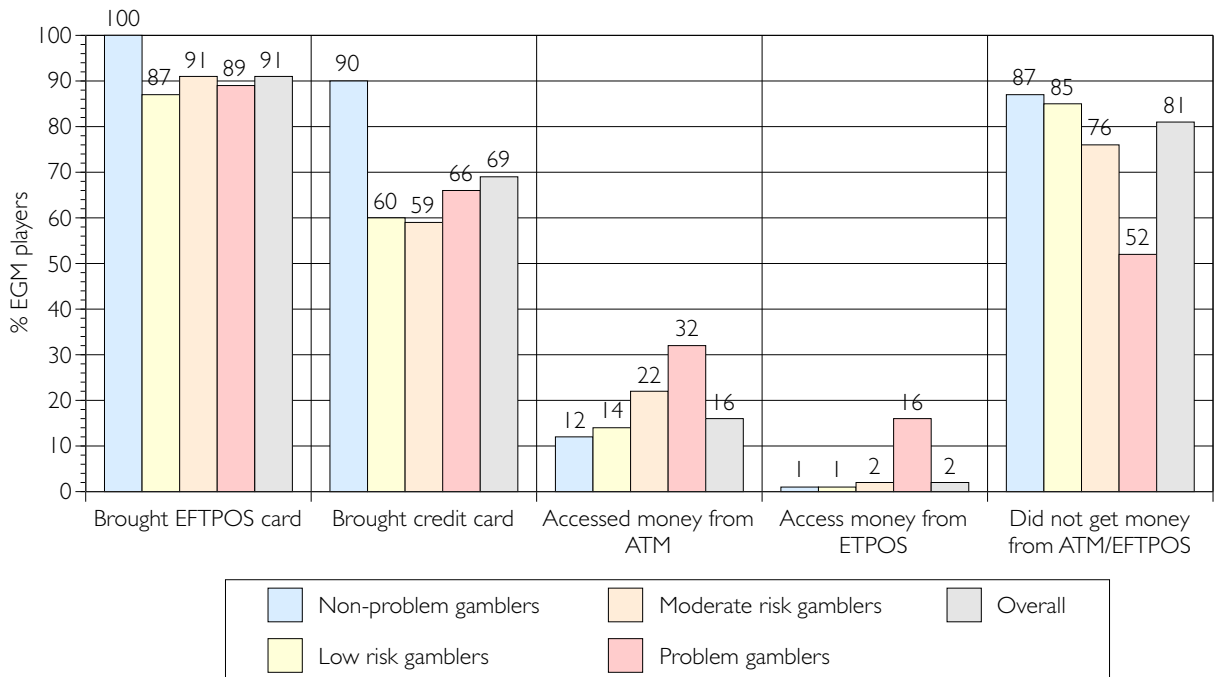
a. Question - Did you bring any of the following cards in your purse/wallet? Did you stop at an ATM or EFTPOS prior to arrival here today to get money to bring to pokies? (Base: All EGM players)

*Access to cash
pre-visit or
during play*

The mean amount of money reported by players to have been sourced via EFTPOS or ATMs prior to EGM play is presented in Table 9. Findings showed that when EFTPOS or ATMs were used, a mean of $145 was accessed.

Players who exceeded limits withdrew a mean of $215 via EFTPOS or ATMs prior to play, while players who did not exceed limits withdrew $140. However, this difference was not statistically significant.

In addition, non-problem gamblers withdrew the smallest amount ($137.30) and moderate risk gamblers withdrew the highest amount ($165.60). Differences again were non-significant.

Table 9. Money accessed via EFTPOS or ATM prior to EGM play
by risk for problem gambling (N=200, December 2009)[a]

Risk for problem gambling	Amount accessed via EFTPOS or ATM ($)	
	Mean	Median
Non-problem gamblers	137.30	100.00
Low risk gamblers	144.00	50.00
Moderate risk gamblers	165.60	60.00
Problem gamblers	136.60	120.00
Overall	145.4	100

*a. Question - How much cash did you get from either an ATM or through
EFTPOS as mentioned above? (Base: All EGM players)*

Findings showed no differences between players in terms of access to cash via ATMs or EFTPOS during EGM play based on:

- •• whether players exceeded their precommitments (or otherwise)
- •• level of the EGM player's risk for problem gambling

This is possibly an effect of players not wishing to interrupt the observation and in part is also because few players accessed ATMs/EFTPOS during EGM play.

*Play prior to
pokies*

While EGM players were asked not to play EGMs on the day of observation (until the interviewer arrived), it was recognised as a reality that some players would. For this reason, players were asked to indicate whether they had played EGMs prior to the observational interview (and were additionally asked how much they had spent). Results are presented in Table 10.

Results showed no differences between players who exceeded versus did not exceed their precommitment during play. Higher risk segments, though, found it more difficult to resist EGM play pre-interview, with 8% of problem gamblers and 12% of moderate risk gamblers playing pokies prior to interview commencement. These results are also interesting in that all players had 'precommitted' to not playing EGMs until they had met the interviewer.

Table 10. EGM play admitted by players prior to shadow
- by risk for problem gambling (N=200, December 2009)[a]

Risk for problem gambling	Mean spending based on full sample ($)	% players admitting to playing EGMs prior to shadow
Non-problem gamblers	0.70	5
Low risk gamblers	0.10	4
Moderate risk gamblers	3.20	12
Problem gamblers	1.90	8

*a. Question - How much money did you spend or lose on the pokies
TODAY prior to starting this survey (Base: All EGM players)
(Note that median spend was equal to zero for all risk segments)*

Recent play activity (other than on the day of play) by EGM players

Recent loss on EGMs

In addition to exploring the cash and cards brought to gambling, players were asked about their recent play activity. Apart from giving an indication of the player's recent spending, it provides a general indication of recent EGM expenditure.

The mean and median loss associated with EGM play in the past four weeks, as reported by EGM players, is presented in Table 11. Negative values indicate the experience of wins.

Players who exceeded precommitments had spent no more on EGM play in the past four weeks, compared to players who did not exceed limits (respectively, $52.50 v $54.50).

However, there was a positive relationship between risk for problem gambling and loss on EGMs in the past four weeks, with problem gamblers reporting the most loss overall (mean of $150 or median of $291.50) (r=.18, p<.01).

Table 11. Spending or loss on pokies in the past four weeks - by risk for problem gambling (N=200, December 2009)[a]

Risk for problem gambling	Spending or loss on EGM play in the past four weeks *(negative values indicate wins)*	
	Mean loss ($)	Median loss ($)
Non-problem gamblers	2.00	-0.60
Low risk gamblers	22.00	38.40
Moderate risk gamblers	50.00	55.30
Problem gamblers	150.00	291.50
Overall	25.00	52.80

a. Question - How much would you have spent or lost on pokies in the past four weeks? (Base: All EGM players)

Times EGMs recently played

The mean visits players had made to pokies in the past four weeks are in Table 12.

Players who exceeded precommitments were not more likely to play EGMs more frequently than players who did not exceed their precommitments (respectively, 5.5 versus 4.2 times - a difference which was not significant).

Similar to expenditure trends, findings showed a positive correlation between the frequency of visits to pokies and risk for problem gambling (r=.23, p<.01). Problem gamblers had been 7.8 times, compared to only 2.3 times for non-problem gamblers.

Table 12. Mean times players visited pokies in past month (N=200, December 2009)[a]

Visits to pokies in past month	Mean times EGMs were played in past month (times)				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
How many times have you been to the pokies in the past month	2.3	5.3	3.7	7.8	4.4

a. Question - How many times have you been to the pokies in the past month (4 weeks)? (Base: All EGM players)

Summary of findings

Analysis of the cash and cards brought by players to gambling highlights that problem gamblers may have greater access to cash in the context of gaming play. They brought the highest amount of cash to play and were more likely to access money from ATMs or EFTPOS <u>prior</u> to venue arrival.

In contrast, there were no major differences in access to cash between players who exceeded versus did not exceed their precommitment (suggesting that cash did not play a role in players exceeding precommitments).

Findings similarly showed no differences between players in terms of access to cash via ATMs or EFTPOS <u>during</u> EGM play based on:

- •• whether players exceeded their precommitments (or otherwise)
- •• level of the EGM player's risk for problem gambling

This is possibly an effect of players not wishing to interrupt the observation and in part is also because few players accessed ATMs/EFTPOS during EGM play.

Higher risk segments combined were less likely to bring credit cards (possibly a control strategy to keep to precommitments) and problem gamblers reported the highest EGM loss in the past month and the most number of visits to gaming venues. No significant differences, however, were observed between players exceeding precommitments (and those who did not) in terms of play frequency and gaming expenditure in the past four weeks.

While the need for higher levels of cash possibly explains the observed tendency of problem gamblers to bring and seek cash <u>before</u> play, results may also suggest that problem gamblers are somewhat vulnerable during gaming due to the availability of additional cash for play.

Results similarly highlight that risk for problem gambling is an important determinant of player access to cash during play.

Accordingly, the next section of the study explores player adherence to reported precommitments in the context of live play observations.

C. Detailed findings - *Player adherence to precommitments during live EGM play*

Before examining the range of factors which may predict adherence to precommitments (and related constructs such as gaming excitement and the urge to continue play), the next section examines the level of player adherence to precommitments during live play.

Live play observations were undertaken at 200 venues across three states of Australia.

As previously indicated, precommitted spend limits were reported by players on three occasions, to explore the possibly that limits may be reported differently over different periods of time (For further detail, readers should refer to the section - Budgeting approaches and current debts of EGM players on page 40).

This included asking EGM players to report spend limits through an online survey (generally completed by players at home), directly before EGM play (at the gaming venue) and at the end of the live EGM play observation.

On this basis, this section of the report presents findings showing player adherence to spend limits (which were reported on different occasions), along with results relating to player adherence to bet size and time precommitments during play.

Within this context, key findings are structured as follows:

- •• Player adherence to spend precommitments during EGM play
- •• Player adherence to bet size precommitments during EGM play
- •• Player adherence to time precommitments during live EGM play
- •• Player spending on EGM play relative to weekly personal income
- •• Summary of findings

Player adherence to spend precommitments during EGM play

Self-reported adherence to expenditure limits

Player adherence to precommitted spend limits was examined using both self-report data and comparisons between reported spend limits and actual expenditure during the live EGM play observation.

Self-reported overspending of play expenditure limits (recorded post-play) is presented in Table 13 and Figure 14. As initially described on page 38, this was one of several measures used to examine player adherence to spending precommitments.

Based on self-report ratings, findings showed that only 7% of players felt that they had overspent their expenditure limit during EGM play. Based on a comparison of mean ratings, problem gamblers were significantly more likely than non-problem gamblers to report overspending their expenditure precommitment ($p < .05$).

Table 13. Extent to which players reported overspending their spend limit - by risk for problem gambling (N=200, December 2009)[a]

Extent players reported overspending spend limits	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
A lot more	0	0	0	10	1
Somewhat more	0	2	0	1	1
A little more	3	7	5	3	5
% spend a lot/somewhat or a little more	3	9	5	14	7
Didn't spend more than limit	37	50	54	37	46
Spent under limit	60	40	41	48	47
Means (1=Spent a lot more, 5=Spend under limit)	4.6	4.4	4.3	4.1	4.4

a. Question - Did you end up spending more than your desired pokies spend limit today (that is, have you spent more than the amount you ideally prefer to spend on pokies) (Base: All EGM players)

Figure 14. Extent to which players reported overspending their spend limit -
by risk for problem gambling (N=200, December 2009)[a]
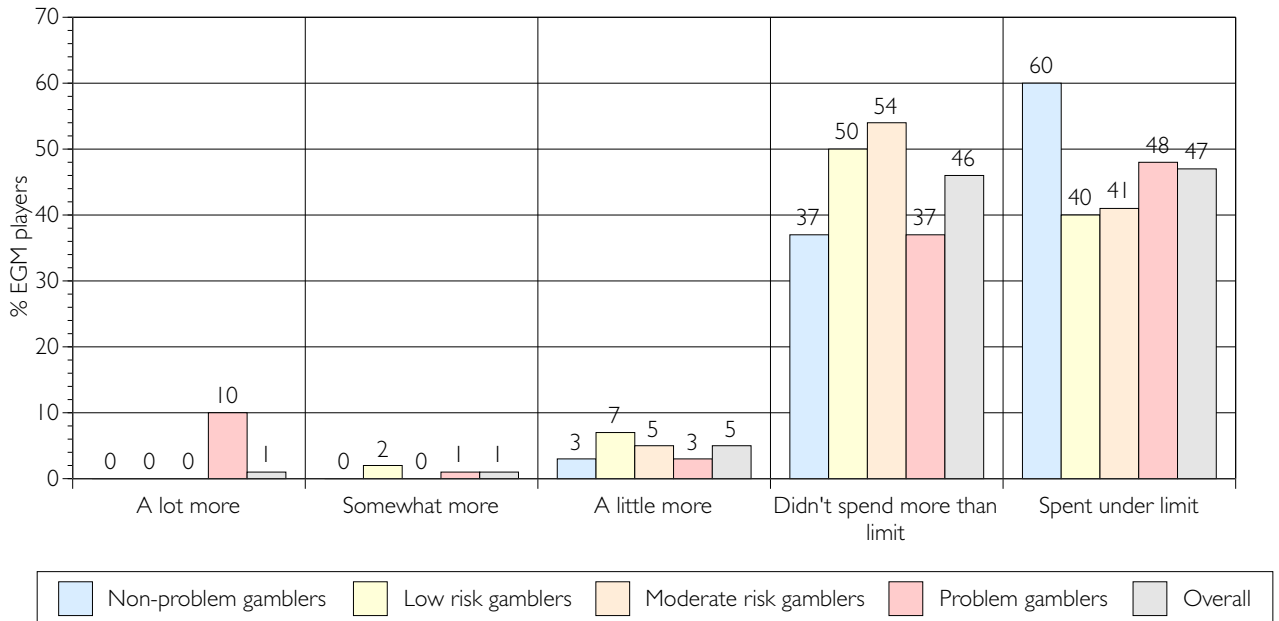
a. Question - Did you end up spending more than your desired pokies spend limit today (that is, have you spent more than the amount you ideally prefer to spend on pokies) (Base: All EGM players)

Actual adherence to reported spend limits

In addition to the self-reported measure of adherence to precommitments (refer Table 13), during the study, players made estimates of EGM expenditure limits (ie. reporting a specific monetary value) at different points in time. This was also to permit some exploration of how spend limits may vary depending on the time and location they are set.

This included asking respondents to indicate specific EGM expenditure limits (in dollar values):

•• in the online survey - completed at home well before play

•• pre-play - while inside the venue, but directly before play

•• post-play - after the EGM play observation concluded

On this basis, the next analysis examined player adherence to precommitments based on a comparison of reported and actual expenditure on these three separate occasions.

Total expenditure, in this instance, included both actual EGM expenditure (recorded on the day of play), plus any additional expenditure in cases where players reported playing pokies prior to their play observation. Other leisure expenditure (eg. food), however, was not included.

Comparative findings are shown in Table 14. Overall, between 12-16% of players in a single play observation session exceeded an expenditure limit, based on the monetary values reported at three different points in time. It should also at this point be noted that this differs from the original estimation made by players in Table 13 (7%).

While this is not intended to second-guess the player's most affordable or appropriate limit, it illustrates that limits are somewhat arbitrary and highlights that further research is needed to identify the most effective location for making precommitment decisions.

This also has to consider the real issue that expenditure limits will vary across time (eg. due to different available budgets and financial pressures).

In reviewing results, a number of other issues also require reflection.

Limits estimated online were away from the venue (provided through an online survey). For this reason, they could be argued to be a more well-considered limit (and not affected by 'excitement' at the venue). This approach may also be advocated through the work of Dickerson (2003). Although, an alternative interpretation may be that limits set at home are too 'out of context' and thus not tailored to the time of play.

Limits set directly before gaming could also be argued to be equally more or less relevant. Being set immediately before play may lead to some players experiencing 'excitement' (as suggested by Dickerson, 2003). However, limits may also be more realistic being just before the commencement of play.

Limits reported post-play could similarly be subject to social desirability (ie. as players may feel embarrassed stating a limit under their actual expenditure) or alternatively, argued to represent a true feeling of how the player felt about their expenditure (after it had occurred).

While the most appropriate limit cannot be determined through this research, findings highlight that player adherence to limits will vary depending on the time and location they are set.

Limit adherence by risk for problem gambling

A number of trends by risk for problem gambling are also noteworthy. Based on the expenditure limit recorded outside the gaming venue, 22% of moderate risk gamblers and 17% of problem gamblers exceeded their limit. In comparison, 13% of non-problem gamblers and 15% of low risk gamblers exceeded their precommitment.

A similar trend was observed for the post-play limit. However, the limit set before play at the venue (which readers will recall was much higher for problem gamblers) does not show the same pattern of results. This shows a higher proportion of non-problem gamblers and low risk gamblers 'exceeding' their spend limit.

This may be explained by previous results, which showed that problem gamblers have a distinct tendency to estimate higher limits when at the gaming venue (refer Figure 15) (mean of $123.80 when estimated at the venue before play, compared to $105.40 at home online and $68.60 following play).

Accordingly, problem gamblers may be less likely to exceed the limit reported directly before play at the venue, given that this limit is effectively much higher.

Table 14. Whether players exceeded limits - by risk for problem gambling (N=200, December 2009)[a]

Estimation of limits	Whether limit was exceeded	% EGM players by risk for problem gambling				
		Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Based on calculations of specific monetary figures (reported on different occasions)						
Limits estimated outside venue (in online survey)	Exceeded limit	13	15	22	17	16
Limits estimated at venue - *Before* commencement of play	Exceeded limit	15	19	9	12	16
Limits estimated at venue - *After* completion of play	Exceeded limit	10	14	6	18	12
Based on self-report post-play						
Self-reported adherence to spend limits (as in Table 13)	% spending a lot/somewhat more or a little more	3	9	5	14	7

a. Players estimated their EGM expenditure limit at three different time points and whether they exceeded their limit was calculated for each of the three limits reported.

Figure 15. Self-reported EGM spend limits estimated by players at different points in time - by risk for problem gambling (reproduced for reader reference) (N=194, December 2009)[a]
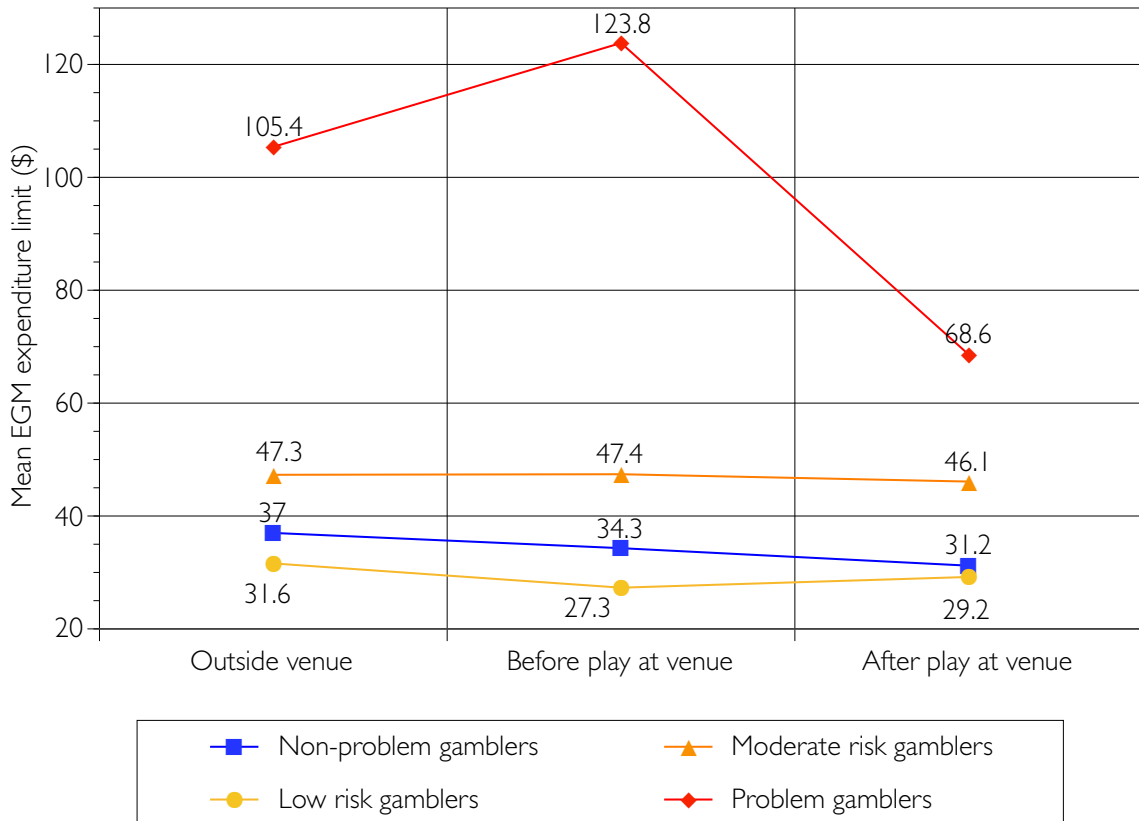
a. Question - In relation to just your pokies play, What is your typical daily pokies spend limit - that is, the amount you prefer not to spend over (even if you don't keep to it) (Base: All EGM players)

Reasons for exceeding spend limits

As only fifteen reasons were provided by EGM players exceeding their expenditure limits, they are detailed below. It is interesting to note that players report a range of reasons including the temptation of jackpots, money not lasting long enough to feel satisfied with play, wanting to relax at the EGM, access to money and experiencing an 'urge to win' or to win a feature.

Verbatims are provided as follows:

- *I would have spent $15. I spent $18 because I sat down at the wrong machines, with multi-lines (eg. 50 lines and 5c machines). I usually don't play these*
- *I thought the machine might give me more chance to get something*
- *The jackpot was too tempting to resist going for*
- *My first $20 only lasted 13min. It would have been alright, if it had lasted a half hour*
- *For me, it was relaxing comfortable at the machine. It was nothing to do with the machine itself*
- *My addiction is pokes and chasing losses. I know I should not be putting money in, but I just do*
- *I put in some extra coins that I had in my purse*
- *Man sitting next to me was the reason I went over - I was chatting to him*
- *I lost track of the time when I was playing*
- *I was hoping to have a big win. That's what made me continue*
- *I felt the machine I was on was due for a win*
- *I had the money in my wallet*
- *I had a small urge to win something, so I put in more money that I usually would*
- *I kept playing, as I hadn't yet won the feature*
- *I wanted to play longer, but my money ran out too quickly. So I continued on*

Ability to track EGM expenditure

A further finding showed that players who reported widely variable limits *also* tended to have difficulty tracking their EGM expenditure during play (χ^2=9.62, p<.01). While naturally speculative, this may suggest that some players cognitively process expenditure information better than others or may be more motivated to process such information. This may also point to some value in developing player skills on how to set limits and track their EGM expenditure.

Player adherence to bet size precommitments during EGM play

Bet size precommitments

While not a core focus of the research, bet size limits were examined in the study. Bet size limits in EGM play refer to the number of credits bet for each line in the pokies. While a single credit is the minimum bet, players can also bet more than a single credit during play.

Findings showing self-reported adherence to bet size limits are in Table 15. As shown, 80% of players reported setting a bet size limit.

Players who exceeded expenditure limits were no more likely to set a bet size limit than players who did not exceed spend limits. Based on mean comparisons, problem gamblers were significantly more likely to set bet size limits, compared to non-problem gamblers (p<.05).

Table 15. Whether EGM players set a bet size limit - by risk for problem gambling (N=200, December 2009)[a]

Player reports of setting a bet size limit on credits per line bet on EGM play	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Set bet size limit	72	83	81	87	80
Did not set bet size limit	28	17	19	13	20
Mean (1=set bet size limit, 2=did not set bet size limit)	1.4	1.7	1.4	1.1	1.5

a. Question -Did you set a bet size limits on the credits you could bet per pokies line TODAY? (Base: All EGM players)

The size of bet limits set by players - based on player self-report - is shown in Table 16 and Figure 16. As shown, 61% of players set a bet size limit of a single credit and tried to resist using multiple credits during EGM play.

Findings showed no differences between players who exceeded their spend limit versus players who did not (based on the online limit).

Comparison by risk segments showed that, relative to non-problem gamblers, problem gamblers were somewhat more likely set a bet size limit based on more than two credits per line. This result was also tending towards significance (OR=4.16, p=.07).

Table 16. Size of bet size limits set by players - by risk for problem gambling (N=155, December 2009)[a]

Bet size limit	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Single credit	50	78	49	27	61
Two credits	35	14	41	30	25
More than two credits per line	15	8	10	42	13

a. Question - What was the maximum credit bet per line? (Base: EGM players who set bet size limit)

Figure 16. Size of bet size limits set by players - by risk for problem gambling
(N=155, December 2009)[a]
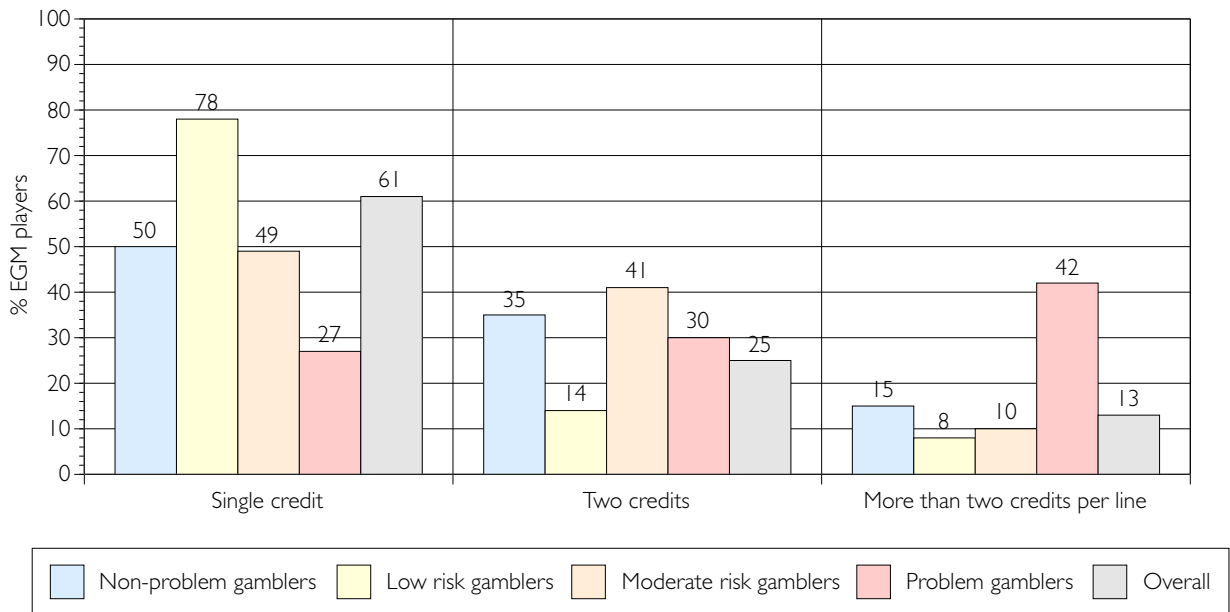
a. Question - What was the maximum credit bet per line? (Base: EGM players who set bet size limit)

Actual adherence to bet size limits

Actual adherence to bet size limits is in Table 17. This was calculated based on a comparison of players who reported limiting themselves to a single bet and actually going over that by using multiple credit bets during the live play observation.

Findings showed that only 7% of players exceeded their reported bet size limits.

In relation to the use of bet limits, no differences were observed between players who exceeded their expenditure limit versus those who did not.

While results were not statistically significant, it is noteworthy that higher-risk gamblers were somewhat more likely to exceed their bet size limit compared to non-problem gamblers (although most players overall kept to their bet size limits).

Table 17. Adherence to bet size limits - by risk for problem gambling
(N=155, December 2009)[a]

Risk segment	Adherence to bet size limits (% EGM players)	
	Adhered to bet size limits or didn't have a bet size limit	Exceeded bet size limits, as used multiple credits and precommitted to use only a single credit
Non-problem gamblers	97	3
Low risk gamblers	91	9
Moderate risk gamblers	89	11
Problem gamblers	89	11
Overall	93	7

a. Question - What was the maximum credit bet limit per line? (Base: Players who set
a bet size limit more than a single credit bet)

Player adherence to time precommitments during live EGM play

Time limit precommitments

While past research has shown only a slight preference for time limits in EGM players (eg. McDonnell-Phillips, 2005), player use of time limits was briefly explored in the study. Time limits typically refer to the maximum time players wish to allocate to gambling, with the intent to cease gambling at the end of the designated time period.

Whether players set a time limit for EGM play (based on self-report) is shown in Table 18.

As shown, only 28% of players reported setting a time limit. Players who exceeded spend limits during EGM play were also less likely to set a time limit (p<.05). Low risk, moderate risk and problem gamblers combined were similarly less likely to set a time limit (p<.05).

Table 18. Whether EGM players set a time limit for play -
by risk for problem gambling (N=200, December 2009)[a]

Did you set yourself a pokies time limit today	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Time limit set	39	20	26	37	28
No time limit set	61	80	74	63	72

a. Question - Did you set yourself a pokies time limit TODAY (a maximum time you could spend playing) (Base: All EGM players)

Time limits set for EGM play

The specific time limits set by EGM players are shown in Table 19.

In relation to the time limits set, there were no significant differences between players who exceeded spend limits versus those who did not.

Problem gamblers set a significantly longer time limit for EGM play than non-problem gamblers (p<.05). While non-problem gamblers set a time limit of 50.3 minutes for EGM play (on average), the same limit for problem gamblers was a much higher average of 81.3 minutes.

Table 19. Time limits set for EGM play -
by risk for problem gambling (N=55, December 2009)[a]

Risk for problem gambling	Mean time limit set for EGM play (minutes)	
	Mean	Median
Non-problem gamblers	50.3	40
Low risk gamblers	63.2	60
Moderate risk gamblers	76.6	60
Problem gamblers	81.3	60
Overall	62.1	60

a. Question - How many minutes was the time limit you set?
(Base: EGM players who set a time limit)

In considering the notion of 'time limits' in the context of EGM play, construct validity issues are apparent. One qualitative observation from conducting the study was that time limits may be reported by players, simply because they have another planned activity.

In this sense, the 'time limit' was not for consumer protection, rather was reported due to the need to travel to another location.

While not examined in the study, it could be argued that this is different from the notion of a time limit selected by players for consumer protection. On this basis, further refining the construct definition of a true 'precommitted time limit' (for consumer protection) would be an area worthy of future research exploration.

Actual adherence to time limits

Whether EGM players adhered to time limits reported in the study is shown in Table 20.

Based on a self-report scale, only 2% of players reported not adhering to the time limits they set for play.

In relation to adherence to time limits, there were no significant differences between players who exceeded an expenditure limit versus those who did not.

Comparison of risk segments showed that problem gamblers were more likely than non-problem gamblers to report 'not at all' adhering to the time limits they set (OR=1.35, p<.001).

Table 20. Whether EGM players kept to a time limit for EGM play -
by risk for problem gambling (N=48, December 2009)[a]

Whether players kept to a time limit for EGM play	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Not at all	0	0	8	13	2
Somewhat	21	20	17	9	20
Definitely	79	80	74	78	78

a. Question - Did you keep to your pokies time limit today?
(Base: EGM players who set a time limit)

Comparison of typical time limits reported for EGM play and actual time played during the live observation is shown in Table 21. Only 17% of players reporting a time limit exceeded that limit during play.

There were no differences between players who exceeded expenditure limits versus those who did not. It is interesting that 100% of problem gamblers adhered to their previously reported time limit (Refer Table 19), in spite of some of the segment's previous belief that they exceeded their time limit (Refer Table 20). This may be because their time limit was different at the time of reporting (hence further emphasising that limits may be more variable across time or setting), however, may also be accurate.

Table 21. Whether EGM players actually kept to a time limit for EGM play -
by risk for problem gambling (N=54, December 2009)[a]

Whether players actually kept to their time limit	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Kept to or under time limit	87	68	90	100	83
Exceeded time limit	13	32	10	0	17

a. Adherence to time limits calculated from live play data (Base: EGM players who set a time limit)

Player spending on EGM play relative to weekly personal income

Spending relative to personal income

While affordability of a spending precommitment is difficult to define, a player's spending relative to personal income presents one means of examining the possible affordability of an expenditure limit. On this basis, analysis examined the percent of players who spent more than 5% of their personal income on the day of play observation.

While naturally somewhat arbitrary, five percent of weekly income was selected as a basis for comparison, as data from the Australian Bureau of Statistics shows that spending on recreation is approximately 11% of private gross household income (Australian Bureau of Statistics Household Expenditure Survey, 2003-2004).

On this basis, 5% for a single session of play was deemed a 'ballpark figure' for utilisation (bearing in mind that some players are likely to have at least one or more additional recreational activities and in some cases, play EGMs multiple times each week).

Total EGM player spending on the day of observation (including any EGM expenditure prior to the observation), relative to weekly income, is presented in Table 22 and Figure 17.

Results show the percent of players who spent more than 5% of their weekly income during play. Income levels were taken conservatively with the top end of the weekly income range used in analysis. This implied that percentages were conservative and if anything were underestimated (rather than overestimated).

Findings showed no differences between players who exceeded their spend limit versus those who did not, in relation to spending relative to personal income.

However, problem gamblers were significantly more likely to spend more than 5% of their weekly income (41%), compared to non-problem gamblers (22%) (p<.05). Interestingly, only 22% of moderate risk gamblers spent more than 5% of their weekly income.

The lower median weekly income level of problem and moderate risk gamblers also further highlights that some players may be spending more than they can afford. This may highlight the need to educate and encourage players to set affordable and realistic precommitment limits.

Table 22. Percent of EGM players spending more than 5% of their weekly income - by risk for problem gambling (N=199, December 2009)[a]

Whether EGM players players spent more than 5% of weekly income on day of observation	% EGM players by risk for problem gambling			
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers
Spent more than 5% of weekly income during EGM play	22	38	22	41
Did not spend more than 5% of weekly income during EGM play	78	62	78	59
Median weekly income ($)	1299	799	399	999

a. Question - EGM spending recorded during observation and recoded to indicate whether players spend more than 5% of their weekly income (Base: All EGM players)

Figure 17. Percent of EGM players spending more than 5% of their weekly income - by risk for problem gambling (N=199, December 2009)[a]
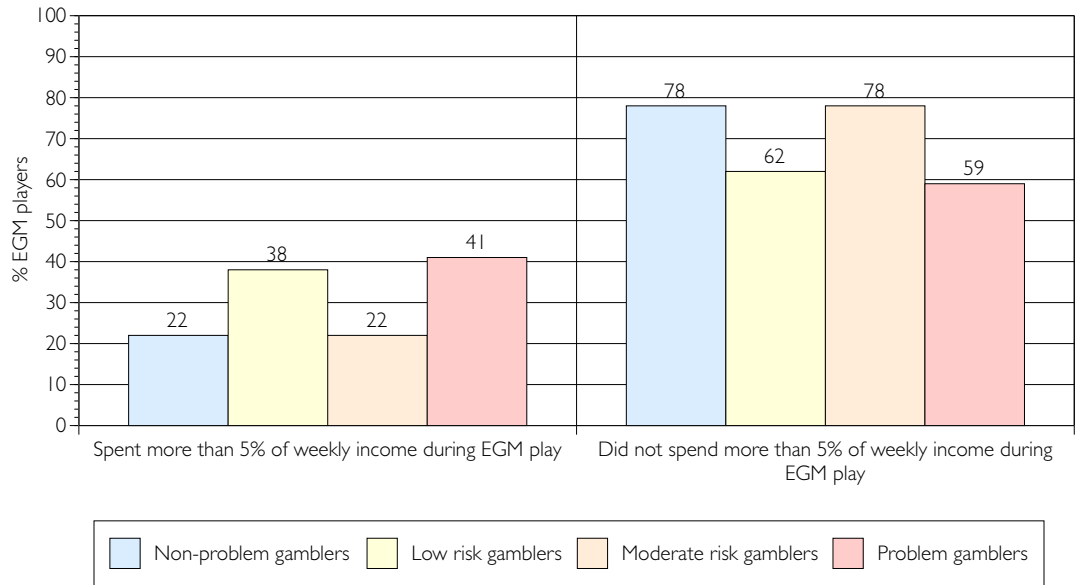
a. Question - EGM spending recorded during observation and recoded to indicate whether players spend more than 5% of their weekly income (Base: All EGM players)

Summary of findings

Based on actual comparison of money reported and spent on three occasions, between 12-16% of EGM players exceeded their spending precommitment in a single session of play.

Curiously, though, when based on self-report post-play, only 7% of players reported exceeding their spending precommitment.

This presented range reflects that adherence to precommitments may vary depending on the location and time when precommitments are reported. For instance, when based on spend limits reported by players away from venues, 16% of players exceeded their spend precommitment. In comparison, when based on figures reported after play, this same figure was 12%.

This also raises two key questions:

- *How should adherence to precommitments be measured?*
- *How often and where should EGM players select precommitments?*

Such findings may have implications for the design of precommitment systems and may have implications for the benefits of such systems for different gambling risk segments.

Indeed, if a higher risk player selects a high limit (perhaps because that limit is set just before play), they may not receive reminders at the correct time (Reminders are a common design feature of card-based precommitment systems).

Findings also showed that, when based on self-report after play, problem gamblers were significantly more likely to report exceeding their limit, compared to non-problem gamblers.

However, comparisons of reported and actual spend limits by risk segment (for limits reported on different occasions), showed that results were not always significant. This is primarily because problem gamblers reported more variable limits over time.

It was also additionally revealed that players who reported widely variable limits *also* tended to have difficulty tracking their EGM expenditure during play. While naturally speculative, this may suggest that some players cognitively process expenditure information better than others and may point to some value in developing player skills on *how* to track EGM expenditure (even in the absence of card-based gaming).

Findings similarly highlighted that around 80% of players selected a bet size limit and 28% used some form of time limit. This suggests that, while bet size may be useful for many players, time limits are not quite as popular and appeal to a much smaller segment.

When reported bet size limits were compared against actual credits used, only 7% of players exceeded precommitments. In comparison, 17% of players reporting a time limit exceeded the time limit during play (although based on a self-report scale, only 2% of players reported 'not at all keeping' to their time limit).

Finally, findings showed that players exceeding spend limits, along with at-risk gamblers, were significantly less likely to set a time limit for EGM play. Accordingly, while causality cannot be assumed, this may highlight a possible role of <u>time</u> limits in keeping players to <u>expenditure</u> precommitments (ie. perhaps time and money together is helpful).

D. Detailed findings - *Factors <u>directly</u> predicting whether EGM players exceeded precommitments*

As a core aim of the study was to better understand factors which influence adherence to precommitments, a range of predictive analyses was undertaken. The first step involved examining variables, which were <u>directly</u> related to whether or not a player adhered to their spend limit during live EGM play.

Adherence to expenditure precommitments was the core focus, given that spending precommitments have been previously identified as the most important type of limit for EGM players (eg. McDonnell-Phillips, 2005). Ladouceur and Sévigny (2009) also found that precommitment to time was not helpful to players (and argued that items such as clocks and time devices were not instrumental in promoting responsible gambling).

In shaping the analytical plan for this part of the report, predictive relationships between study variables and the tendency of gamblers to exceed spends limits were investigated.

Adherence to spending limits set outside the venue (ie. reported online) was used as the limit for analysis in examining the predictive power of background variables (eg. life events, daily hassles). This was selected on the basis that this limit was reported at the same time background data was collected. In addition, the monetary limit reported directly after EGM play was used for the analysis of aspects of EGM play which may influence whether players exceeded limits.

It should also be considered that findings may vary according to the type of dependent variable used to represent limit adherence. Accordingly, findings should only be considered indicative and exploratory, rather than definitive.

Within this context, the following section summarises significant trends including:

- •• Factors which predicted exceeding limits - influence of life events
- •• Factors which predicted exceeding limits - influence of daily hassles
- •• Factors which predicted exceeding limits - influence of speed of play
- •• Factors which predicted exceeding limits - influence of EGM design
- •• Summary of findings

Factors which predicted exceeding limits - influence of life events

Influence of retirement

As life events have theoretically potential to influence mood and mind sets during play (Matthew, Farnsworth and Griffiths, 2009), their potential to influence adherence to spend limits was investigated. The occurrence of life events was measured by asking EGM players to indicate whether a series of life events had occurred in the previous 12 months.

Examples of life events included retirement, taking on mortgages, experiencing increases in the severity of arguments and the experience of divorce and deaths (See detailed results in - J. Other findings - Psychological and cognitive factors on page 153).

Findings of predictive analysis revealed that a number of life events predicted whether players exceeded their limit during live play. Analyses examined the extent to which various life events predicted the tendency to exceed a limit <u>over and above</u> risk for problem gambling.

Findings showed that retirement in the past 12 months increased the likelihood of players to exceed expenditure limits (even when risk for problem gambling was statistically controlled) (Adjusted OR=7.91, p<.01).

Findings are shown in Table 23 and Figure 18. This may indicate that retirement presents a critical period in a person's life, which may make players susceptible to continuing to gamble. It may also reflect that people have more available time in the early post-retirement phase (as identified by McNeilly and Burke, 2004).

Accordingly, retirement may be a possible risk factor in players exceeding limits over and above risk for problem gambling.

Table 23. Player retirement and adherence to expenditure limits during LIVE EGM play - (N=200, December 2009)[a]

Player adherence to limits during live EGM play observation	Retirement in the past 12 months (% EGM players)	
	Did not retire	Retired
Kept to or under limit	89	50
Exceeded limit	11	50

a. Question - Which of the following life events did you experience in the past 12 months? (Retirement) (Base: All EGM players) Adherence to limits calculated based on limit reported in the online survey)

Figure 18. Player retirement and adherence to expenditure limits
during LIVE EGM play (N=200, December 2009)[a]
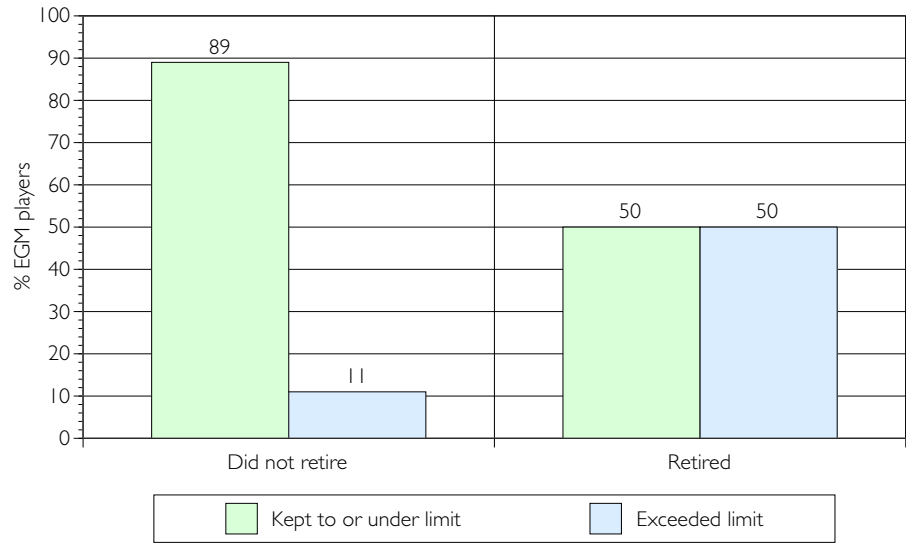
a. Question - Which of the following life events did you experience in the past 12 months? (Retirement)
(Base: All EGM players) (Adherence to limits calculated based on limit reported in the online survey)

Taking on a mortgage, loan or making a big purchase

Further analysis was undertaken to examine the extent to which taking on a mortgage, loan or making a large purchase predicted a player exceeding their limit (controlling for risk for problem gambling). Results are in Table 24.

Findings showed that players who had taken on a mortgage, loan or had made a large purchase in the past 12 months were <u>less likely</u> to exceed their expenditure limit during live play (OR=.21, p<.01).

This may be because players are cognisant that their financial situation is more constrained. Interestingly, however, the same predictive relationship did not apply to experiencing a major change in financial situation (the result was not significant).

Table 24. Mortgages/loans/big purchases and adherence to expenditure limits
during LIVE EGM play (N=200, December 2009)[a]

Player adherence to limits during live EGM play observation	Taking on a mortgage, loan or making a big purchase in the past 12mths (% EGM players)	
	Took on mortgage, loan or made big purchase	Did not do this
Kept to or under limit	96	82
Exceeded limit	4	18

a. Question - Which of the following life events did you experience in the past 12 months?
(Taking on a mortgage, loan or making a big purchase) (Base: All EGM players) (Adherence
to limits calculated based on limit reported in the online survey)

Figure 19. Mortgages/loans/big purchases and adherence to expenditure limits during LIVE EGM play (N=200, December 2009)[a]
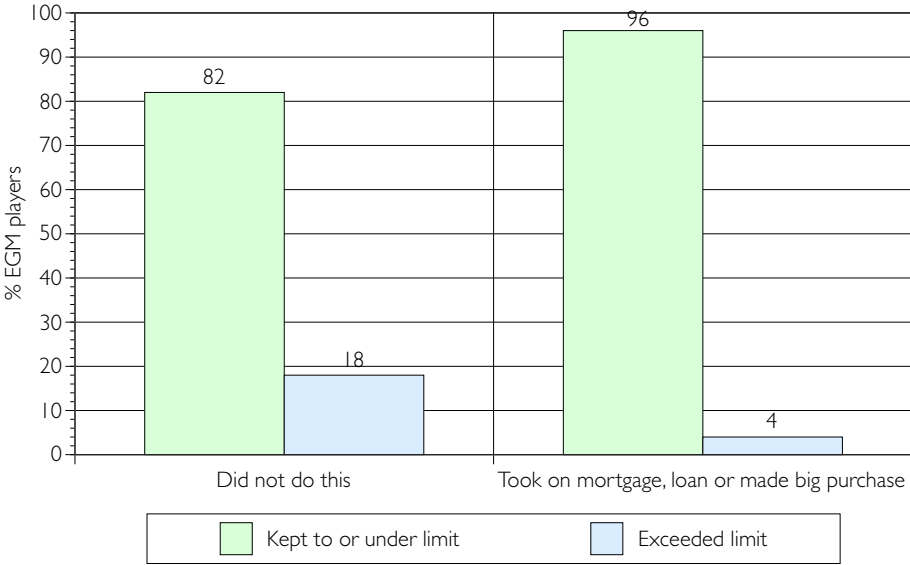
a. Question - Which of the following life events did you experience in the past 12 months? (Taking on a mort-gage, loan or making a big purchase) (Base: All EGM players) (Adherence to limits calculated based on limit reported in the online survey)

Factors which predicted exceeding limits - influence of daily hassles

Experiencing daily hassles - not enough money

In the next set of analyses, the link between daily hassles and the tendency to exceed limits was examined. Daily hassle measures were based on a revised version of the Daily Hassles Scale Revised (DHS-R) (Holm and Holroy, 1992).

This scale explores the extent to which people experience a range of daily hassles in the previous two weeks. This includes events such as concerns over inner conflicts, time pressures, financial concerns, work hassles, relationship hassles and health hassles.

Expenditure limit adherence was again based on whether players spent more than the limit they reported during the online survey (the context in which daily hassles were reported).

All significant trends are summarised in Table 25 and in Figure 20, Figure 21 and Figure 22 (controlling for risk for problem gambling).

Findings showed that players who were experiencing daily hassles related to not enough money were less likely to exceed their expenditure limit during live play (above and beyond a person's risk for problem gambling) (p<.05).

Specifically, players who did not have enough money for basic things were less likely to exceed limits (Adjusted OR=.41, p<.05), as were players who did not have enough money for housing (Adjusted OR=.36, p<.05).

In addition, players who stated not having enough money for recreation and rated this as 'moderately or very severe', were less likely to exceed their expenditure limit during play (even after controlling for risk for problem gambling) (Adjusted OR=.13, p<.01).

Accordingly, results may suggest that the experience of daily money hassles relating to basics, housing and recreation may reduce the likelihood that an EGM player will exceed their gambling spend limit.

Table 25. Not enough money for basics/housing/recreation and adherence to expenditure limits during LIVE EGM play (N=200, December 2009)[a]

Player adherence to limits during live EGM play observation	Extent to which daily hassle occurred in past two weeks	% EGM players	
		Kept to or under limit	Exceeded limit
Not enough money for basic things	Didn't occur	82	18
	Occurred, but not severe	83	17
	Occurred, more severe	98	2
Not enough money for housing	Didn't occur	82	18
	Occurred, but not severe	89	11
	Occurred, more severe	98	2
Not enough money for recreation	Didn't occur	82	18
	Occurred, but not severe	83	17
	Occurred, more severe	96	4

a. Question - How much have the following daily hassles affected you in the past two weeks? (Base: All EGM players) (Adherence to limits calculated based on limit reported in the online survey)

Figure 20. Not enough money for basics and adherence to expenditure limits during LIVE EGM play (N=200, December 2009)[a]
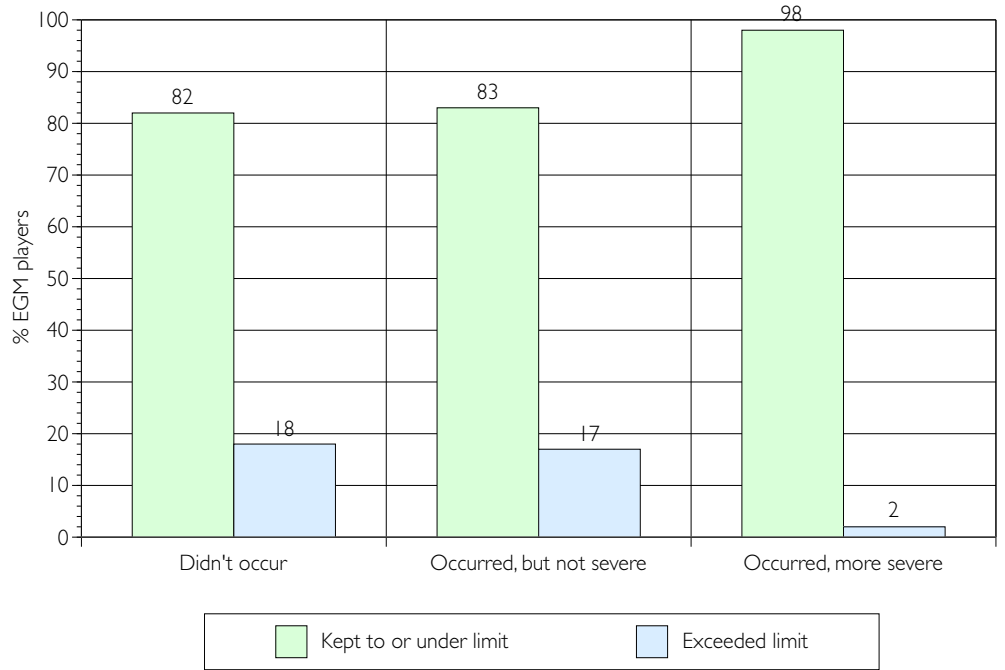
a. Question - How much have the following daily hassles affected you in the past two weeks? (Not enough money for basics) (Base: All EGM players) (Adherence to limits calculated based on limit reported in the online survey)

Figure 21. Not enough money for housing and adherence to expenditure limits during LIVE EGM play (N=200, December 2009)[a]
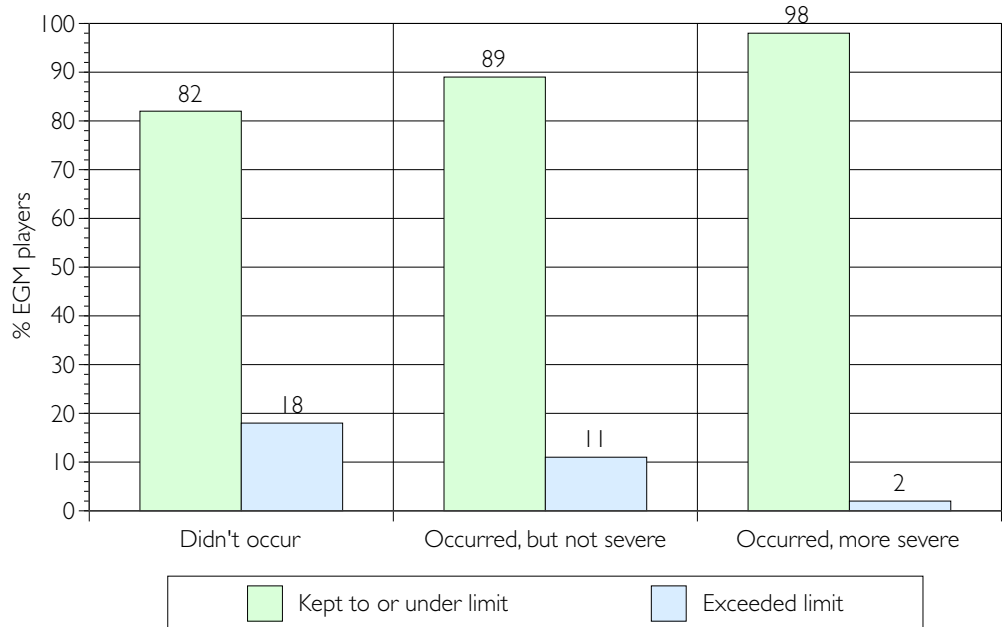
a. Question - How much have the following daily hassles affected you in the past two weeks? (Not enough money for housing) (Base: All EGM players) (Adherence to limits calculated based on limit reported in the online survey)

Figure 22. Not enough money for recreation and adherence to expenditure limits
during LIVE EGM play (N=200, December 2009)[a]
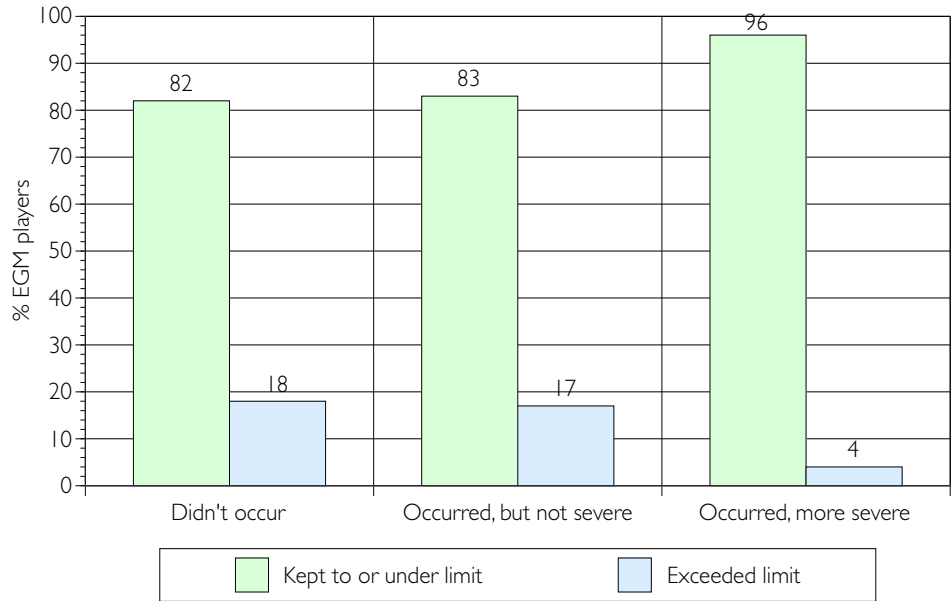
a. Question - How much have the following daily hassles affected you in the past two weeks? (Not enough money for recreation) (Base: All EGM players) (Adherence to limits calculated based on limit reported in the online survey)

Experiencing daily hassles - concerns about owing money or debts

Further analysis showed that players who felt concerned about owing money or debts were less likely to exceed their spend limit during play (Adjusted OR=.46, p<.05) (controlling for risk for problem gambling). Key findings are in Table 26 and Figure 23.

Table 26. Concern about owing money or debts and adherence to expenditure limits
during LIVE EGM play (N=200, December 2009)[a]

Player adherence to limits during live EGM play observation	Extent to which daily hassle occurred in past two weeks	% EGM players	
		Kept to or under limit	Exceeded limit
Concern about owing money or debts	Didn't occur	81	19
	Occurred, but not severe	87	13
	Occurred, more severe	95	5

a. Question - How much have the following daily hassles affected you in the past two weeks? (Concern about owing money or debts) (Base: All EGM players) (Adherence to limits calculated based on limit reported in the online survey)

Figure 23. Concern about owing money or debts and adherence to expenditure limits during LIVE EGM play (N=200, December 2009)[a]
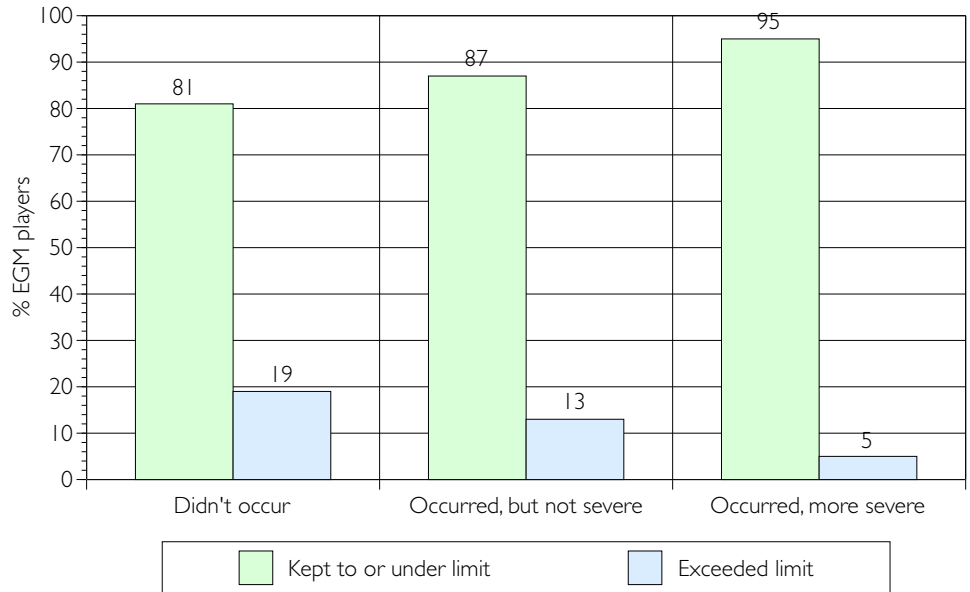
a. Question - How much have the following daily hassles affected you in the past two weeks? (Concern about owing money or debts) (Base: All EGM players) (Adherence to limits calculated based on limit reported in the online survey)

Concerns over job security

In the next analysis, the link between job security concerns and the tendency to exceed limits was examined. Results are shown in Table 27 and Figure 24.

Players experiencing concerns over job security were less likely to exceed expenditure limits during live play (controlling risk for problem gambling), compared to those without such concerns (Adjusted OR=.39, p<.05).

This may be because players fear that they will need additional money in case that they lose their job and the financial security the income provides.

Table 27. Concerns about job security and adherence to expenditure limits during LIVE EGM play (N=200, December 2009)[a]

Player adherence to limits during live EGM play observation	Extent to which daily hassle occurred in past two weeks	% EGM players	
		Kept to or under limit	Exceeded limit
Concern about job security	Didn't occur	82	18
	Occurred, but not severe	82	18
	Occurred, more severe	99	1

a. Question - How much have the following daily hassles affected you in the past two weeks? (Concern about job security) (Base: All EGM players) (Adherence to limits calculated based on limit reported in the online survey)

Figure 24. Concern about job security and adherence to expenditure limits during LIVE EGM play (N=200, December 2009)[a]
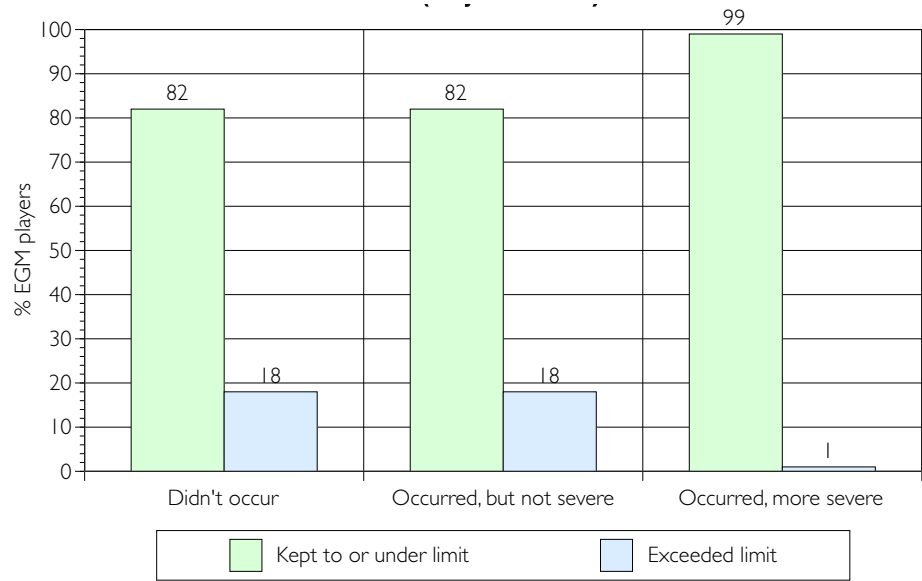
a. Question - How much have the following daily hassles affected you in the past two weeks? (Concern about job security) (Base: All EGM players) (Adherence to limits calculated based on limit reported in the online survey)

Having debts

Interestingly, having a debt did not predict the likelihood that a player would exceed their EGM limit during play (after risk for problem gambling was statistically controlled). Although having a loan or IOU was somewhat associated, but non-significant.

This may imply that concerns over debts and money are more important predictors of whether a player exceeds limits, rather than only just having debts.

Factors which predicted exceeding limits - influence of speed of play

Mean spins per minute

As part of the study, observers recorded the total number of spins (EGM games) associated with wins and losses during EGM play, along with the total session play time. EGM play time included the time associated with players talking and doing other activities, so the data recorded is not a pure measure of time spent only on EGM play (and hence is an estimate of play time).

On this basis, the mean number of EGM spins per minute of play by risk for problem gambling was examined for exploratory purposes. Results are in Table 28 and Figure 25.

Findings showed that players overall played 5.5 games (spins) per minute of play. While both moderate risk and problem gamblers appeared to have a faster rate of play, the trend was not statistically significant.

Table 28. Mean spins per minute of EGM play -
by risk for problem gambling (N=200, December 2009)[a]

EGM spins per minute	Mean spins per minute of EGM play by risk for problem gambling (includes other activities such as note/coin feeds, talking etc.)				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
EGM spins per minute of play (excluding free spins, features and use of double-up)	5.5	5.2	5.9	6.3	5.5

a. Mean spins associated with wins/losses recorded by observers, along with time spent seated at EGMs
(not a pure measure of just time spent on EGM play as includes note/coin feeds and other activities)

Figure 25. Mean spins per minute of EGM play -
by risk for problem gambling (N=200, December 2009)[a]
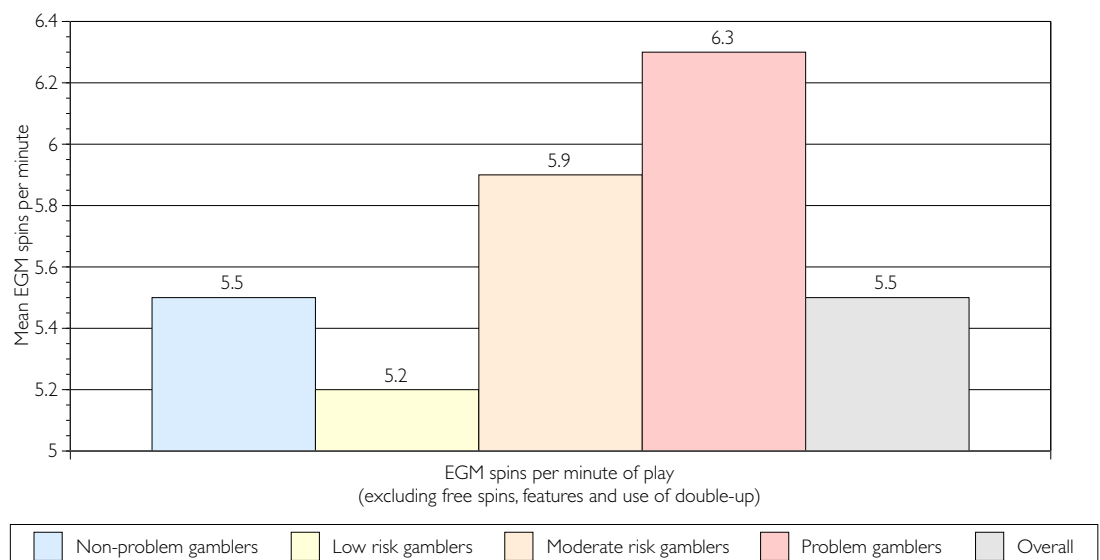
a. Mean spins associated with wins/losses recorded by observers, along with time spent seated at EGMs
(not a pure measure of just time spent on EGM play as includes note/coin feeds and other activities)

Mean spins by limit adherence

Mean spins per minute by whether players adhered to spend limits (based on the spend limit reported online) are shown in Table 29 and Figure 26.

All risk segments who kept to or under limits tended to have a similar rate of play (ie. spins per minute). However, in the case of players who exceeded limits, problem gamblers played a significantly higher number of EGM spins per minute (mean=12.0), compared to low risk gamblers (mean=5.1) (p<.05). In addition, a similar trend was observed for moderate risk gamblers, although differences were not significant.

Findings may suggest that high risk gamblers exceeded limits in part due to a faster rate of play (ie. button presses or spins). This may have implications for the design of spin rates for EGMs and points to the need for further research to examine why some high risk players may play EGMs at a faster rate.

Table 29. Mean spins per minute of EGM play and whether players adhered to spend limits - by risk for problem gambling (N=200, December 2009)[a]

EGM spins per minute	Kept to or under limit (Mean spins per minute)				Exceeded limit (Mean spins per minute)			
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers
EGM spins per minute of play (excluding free spins, features and use of double-up)	5.5	5.2	5.3	5.1	5.5	5.1	7.8	12

a. Mean spins associated with wins/losses recorded by observers, along with time spent seated at EGMs (not a pure measure of just time spent on EGM play as includes note/coin feeds and other activities) (Limit adherence based on limits reported during the online study)

Figure 26. Mean spins per minute of EGM play and whether players adhered to spend limits - by risk for problem gambling (N=200, December 2009)[a]
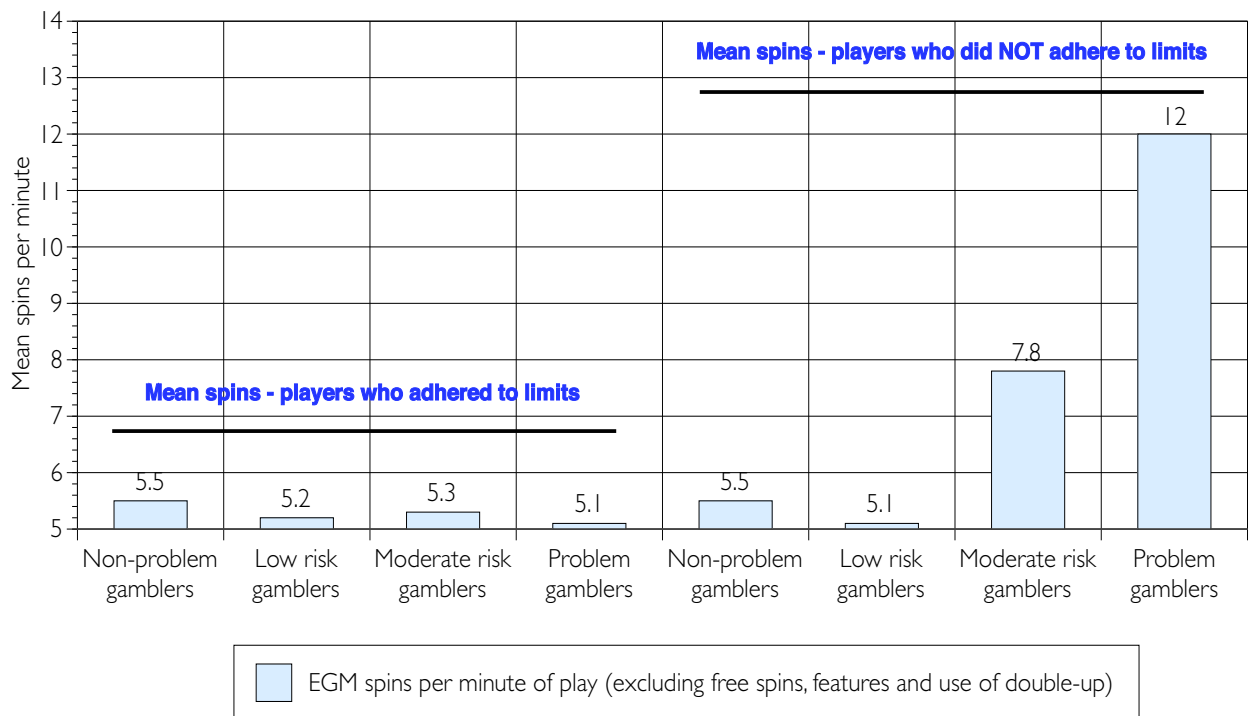
a. Mean spins associated with wins/losses recorded by observers, along with time spent seated at EGMs (not a pure measure of just time spent on EGM play as includes note/coin feeds and other activities) (Limit adherence based on limits reported during the online study)

Factors which predicted exceeding limits - influence of EGM design

Overview

Aspects of EGM play which were associated with players exceeding their expenditure precommitments are summarised in Table 30. It should be noted that findings may vary depending on the outcome measures used and in this case, the dependent variable used was the main limit reported by players directly after play.

Results have been adjusted to control for the effects of risk for problem gambling, implying that such influences are effectively 'removed' from the analysis.

Based on the limit reported after play, significant predictors of exceeding expenditure precommitments during live play were obtaining an increase in free spins upon moving from EGM 1 to EGM 2 (r=.253, p<.001), being absorbed and involved in EGM play (r=.145, p<.05) and experiencing an overall urge to continue play (r=.140, p<.05).

It was also interesting to note that 'excitement' associated with features was a significant predictor of players exceeding limits when the online play limit was used as the dependent measure (r=.252, p<.05).

Findings, however, showed that consumption of alcohol and use of ATMs or EFTPOS during play were not significant predictors. This may be a reflection of the impact of the observation (ie. as players may have avoided accessing money, feeling it may disrupt the study). However, it is also possible that player responses to EGM game design may play a greater role in adherence to precommitments than other variables.

One result was tending towards significance in relation to predictors of players exceeding limits - a smaller number of other players being around participants while they were undertaking the EGM play observation (r=-.135, p=.057). The total free spins won during the session (r=.119, p=.09) was also somewhat associated with players exceeding limits.

This may be a reflection of the observational impacts (ie. players may have felt uncomfortable being observed around others), but may also point to the potential for 'isolated' players (ie. with few other players around) to exceed spending precommitments. However, given that results are not significant, they should be very cautiously interpreted.

Overall findings thus indicate that variables relating to urges to continue play, player involvement and excitement were associated with players exceeding precommitments.

The role of 'excitement' and 'urges to continue' play are particularly interesting findings in that they converge with propositions of Dickerson (2003), who purported that EGM players may experience increased excitement and 'irresistible urges' during EGM play.

As results are controlled for risk for problem gambling, findings additionally highlight that such variables may play a role in limit adherence, above and beyond risk for problem gambling.

Table 30. Predictors of non-adherence to spending precommitments
based on EGM game design (partial correlations)[a]- ALL PLAYERS

Variables (1=Exceeded limit based on limit reported directly after EGM play, 0=Did not exceed limit)	Partial correlation controlling for risk for problem gambling (r)	Significance level (p)	Significance
Increase in free spins from EGM 1 to EGM 2 (after changing machines)	.253	.000	*significant*
Player involvement in EGM play	.145	.040	*significant*
Overall mean urge to continue play	.140	.049	*significant*
Number of people within 2m radius	-.135	.057	*tending*
Total free spins received during the play session	.119	.093	*not significant but of interest*
Also noteworthy - based on the online limit: Mean excitement from features during EGM play	.252	.046	*significant*

a. Controlling for player risk for problem gambling

Direct predictors of the extent spend limits (based on EGM game design characteristics) were exceeded are summarised in Figure 27.

Figure 27. Factors directly predicting players exceeding expenditure limits during play (role of EGM game design)

Factors which directly predict EGM players **exceeding spend limits**

Increase in free spins from EGM1-2
Increase in the free spins received from the 1st to 2nd EGM played (r=.253, p<.001)

Involvement in EGM play
How absorbed and involved player was in EGM play (r=.145, p<.05)

Overall urge to continue play
The greater the overall urge to continue EGM play (r=.140, p<.05)

Excitement from features
The greater the excitement from features (r=.252, p<.05)

Tending towards significance
A smaller number of other players being within a 2m radius of player (r=-.135, p=.057)

Total free spins recorded during the live observation (r=.119, p=.09)

Based on online limit as the dependent variable

Extent spend limits were exceeded

Controlling for risk for problem gambling

Based on the monetary limit value reported directly after play unless noted

Summary of findings

A small number of variables <u>directly</u> predicted whether EGM players exceeded their spending precommitments. Players less likely to exceed precommitments were those who had:

- •• retired in the past year
- •• had taken on a loan or made a large purchase
- •• had experienced daily money hassles (eg. relating to basics, housing or recreation),
- •• were concerned about owing money or debts or;
- •• were concerned about job security

Several aspects of live EGM play were also directly related to players exceeding precommitments (based on the limit reported post-play). These were the:

- •• receiving an increase in free spins on moving from the first to second EGM
- •• level to which player was absorbed and involved in EGM play
- •• experiencing an overall urge to continue during EGM play
- •• (and based on the online limit) the 'excitement' from features

While most players who kept to limits had a similar speed of play, for players who exceeded precommitments, problem gamblers played at a faster rate than low risk gamblers (and a similar trend was observed for moderate risk gamblers, although non-significant).

Such results may thus highlight some possible association between problem gambling and faster spin rates, when players exceed limits.

Finally, while accessing ATMs and EFTPOS during EGM play were not significant predictors, this may be due to the observer effect during EGM play. However, this could potentially also point to a greater role of EGM design characteristics in player adherence to precommitments, compared to other factors.

Accordingly, further research is thus needed to further explore these issues.

E. Detailed findings - *Role of play excitement, urges to continue and mood in adherence to precommitments*

While only a small set of variables were <u>directly</u> related to player adherence to precommitments during play, further exploratory analyses were undertaken to explore predictors of important related precommitment constructs.

This was also supported by the previous analysis, which showed that both urge to continue and excitement related variables may be associated with a player exceeding precommitments.

Original proposals by authors such as Dickerson (2003) also advocated that a player's mood (mildly negative), excitement and the experience of urges to continue during gambling may play some role in adherence to precommitment decisions.

From this perspective, such variables present as interesting constructs to explore in the context of live EGM play.

Accordingly, this sections explores the following:

- •• Factors which predict the urge to continue and EGM play excitement
- •• Prospective analysis using EGM play data as panel data (intra-play)
- •• Exploring links between EGM player mood and play excitement
- •• Summary of findings

Factors which predict the urge to continue and EGM play excitement

Unique predictors while controlling for risk for problem gambling - urge to continue gambling

Findings showing the relationship between urge to continue EGM play and other variables are summarised in Table 31 and Figure 28. Analyses controlled for risk for problem gambling, implying that the effects of risk were effectively 'removed' from the analysis (ie. through the use of partial correlations).

All but four variables were significant predictors of mean player ratings of the urge to continue during play. Non-significant predictors may imply (spurious) correlations, which are mostly explained by a player's risk status for problem gambling.

The most significant predictors of urges to continue play were excitement experienced when features occurred (r=.599), overall EGM play excitement (r=.526), excitement experienced during free spins (r=.322) and the total features received for the session of play (r=.247).

In addition, the total free spins (r=.216) recorded through observation were also strong predictors, as was player attraction to venues due to loyalty points (r=.214), the coins dropping from other machines nearby (r=.196), the friendliness of venue staff (r=.178), using a higher-number of multi-credit bets (r=.166) and money won in total from either free spins or features (r=.164, p<.05).

This may suggest that the predictors most strongly related to urges to continue play are the excitement experienced during features, excitement from EGM play (overall) and excitement experienced during free spins.

Accordingly, excitement related variables are strong overall predictors of the urge to continue gambling on EGMs.

Table 31. Factors which predict urge to continue during EGM play - unique predictors (partial correlations) - ALL PLAYERS

Variables	Partial correlation controlling for risk for problem gambling (r)	Significance level (p)	Significance
Excitement - Features	.599	.000	*significant*
Excitement - Overall	.526	.000	*significant*
Excitement - Free Spins	.322	.002	*significant*
Total features recorded	.247	.000	*significant*
Total free spins recorded	.216	.002	*significant*
Player attracted to venue because of loyalty points or incentives	.214	.003	*significant*
Coin drops able to be heard in the background[a]	.196	.006	*significant*
How friendly were the staff at the venue today	.178	.012	*significant*
Total multi-credit bets[b] made during play	.166	.02	*significant*
Total money won from free spins or features	.164	.021	*significant*
Spins associated with money lost	.14	.060	*tending*
Player tendency to think about how nice it would be to win	.13	.070	*tending*
Spins associated with money won $0.01 to $5	.13	.070	*tending*
Tally - Money Won $10 to $20	.272	.09	*not significant but of interest*
Total Coins - Dollar Value	.143	.101	*not significant but of interest*
Player tendency to think about pokies play in the past 24 hrs	.095	.184	*not significant but of interest*
Problems or hassles with spouse/partner in the past two weeks	.035	.621	*not significant but of interest*

a. Winnings from other players

b. These involve betting more than 1 gaming machine credit per line during EGM play.

Variables which predicted urge to continue during EGM play are summarised in Figure 28.

Figure 28. Factors which predict urge to continue during EGM play (controlling for risk for problem gambling)

Factors which predict urge to continue during EGM play

Excitement from features
The higher excitement ratings when features were received during play (r=.599, p<.001)

Overall play excitement
The higher the overall play excitement (r=.526, p<.001)

Excitement from free spins
The higher the excitement ratings when free spins were received (r=.322, p<.01)

Total features during session
The more features recorded during the live observation (r=.247, p<.001)

Total free spins during session
The total free spins recorded during the live observation (r=.216, p<.01)

Loyalty points/incentives
The more players visited venue for loyalty points/incentives (r=.214, p<.01)

Coin drops in background
The more players heard coin drops in the background (r=.196, p<.01)

Friendliness of venue staff
The friendlier the staff were at the EGM venue (r=.178, p<.05)

Higher number of multi-credits
The total multi-credit bets made during EGM play (r=.166, p<.05)

Money won - free spins/features
The more money won by players following free spins/features (r=.164, p<.05)

Tending towards significance
Player desire for wins (r=.13, p=.07)
The more players had wins from $10-20 (r=.272, p=.09) or 1c-$5 (r=.13, p=.07)
The more spins associated with money lost (r=.14, p=.06)

Controlling for risk for problem gambling

Higher urge to continue EGM play

The next analysis examined unique predictors for overall play excitement. Similar to the previous analysis, this involved investigating which variables were the best predictors of excitement, whilst controlling for risk for problem gambling.

Key findings are shown in Table 32.

The best predictors of play excitement were being absorbed and involved in play (r=.363), venue promotions/prizes (r=.250), loyalty points and incentives (r=.221) which attracted the player to the venue, the player tendency to dream about winning in the 24hrs prior (r=.193), the friendliness of venue staff (r=.191) and the total free spins received (r=.187).

The number of multi-credit bets placed added to play excitement (r=.175), although the number of features received during play was not significant. This may also be because features are a fairly 'rare' event in pokies play (particularly compared to free spins, which are relatively more frequent).

A mean of 3.0 free spins or 4.4 features per EGM play session was interestingly also identified as required to feel 'fairly satisfied' with play overall (Refer page 137 for further detail).

Overall, while exploratory, results suggest that play excitement is determined by promotions/ prizes and loyalty point and incentives offered to players at venues. In addition, findings show evidence that high involvement in play and a player's desire to win may be associated with high play excitement.

Table 32. Factors which predict overall play excitement during EGM play - unique predictors (partial correlations) - ALL PLAYERS

Variables	Partial correlation controlling for risk for problem gambling (r)	Significance level (p)	Significance
How absorbed and involved player was in playing pokies	.363	.000	*significant*
Promotions/prizes offered to poker machine players	.250	.000	*significant*
Good loyalty points or incentives offered to pokies players	.221	.002	*significant*
Player tendency to think it would be nice to win at pokies in the 24hrs prior to play	.193	.007	*significant*
Friendliness of venue staff	.191	.007	*significant*
Total free spins received during play	.187	.008	*significant*
Total Won or Lost on pokies play	.192	.007	*significant*
Total number of multi-credit bets[a] made	.175	.010	*significant*
Player tendency to think about pokies in the 24hrs prior	.169	.017	*significant*
Mean number of people around player	.132	.064	*tending*
Player tendency to think about play strategies they were going to use to increase their chance of winning in the 24hrs prior	.131	.066	*tending*
Total features received during play	.108	.132	*not significant but of interest*
Affect changes from pre- to -post play (negative indicates improvements)	-.5	.000	*significant*

a. These involve betting more than 1 gaming machine credit per line during EGM play.

Key predictors of play excitement are summarised in Figure 29.

Figure 29. Factors which predict player excitement during EGM play (controlling for risk for problem gambling)

Factors which predict player **excitement** during EGM play

Involvement in EGM play
How absorbed and involved player was in playing pokies (r=.363, p<.001)

Player promotions/prizes
Promotions/prizes offered to EGM players (r=.25, p<.001)

Loyalty points/incentives
Good loyalty points or incentives offered to players (r=.221, p<.01)

Player desire to win on pokies
Player tendency to think it would be nice to win in 24hrs pre-play (r=.193, p<.01)

Total won/lost on pokies
Total won or lost on pokies play (r=.192, p<.01)

Venue staff friendliness
Friendliness of venue staff (r=.191, p<.01)

Total free spins received
Total free spins received during play (r=.187, p<.01)

Total multi-credit bets
Total number of multi-credit bets made (r=.175, p<.01)

Thinking about play in 24hrs prior
Player tendency to think about pokies in the 24hrs prior (r=.169, p<.05)

Greater affect improvement
Affect changes pre- to -post play (negative indicates improvements) (r=-.5, p<.001)

Tending towards significance
Tendency to think about play strategies in the 24hrs prior (r=.131, p=.07)
Mean number of people around player (r=.132, p=.06)

Controlling for risk for problem gambling

Higher EGM play excitement

Further exploratory analysis revealed that players who exceeded expenditure limits were less satisfied with their wins during EGM play (p<.05). On this basis, the relationship between predictor variables and play satisfaction was examined, whilst controlling for risk for problem gambling.

Key findings are in Table 33. When controlling for risk for problem gambling, the most significant predictor of EGM play satisfaction was the amount won (r=.315), experiencing play excitement (r=.718), player satisfaction with wins received (r=.697), satisfaction with the quality (r=.568) and the number of features (r=.557) and satisfaction with free spins received (r=.512).

In addition, a number of 'peripheral' variables were strong predictors. This included the quality of smoking areas (r=.240), loyalty points offered at the venue (r=.207), promotions and prizes (r=.184) and even consumption of alcohol seemed to be associated with increased play satisfaction (r=.144).

Table 33. Factors which predict overall play satisfaction with EGM play - unique predictors (partial correlations) - ALL PLAYERS

Variables	Partial correlation controlling for risk for problem gambling (r)	Significance level (p)	Significance
Total Won or Lost during play	.315	.000	*significant*
Overall play excitement	.718	.000	*significant*
Satisfaction with the wins received	.697	.000	*significant*
Satisfaction with quality of features received	.568	.000	*significant*
Satisfaction with total number of features received	.557	.000	*significant*
Satisfaction with number of free spins received	.512	.000	*significant*
Excitement associated with free spins	.401	.000	*significant*
Total free spins	.255	.000	*significant*
Excitement associated with features	.421	.001	*significant*
Venue having nice smokers' areas	.240	.001	*significant*
Total EGMs played	-.229	.001	*significant*
Good loyalty points or incentives offered	.207	.003	*significant*
Use of strategies to help keep to spend limits	-.204	.004	*significant*
Promotions/prizes offered to poker machine players	.184	.009	*significant*
Total cash taken out of pokies (not spent)	.179	.011	*significant*
Total spins with money Won from $0.01 to $5	-.177	.013	*significant*
Good food or drink pricing	.176	.013	*significant*
Total spins that led to money being lost	-.168	.022	*significant*
Total money won from free spins or features	.159	.025	*significant*
Good food quality	.158	.026	*significant*
New poker machine brands at venue	.155	.029	*significant*
Consuming alcoholic drinks at the pokies today	.144	.042	*significant*

Prospective analysis using EGM play data as panel data (intra-play)

Context

Given that live EGM play data was gathered for each machine, prospective analysis was undertaken to examine links between changes in two variables:

- •• (1) Changes in the urge to continue EGM play and;
- •• (2) Changes in EGM play excitement

The objective was to examine whether any changes increased urges to continue play or play excitement. This was examined using prospective data recorded from the first and second EGM played (ie. EGM 1 to EGM 2).

Predictors used in analyses were the changes in mean urge to continue play from EGM 1 to EGM 2 and the change in mean excitement from EGM 1 to EGM 2. Measures involved taking data from EGM 1 from data associated with EGM 2 (implying that positive scores were formed to represent an increase in urge to continue or play excitement).

(1) What predicts changes in the urge to continue from EGM 1 to EGM 2?

Predictors of changes in the urge to continue play from EGM 1 to EGM 2 are shown in Table 34. Risk for problem gambling was statistically controlled for each of the partial correlations provided.

Findings suggested that, increases in excitement associated with receiving features (from EGM 1 to 2) led to a significant decrease in the urge to continue EGM play (r=-.799, p<.05). This may suggest that players who received features after not receiving any during play of EGM 1, felt more satisfied with play and felt less of an urge to continue.

The greater the change in overall play excitement from EGM 1 to 2, the more likely the player experienced an increase in the urge to continue play (r=.53, p<.001). This suggests that players who increased in excitement tended to experience an increased urge to continue.

Such a result may point to the potential importance of excitement in stimulating players.

While non-significant, two other results were of interest. There was somewhat of an association between increases in free spins and positive changes in the urge to continue play (from EGM 1 to EGM 2).

This result is mentioned given the small sample of players who received free spins on their first and second EGM (remembering that they are not ubiquitous). This may suggest that increased numbers of free spins has a small relationship with the urge to continue play.

The other variable of interest related to friendliness of venue staff. This was somewhat positively related to increased excitement during play, although was only tending towards significance (p<.07).
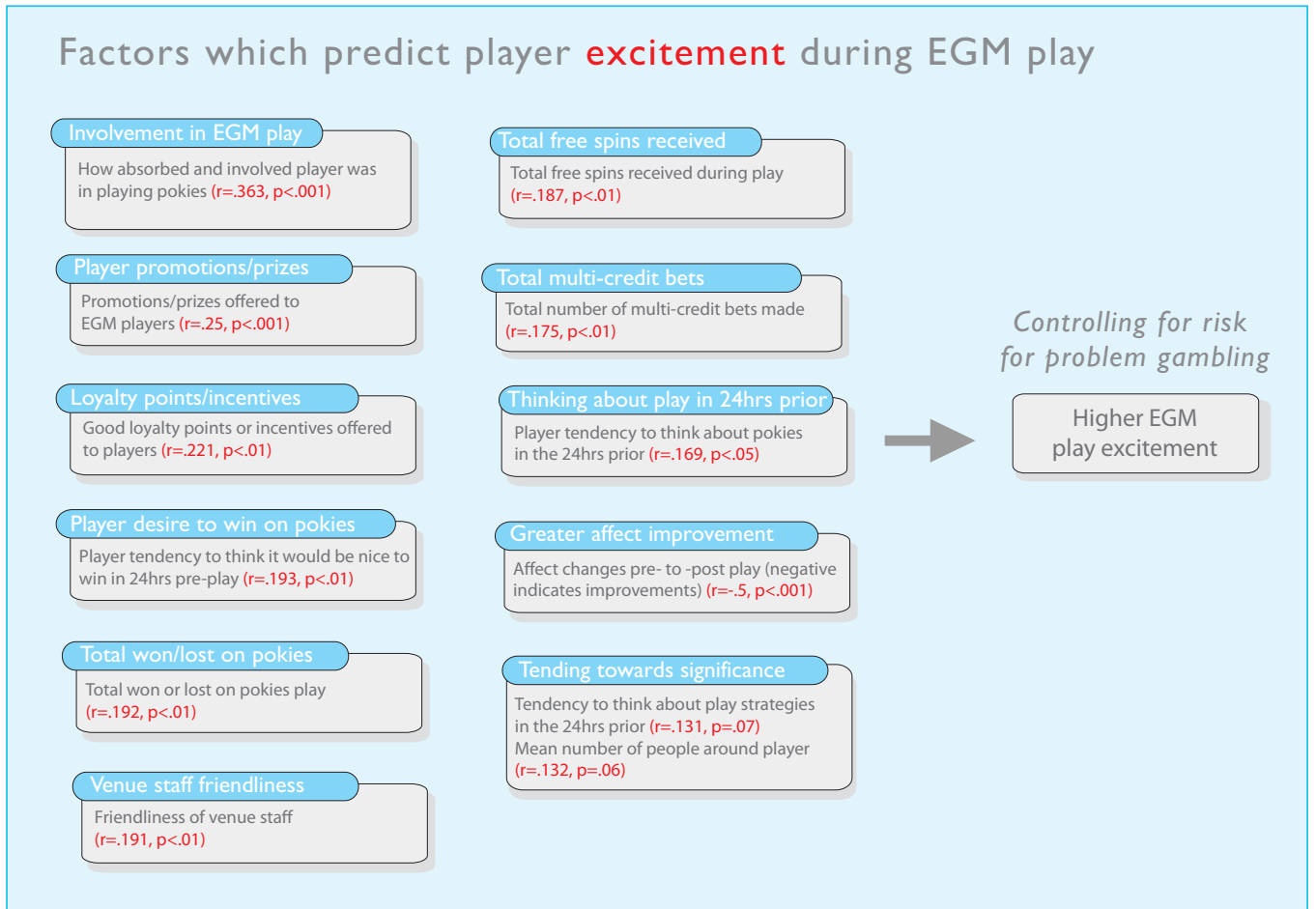
Table 34. Factors which predict urge to continue during EGM play - unique predictors (partial correlations) - ALL PLAYERS

Variable type	Whether changes in the following variables predicted changes in the urge to continue EGM play	Partial correlation controlling for risk for problem gambling (r)	Significance level (p)	Interpretation
Prospective	Excitement - Features[a]	-.799	.013	*significant*
Prospective	Excitement - Overall	.530	.000	*significant*
Prospective	Excitement - Free Spins	-.307	.401	*non-significant*
Prospective	Tally - Money Won $10 to $20	-.022	.853	*non-significant*
Prospective	Total features recorded	-.045	.696	*non-significant*
Prospective	Total free spins recorded	.190	.107	*non-significant, but slight link*
Cross-sectional	Player attracted to venue because of loyalty points or incentives	.167	.147	*non-significant*

Table 34. Factors which predict urge to continue during EGM play - unique predictors (partial correlations) - ALL PLAYERS

Variable type	Whether changes in the following variables predicted changes in the urge to continue EGM play	Partial correlation controlling for risk for problem gambling (r)	Significance level (p)	Interpretation
Prospective	Coin drops[b] able to be heard in the background	.013	.908	*non-significant*
Cross-sectional	How friendly were the staff at the venue today	.210	.068	*non-significant, but slight link*
Prospective	Total multi-credit[c] bets made during play	.011	.922	*non-significant*
Prospective	Total money won from free spins or features	.086	.460	*non-significant*
Prospective	Total Coins - Dollar Value	-.038	.742	*non-significant*
Prospective	Spins associated with money lost	-.062	.594	*non-significant*
Cross-sectional	Player tendency to think about how nice it would be to win	.115	.323	*non-significant*
Prospective	Spins associated with money won $0.01 to $5	-.104	.372	*non-significant*
Cross-sectional	Player tendency to think about pokies play in the past 24 hrs	.122	.291	*non-significant*
Cross-sectional	Problems or hassles with spouse/partner in the past two weeks	.136	.240	*non-significant*

a. Very few players had features from EGM 1 to 2, so few ratings were able to be used for this analysis.

b. Winnings from other players

c. These involve betting more than 1 gaming machine credit per line during EGM play.

(2) What predicts changes in play excitement from EGM 1 to EGM 2?

Analyses were then undertaken to examine whether changes in play excitement from EGM 1 to EGM 2 were associated with changes in other play variables. In addition, the link between various cross-sectional variables and changes in excitement was explored.

Findings are shown in Table 35. While none of the prospective variables were statistically significant, player tendencies to think about 'strategies to win' on pokies in the 24 hours prior to EGM play was associated with a significant increase in excitement from EGM 1 to EGM 2.

While only speculation, this may suggest that players who come in to play with a 'strategy' increasingly get excited during play (perhaps about trying out their 'strategies').

Players who visited venues because of loyalty points and incentives were significantly more likely to increase in excitement from EGM 1 to EGM 2. This may be due to players becoming more and more 'excited', as they increasingly win bonus points through EGM play.

While not significant, a further emerging trend was of interest. Players who were likely to experience a decline in mood during play (based on pre- versus post-affect measures) were somewhat more likely to experience increasing play excitement from EGM 1 to EGM 2.

Table 35. Factors which predict overall play excitement changes during EGM play - unique predictors (partial correlations) - ALL PLAYERS

Variable type	Whether changes in the following variables predicted changes in the EGM play excitement from EGM 1 to EGM 2	Partial correlation controlling for risk for problem gambling (r)	Significance level (p)	Interpretation
Prospective	How absorbed and involved player was in playing pokies	-.109	.348	*non-significant*
Prospective	Mean jackpot prize associated with EGM	.111	.339	*non-significant*
Cross-sectional	Promotions/prizes offered to poker machine players	.155	.180	*non-significant*
Cross-sectional	Good loyalty points or incentives offered to pokies players	.277	.015	*significant*
Cross-sectional	Player tendency to think it would be nice to win at pokies in the 24hrs prior to play	.056	.627	*non-significant*
Cross-sectional	Friendliness of venue staff	-.143	.219	*non-significant*
Prospective	Total free spins received during play	.149	.199	*non-significant*
Prospective	Total Won or Lost on pokies play	.063	.590	*non-significant*
Prospective	Total number of multi-credit bets[a] made	.004	.971	*non-significant*
Cross-sectional	Player tendency to think about pokies in the 24hrs prior	.162	.161	*non-significant*
Cross-sectional	Player tendency to think about play strategies they were going to use to increase their chance of winning in the 24hrs prior	.318	.005	*significant*
Prospective	TOTAL Features	.004	.972	*non-significant*
Prospective	Affect changes from pre- to -post play (negative indicates improvements)	.191	.097	*non-significant, with slight link*
Prospective	Mean number of people around player	-.077	.509	*non-significant*

a. These involve betting more than 1 gaming machine credit per line during EGM play.

Exploring links between EGM player mood and play excitement

Role of affect in adherence to precommitment

The concept of a player's mood or 'affect' influencing play excitement is a topic of research interest. Past research has pointed to a possible role of mood in the experience of impaired control during gambling (eg. Dickerson, 2003), although this has also been debated (eg. Sandeep, Morgan, Lalumière and Williams, 2009).

The previous analyses showed that excitement may increase urges to continue during EGM play. On this basis, analysis explored the degree to which mood is associated with play excitement.

Findings, however, showed that general affect (based on an aggregated score of four ratings) was not <u>directly</u> related to whether a player adhered to their spending precommitment (as measured through the limit reported in the online survey).

However, findings showed that one measure of mood (pre-play happiness) was related to reported levels of play excitement ($r=-.14$, $p<.05$) (ie. the more unhappy a player was feeling, the more excitement experienced during play). It should also be remembered at this point that overall play excitement was a strong predictor of experiencing urges to continue during play ($r=.526$, $p<.001$).

Changes in affect pre-play to post-play

Regression analysis also showed that pre-play mood significantly predicted post-play mood ($r=.18$, $p=.01$), above and beyond the following:

- • risk for problem gambling ($r=-.30$, $p<.001$)
- • amount of money won on the day of play ($r=.17$, $p=.01$)

Mood changes by risk segment are presented for interest in Table 36 and Figure 30. The mean decline in mood was notably greater for problem and moderate risk gamblers (mean decline of 1.5 and 1.3 respectively), compared to non-problem and low risk gamblers (mean decline of a much lower 0.6 and 0.5) ($r=1.9$, $p<.01$).

Table 36. Affect changes from pre-play to post-play -
by risk for problem gambling (N=200, December 2009)[a]

Time of measurement	Mean affect (1=very low, 7=very high) by risk for problem gambling			
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers
Pre-play	6.1	5.7	5.9	5.6
Post-play	5.5	5.2	4.6	4.1
Difference in affect	0.6	0.5	1.3	1.5

a. Question - Affect was measured by asking players to rate four items on a seven point semantic differential scale (Higher scores for pre-play and post-play mood ratings equate to more positive mood)
(Base: All EGM players)

Figure 30. Affect changes from pre-play to post-play - by risk for problem gambling (N=200, December 2009)[a]
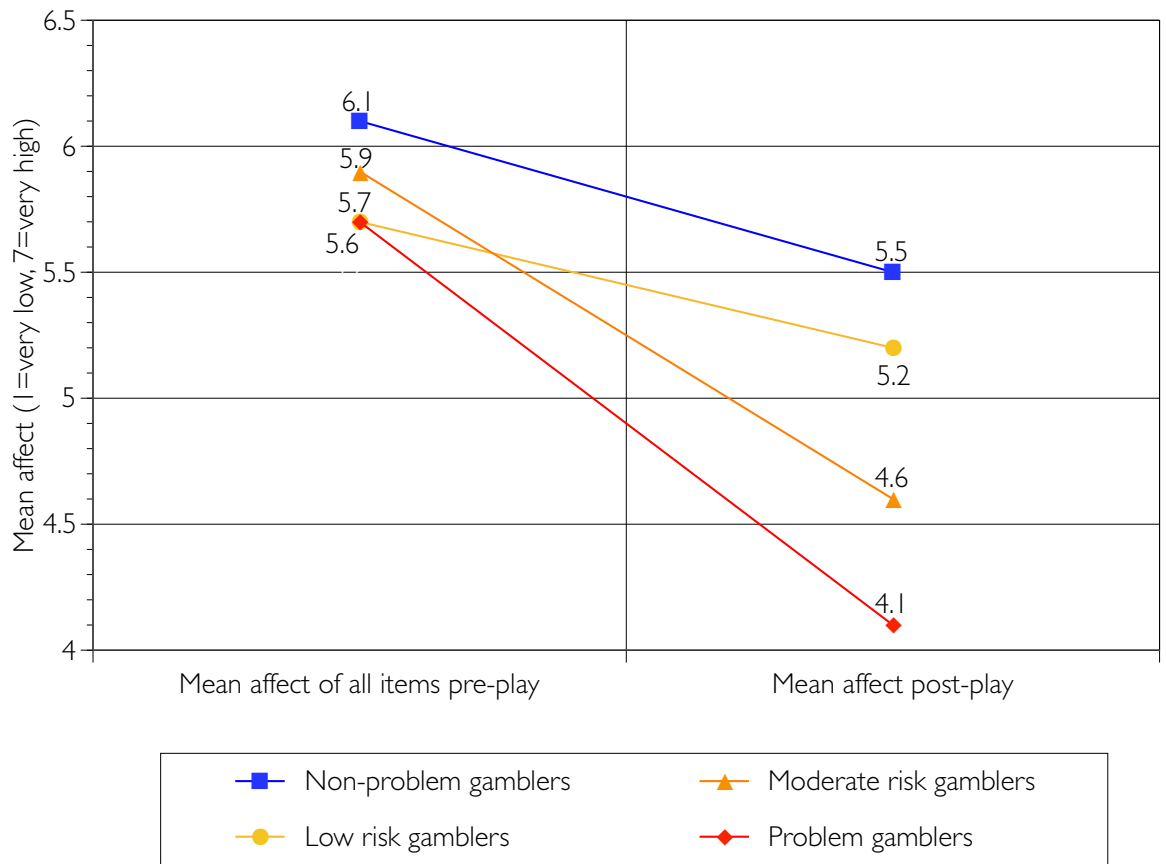
a. Question - Affect was measured by asking players to rate four items on a seven point semantic differential scale
(Higher scores equate to more positive mood, Lower scores equate to more negative mood) (Base: All EGM players)

Table 37 presents mood changes by pre-play mood and risk segment. Positive numbers indicate that mood declined, while negative numbers indicate that mood improved (For instance, mood may drop from 6 to 5 implying a shift of +1).

Results showed that players who were unhappy before commencing play experienced a slightly elevated mood post-play (mean=-0.7). This may imply that EGM play improved mood. In contrast, players who were somewhat happy or quite happy before play, tended to experience a small mood decline (means respectively=0.5 and 1.3).

Table 37. How pre-play affect and risk for problem gambling influence
the change in mood experienced following EGM play (N=200, December 2009)[a]

Player mood pre-play	Affect change (negative indicates mood improvements)				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	All players
Unhappy	-2.4	-0.7	-0.8	1	-0.7
Somewhat happy	-0.4	0.7	0.7	0.4	0.5
Quite happy	1	1	2.1	2.3	1.3

a. Question - Affect was measured by asking players to rate four items on a seven point semantic differential scale (Negative values indicate that mood improved from pre-play to post play, while positive figures indicate that mood declined) (Base: All EGM players)

By risk for problem gambling, results showed that:

- for players who were <u>non-problem gamblers</u> and <u>unhappy</u> before play, mood improved considerably following play (mean=-2.4) (negative values indicate mood improvements) - This may suggest that unhappy non-problem players have their mood lifted by play

- for players who were <u>problem gamblers</u> and <u>unhappy</u> before play, mood tended to decline slightly (mean=+1). Mood also declined for problem gamblers who were both somewhat happy (mean=0.4) and quite happy (mean=2.3) before starting play.

Predictors of
pre-play
mood

Further exploratory analysis showed that pre-play mood was significantly predicted by a number of variables. Specifically, the lower the player's pre-play mood, the:

- higher reported levels of psychological distress of the player (r=-.18, p<.05) (as measured by the Kessler-10)
- more players reported having concerns over an inner conflict (r=-.22, p<.01)
- more players reported regrets about past decisions (r=-.17, p<.05)
- more players were concerned about the meaning of life (r=-.15, p<.05)
- more players reported loneliness/isolation (r=-.17, p<.05)
- more players felt concerned over their appearance (r=-.18, p<.01)
- more players reported hassles/problems from workers (r=-.15, p<.05)
- more players reported hassles/problems with family (r=-.17, p<.05)
- more players reported hassles/problems with their spouse (r=-.16, p<.05)
- more likely players were to report playing EGMs due to boredom (p<.05)

Factors which predict **pre-play mood** of EGM players

Psychological distress
The higher reported levels of psychological distress of the player (as measured by the Kessler-10 scale) (r=-.18, p<.05)

Inner conflict
The more players reported having concerns over an inner conflict (r=-.22, p<.01)

Regrets about past decisions
The more players reported regrets about past decisions (r=-.17, p<.05)

Concern over meaning of life
The more players were concerned about the meaning of life (r=-.15, p<.05)

Loneliness or isolation
The more players reported loneliness or isolation (r=-.17, p<.05)

Concern over appearance
The more players reported concern over appearance (r=-.18, p<.05)

Personal relationship hassles
The more players reported hassles/problems from workers (r=-.15, p<.05)
The more players reported hassles/problems with family (r=-.17, p<.05)
The more players reported hassles/problems with their spouse (r=-.16, p<.05)

Playing due to boredom
The more likely players were to report playing EGMs due to boredom (p<.05)

Divorce and legal difficulties were also somewhat related, yet non-significant.

→ **Low positive affect prior to EGM play**

Summary of findings

While general affect was not found to be directly linked to play excitement, analysis showed that one measure of mood - *pre-play happiness* - was negatively associated with the excitement experienced during EGM play.

The more unhappy a player was feeling prior to play, the more excitement they experienced. This also converges with findings of Dickerson (2003) (although this was only one item).

Based on data highlighting possible indirect roles of play excitement and 'urges to continue' play in adherence to precommitments (plus the possibility of some aspects of mood), exploratory analysis was then undertaken to identify important predictors of each construct.

Significant predictors (controlling for risk for problem gambling) were found to include:

Predictors of - **Urges to continue play**	Predictors of - **Play excitement**	Predictors of - **Pre-play mood**
• excitement from features • overall play excitement • free spin excitement • total features/free spins • loyalty points/incentives • coin drops (caution)[a] • venue staff friendliness • multi-credit bets played • money won - features • money won - free spins	• EGM play involvement • player promotions/prizes • loyalty points/incentives • player desire to win • total won/lost on EGMs • venue staff friendliness • total free spins • multi-credit bets played • Thinking about play in the prior 24hrs • affect improvement (pre- to -post play)	• psychological distress • experience of inner conflicts • regrets about past decisions • concern over the meaning of life • loneliness or isolation • concerns over appearance • personal relationship hassles • playing EGMs to defeat boredom

a. Results were based on correlations, however, logistic regression showed a small odds ratio, so this result should be carefully interpreted.

Most notably, predictors most strongly related to <u>urges to continue</u> were the excitement experienced during features, excitement from play overall and excitement from free spins.

The best predictors of play <u>excitement</u> were being involved in play, promotions and prizes, loyalty points and incentives, dreaming about winning, staff friendliness, total money won and venue staff friendliness.

Prospective analysis (using a longitudinal design) also showed that, the greater the change in play excitement (from EGM 1 to 2), the more likely the player experienced an increase in the urge to continue play. This may suggest that players who increased in excitement (from EGM 1 to EGM 2) tended to *also* experience an increased urge to gamble.

<u>This may point to a potential role of play excitement in increasing urges to continue gambling.</u>

Player tendencies to think about 'strategies to win' (in the 24hrs prior to play) was also significantly associated with an increase in play excitement (from EGM 1 to 2). This may highlight the potential to correct cognitive distortions about gambling in EGM players.

In addition, players visiting venues to obtain loyalty points and incentives were found to be more likely to experience increased excitement (from EGM 1 to EGM 2). This may be due to players becoming increasingly 'stimulated', as they win bonus points.

Finally, players who exceeded precommitments were found to be significantly less satisfied with their wins during play and it was additionally revealed that a mean of 3.0 free spins or 4.4 features (per session) was required to feel 'fairly satisfied' (based on all EGM players).

Accordingly, key findings highlight the possible <u>indirect</u> roles of several important variables in adherence to precommitment decisions (although directions of effect are still largely unknown).

As these are important results for the study, these and other important findings are also further discussed on page 9 (A reflection on key findings and possible implications).

F. Detailed findings - *Strategies used to support adherence to precommitments*

As part of the original analysis of gambler precommitment behaviour (McDonnell-Phillips, 2005), the study discussed the use of control strategies to assist gamblers to adhere to precommitments. Control strategies include strategies which may promote adherence to precommitments such as limiting bet size, use of willpower, leaving cards at home and carefully monitoring gaming expenditure.

On this basis, as part of the study, EGM players were asked to describe any control strategies used during play and to reflect on the use of a gaming card to keep to their gaming limit. Such questions were asked at the venue immediately following the EGM play session.

Within this context, findings of this section include:

- •• Strategies players used to keep to precommitments during EGM play
- •• Usefulness of card based gaming to help keep track of EGM spending
- •• Summary of findings

Strategies players used to keep to precommitments during EGM play

Strategies used to keep to precommitments

Whether strategies were used to keep to precommitments during the live EGM play is shown in Table 38 and Figure 32. As shown, 30% of players reported using control strategies to help keep to their spending precommitments.

Based on the limit reported before and after play, players who did not use control strategies during play were significantly more likely to exceed their precommitments during play (r=.21, p<.01 for the limit reported after play and r=.16, p<.05 for the limit reported before play. The online limit was also tending towards significance - p=.06).

It is interesting to note that higher risk segments (moderate risk and problem gamblers) attempted to use control strategies, however, to a somewhat lesser degree than non-problem gamblers (although the difference was not significant).

Table 38. Whether strategies used to help keep to precommitments -
by risk for problem gambling (N=200, December 2009)[a]

Did you try to use any strategies to help keep you to your spend limit during play today	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Strategies used	39	24	31	32	30
No strategies used	61	76	69	68	70

a. Question - Did you try to use any strategies to help keep you to your pokies spending limit during play today or if you didn't have a spend limit - did you use strategies to avoid spending too much (even if they didn't work)? (Base: All EGM players)

Figure 32. Whether strategies used to help keep to precommitments -
by risk for problem gambling (N=200, December 2009)[a]
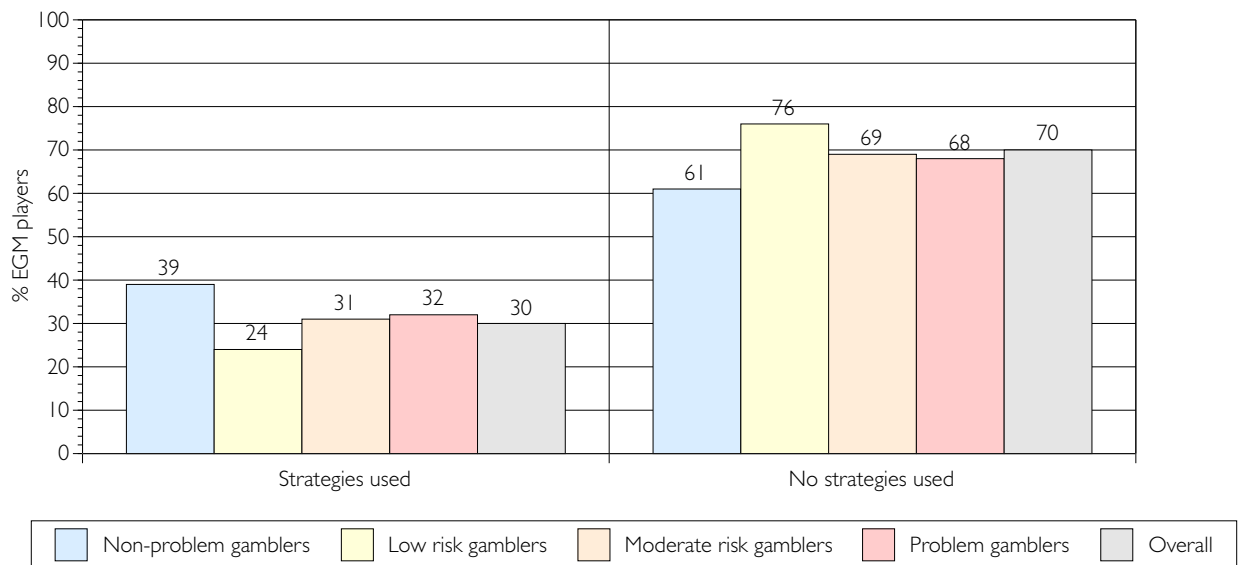
a. Question - Did you try to use any strategies to help keep you to your pokies spending limit during play today or if you didn't have a spend limit - did you use strategies to avoid spending too much (even if they didn't work)? (Base: All EGM players)

Further analysis suggested that players who exceeded their precommitments during EGM play (based on the online limit), also tended to be more likely to report that they did <u>not</u> use control strategies (although this was only tending towards significance) (r=.13, p=.06).

The types of control strategies used by players to help keep to limits are described in Table 39. Reducing bet size (27%), keeping track of spending (23%), limiting money brought to venues (17%), setting limits (17%) and reducing lines played (15%) were the most popular strategies.

While no differences were apparent between players who exceeded versus did not exceed their precommitment, a number of other comparative differences emerged.

Compared to non-problem gamblers, low and moderate risk gamblers were significantly more likely to limit the money they brought to the venue (respectively, OR=6.85 and 5.55, p<.001) (this trend, however, did not hold for problem gamblers).

Moderate risk gamblers were more likely to keep EGM money separate, as a method to support adherence to limits (OR=1.17, p<.001). In addition, they were less likely to report closely tracking expenditure (OR=.067, p<.05).

Accordingly, these represent examples of control strategies used by players.

Table 39. Control strategies reported as being used by players to keep to precommitments -
by risk for problem gambling (N=85, December 2009)[a]

Control strategies reported as being used to keep to precommitments	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Reducing the bet	31	27	14	32	27
Keeping track of spending/monitoring spending	46	12	5	10	23
Limiting money brought to venue	0	30	26	16	17
Setting limits	16	16	16	25	17
Reducing number of lines played	13	14	30	0	15
Willpower/self-talks/giving positive self-encouragement	0	16	7	9	8
Thinking of better uses for money/consequences of overspending	13	0	3	0	5
Taking a break	7	0	0	13	4
Use lower denomination coins/notes	0	7	10	0	4
Keeping EGM money separate	0	0	12	5	3
Bringing a friend/partner and helping each other	0	3	6	0	2
Not spending winnings	0	0	0	5	1
Playing lower denomination EGMs	0	3	0	0	1
Leaving cards at home	0	0	3	5	1
Using larger bets	0	2	0	0	1
Avoiding use of double up	0	0	0	5	0
Moving EGMs	0	0	2	0	0

a. Question - What strategies did you use to help keep you to your pokies spend limit during play or to avoid overspending?
(Base: EGM players reporting using control strategies to keep to precommitments) Non-problem gamblers N=17, Low risk gamblers N=21,
Moderate risk gamblers N=31, Problem gamblers=17

Usefulness of card based gaming to help keep track of EGM spending

As part of the study, players were asked to reflect on the concept of a card, which could be used to help players keep track of their EGM spending. Overall findings for all EGM players are shown in Figure 33.

As shown, 27% of players rated the concept as very useful, 10% quite useful and 6% as useful. In contrast, 52% reported that this was not at all useful. Players exceeding limits were also more likely to rate a gaming card as useful (r=.25, p<.001).

Figure 33. Usefulness of a card to help EGM players keep track of EGM expenditure (N=200, December 2009)[a]
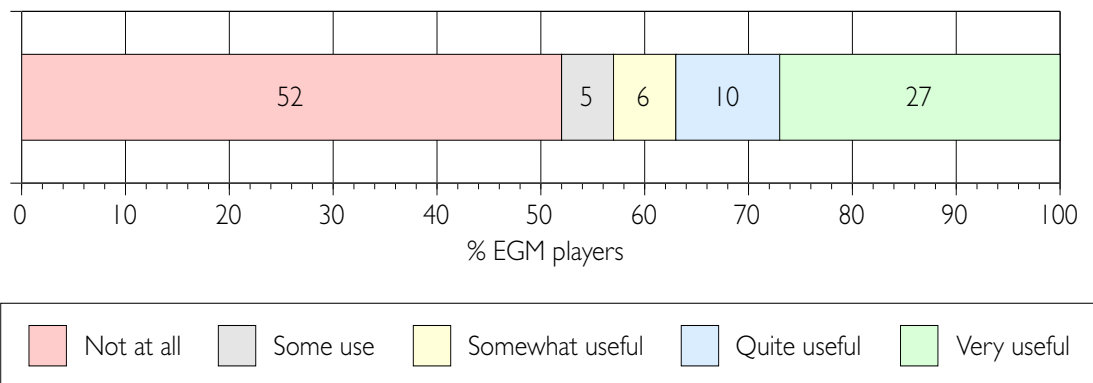
a. Question - Using a scale where 1=not at all and 5=very useful, how useful would it be for you personally to have a card that you can use for pokies play to keep track of your expenditure? (ie. you put money on the card and use the card instead of cash for pokies play) (Base: All EGM players)

Usefulness by risk segment

Perceived usefulness of a card by risk for problem gambling is shown in Table 40 and Figure 34. While not significant, it is interesting to observe that problem gamblers showed somewhat higher support for a card to keep track of expenditure, than other gambling risk segments.

Table 40. Usefulness of a card to help EGM players keep track of EGM expenditure - by risk for problem gambling (N=200, December 2009)[a]

Measure	Mean usefulness (1=not at all, 5=very useful)				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
How useful would it be for you to have a card that you can use for pokies play to keep track of expenditure	2.4	2.6	2.4	3.1	2.5

a. Question - Using a scale where 1=not at all and 5=very useful, how useful would it be for you person-ally to have a card that you can use for pokies play to keep track of your expenditure? (ie. you put money on the card and use the card instead of cash for pokies play) (Base: All EGM players)

Figure 34. Usefulness of a card to help EGM players keep track of EGM expenditure -
by risk for problem gambling (N=200, December 2009)[a]

How useful would it be for you to have a card that you can use for pokies play to keep track of spenditure

Non-problem gamblers   Low risk gamblers   Moderate risk gamblers   Problem gamblers   Overall
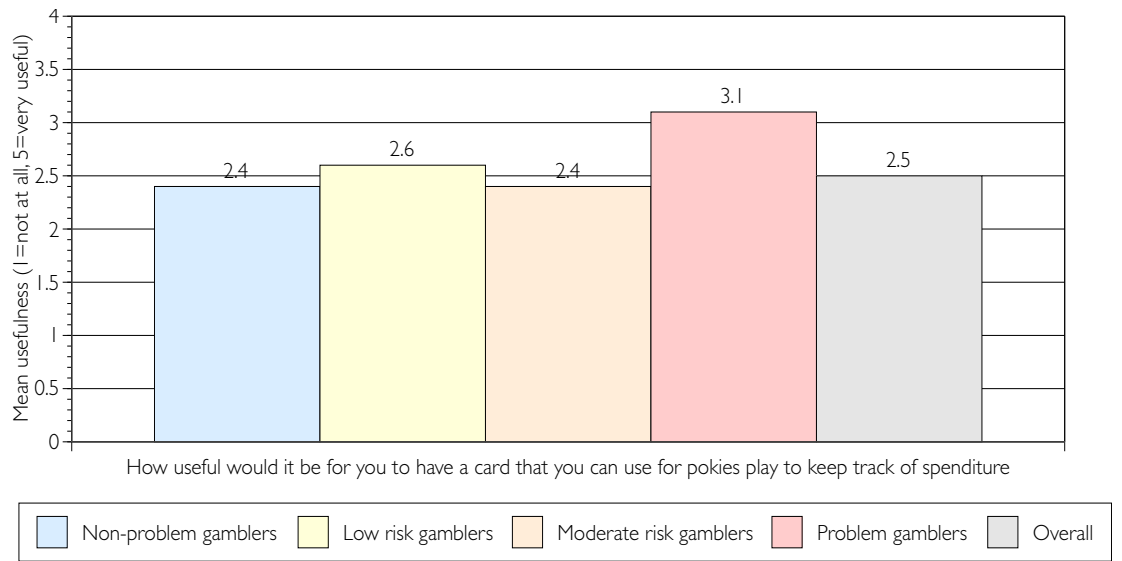
a. Question - Using a scale where 1=not at all and 5=very useful, how useful would it be for you personally to have a card that you can use for pokies play to keep track of your expenditure? (ie. you put money on the card and use the card instead of cash for pokies play) (Base: All EGM players)

Summary of findings

Around 30% of EGM players used control strategies to keep to precommitments. While not significant, these were somewhat more likely to be used by non-problem gamblers.

Reducing bet size (27%), keeping track of spending (23%), limiting money brought to the venue (17%), setting limits (17%) and reducing lines played (15%) were the most popular reported control strategies.

Exploratory analysis showed that players who did not use control strategies <u>may</u> be more likely to exceed precommitments.

In addition, low and moderate risk gamblers were more likely to limit the money they brought to the venue and moderate risk gamblers were more likely to keep money separate and less likely to track expenditure.

When asked about card-based gaming, only 48% of players rated this as of some value and players exceeding limits were also more likely to rate such a card as useful. This may point to precommitment as a tool of perceived higher value to players exceeding precommitted limits.

G. Detailed findings - *Player reflection on their urges to continue EGM play and related issues*

On conclusion of observational interviews, EGM players were asked to reflect on their play in a number of ways. This was to explore whether players could identify any points in time when they felt an 'urge to continue', felt 'due' for a win (ie. a cognitive distortion) or exhibited other behaviours which may have indicated or led to the player exceeding their limit (eg. chasing losses, being too absorbed in play).

Reasons for use of multiple credit bets and the role of responsible gambling signage in adherence to precommitments were also examined. In addition, a further area of questioning examined the level of harm experienced from exceeding a precommitment.

Within this context, findings included:

- •• Points during play where urge was felt to continue gambling
- •• Points during play where players felt they were 'due' for a win
- •• Chasing of EGM losses during play
- •• Feeling absorbed and involved in EGM play
- •• Reasons why players use multiple credit bets
- •• Role of harm-minimisation signage in adherence to precommitments
- •• Impacts of non-adherence to precommitments
- •• Summary of findings

Points during play where urge was felt to continue gambling

Frequency of urge to continue

After players had ceased to play EGMs, they were asked to reflect on their gambling behaviour. This included whether players felt a strong urge to continue gambling at any point during play.

Findings pertaining to the level of urge to continue gambling, as reported by players, are shown in Table 41 and Figure 35.

Based on the limit reported after play, findings showed that players exceeding limits were more likely to report an urge to continue play (r=.17, p<.05) (45% of players exceeding precommitments versus 27% of players not exceeding precommitments).

Problem gamblers were less likely to report <u>not</u> experiencing any urge to continue during play (OR=.29, p<.05) and were more likely to report 'definitely' experiencing urges to continue gambling (OR=4.78, p<.001).

Results may highlight some association between urges to continue and exceeding limits and may indicate that problem gamblers are also more likely to be stimulated to continue gambling.

Table 41. Whether player felt a strong urge to continue gambling during EGM play, but thought they should stop play - by risk for problem gambling (N=200, December 2009)[a]

Whether urge to continue was experienced (reported post-play)	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Not at all	69	76	73	40	70
A little bit	11	13	9	15	12
Somewhat	20	8	12	15	13
Definitely	0	3	5	30	5

a. Question - Were there any points today when you felt a strong urge to continue gambling, but thought you should stop playing? (Base: All EGM players)

Figure 35. Whether player felt a strong urge to continue gambling during EGM play, but thought they should stop play - by risk for problem gambling (N=200, December 2009)[a]
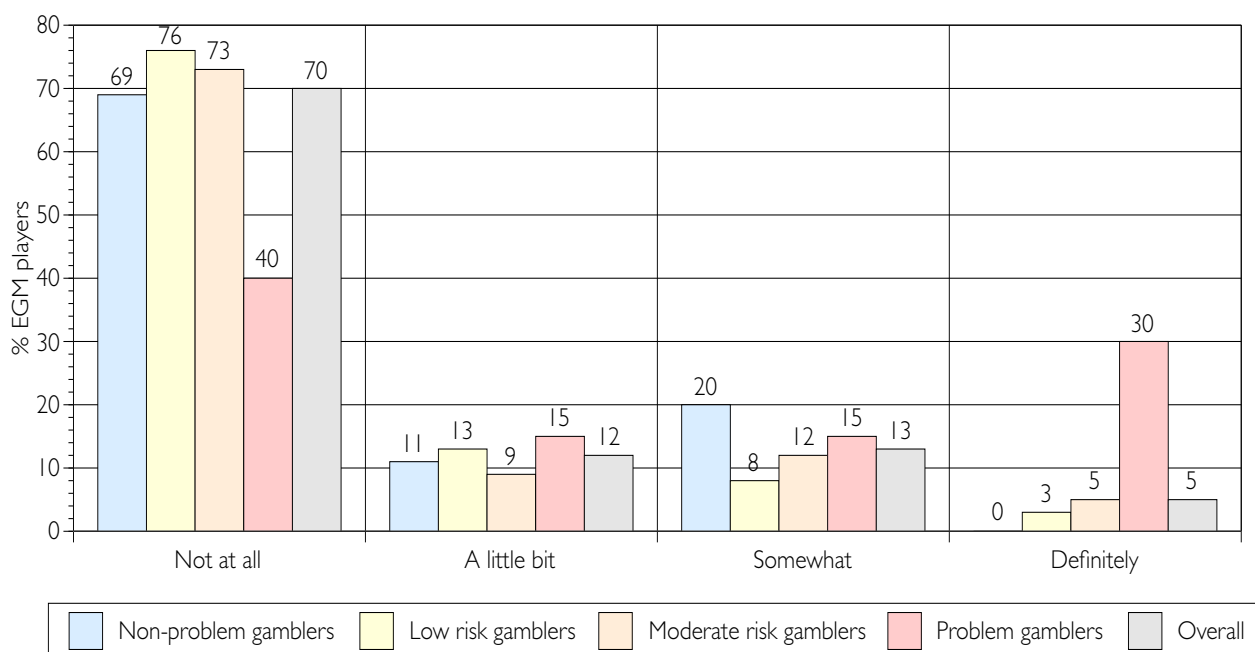
a. Question - Were there any points today when you felt a strong urge to continue gambling, but thought you should stop playing? (Base: All EGM players)

*Points in play
when urge
occurred*

In cases where players reported urges to continue, they were asked about the points in play at which urges occurred. Results are in Table 42.

While only based on small samples, the most common reasons for feeling an urge to continue gambling during EGM play were following a loss (25% of players), feeling an urge but stopping as the player was wanting to take home winnings (21%), following free spins (18%), after larger wins (15%) and due to a desire to experience another feature or due to winning a feature (11%).

No significant differences emerged between players who had exceeded versus not exceeded their limit.

Some interesting comparisons, however, emerged between risk segments. Problem gamblers (OR=4.36, p<.001) were more likely to feel an urge to continue gambling after a loss, compared to non-problem gamblers. Findings may point to a greater impact of loss on problem gamblers particularly and may indicate that players were chasing losses.

Table 42. Points in play where players felt an urge to continue EGM play - by risk for problem gambling (N=77, December 2009)[a]

Points in play when urge to continue occurred	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
AFTER A LOSS					
After a loss	0	48	9	27	25
Spent too much/more than usual as was losing	0	8	0	3	4
AFTER FREE SPINS					
After free spins	18	20	8	21	18
Felt encouraged/happy after free spin	18	0	0	0	5
Felt I was due for a free spin	0	0	11	2	2
AFTER WINS					
After getting small wins	0	0	4	0	1
After larger win	25	20	0	3	15
Desired a big win/more wins	25	0	0	3	8
After wins	18	3	6	5	8
After wins - but kept to my limit	21	0	0	7	7
Set a goal to win	0	0	0	3	1
Desired more wins, but had willpower	0	0	4	0	1
After a win, I felt lucky	0	0	0	2	0
AFTER FEATURES					
Desired another feature/won a feature	18	8	8	10	11
FELT URGE, BUT RESISTED					
Felt urge, but restrained by another person	18	0	0	6	6
Felt urge, but wanted to take home winnings	25	28	19	2	21
Felt I lost to my limit	0	0	2	3	1
OTHER					
When I was running short of money	0	3	11	7	4
Wanted more time playing	0	5	6	5	4
All the time	0	0	0	3	1
After changing note to coins	0	0	4	0	1
Felt excited	0	0	4	0	1
Need money for things	0	0	0	3	1
Had to do something else and leave	0	0	2	2	1

a. Question - Were there any points in play today when you felt a strong urge to continue gambling, but thought you should stop playing?
How would you describe these points in play? (Base: All EGM players who experienced an urge to continue gambling during play)
Non-problem gamblers N=10, Low risk gamblers N=14, Moderate risk gamblers N=25, Problem gamblers N=28

Points during play where players felt they were 'due' for a win

Frequency of feeling 'due' for a win

Following play, players reflected on whether they felt they were 'due' for a win at any point during play. Findings are in Table 43 and Figure 32.

Findings showed that only 30% of players never felt that they were 'due' for a win. This may suggest that EGM play creates some level of win expectancy for many players.

Based on the online limit, players exceeding limits were more likely to report feeling 'due' for a win (r=.21, p<.01) (82% players exceeding limits reported feeling due for a win at least 'a little', versus 67% for those who did not).

Comparisons by risk segment revealed that problem gamblers were more likely to report 'definitely' feeling (at some point) they were due for a win (OR=5.81, p<.05).

This may suggest that players exceeding limits and problem gamblers have higher levels of win expectancy.

Table 43. Frequency of feeling due for a win - by risk for problem gambling (N=200, December 2009)[a]

Were there any points today when you were not winning but felt you were due for a win	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Not at all	27	36	23	26	30
A little	36	38	24	5	32
Somewhat	25	14	27	25	20
Definitely	12	12	26	44	17

a. Question - Were there any points in play today, when you were not winning, but felt you were 'due' for a win? (Base: All EGM players)

Figure 36. Frequency of feeling due for a win - by risk for problem gambling (N=200, December 2009)[a]
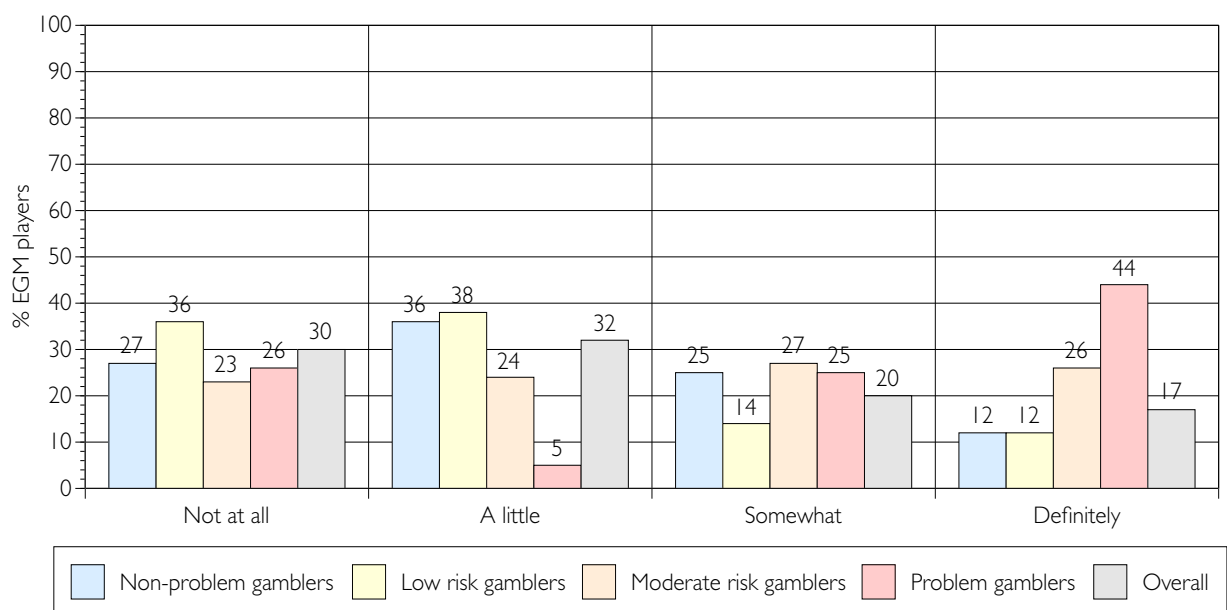
a. Question - Were there any points in play today, when you were not winning, but felt you were 'due' for a win? (Base: All EGM players)

Points-in-play when felt due for win

The points in play when players felt 'due' for a win are described in Table 44. This is based on qualitative feedback.

Overall findings suggested that key points in play when players most commonly felt that they were 'due' for a win included when there were too many losses or no wins in a row (27%), when they felt a desire or an urge to win (25%), when they had spent enough money (11%), when 'nearly' a correct pattern for a win was obtained (9%), when no features were received (7%), on receipt of free spins (6%) and when features appeared (ie. it was seen as a sign of an impending win) (6%).

Players exceeding limits were significantly more likely to feel they were due for a win, after features appeared (15% of those exceeding limits versus 4% of those not exceeding limits) or after 'hoping or desiring a win' (each p<.05) (46% of those exceeding limits versus 21% of those not exceeding limits). Other differences were non-significant.

Non-problem and low risk gamblers combined were also less likely to mention feeling they were due for a win after 'hoping or desiring a win', compared to moderate risk and problem gamblers (OR=.07, p<.001). Indirectly, this may suggest that lower risk players are less likely to hope or desire a win compared to higher-risk segments.

Table 44. Points in play when EGM players felt that they were 'due' for a win - by risk for problem gambling (N=163, December 2009)[a]

Points-in-play when EGM players felt that they were due for a win	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
LACK OF WINS/LOSS					
When not winning/too many losses in a row	18	31	31	30	27
WINS					
Hoped for win/have desire for win/urge to win	18	27	31	29	25
After spend too much/increased bets/ spent enough money	13	11	9	5	11
Small wins, indicative of larger win	3	5	1	0	3
FEATURE-RELATED					
When no features or right feature	4	8	2	19	7
Features appearing is sign of impending win	12	2	9	0	6
FREE SPIN-RELATED					
When received free spins	4	8	6	5	6
When no free spins	12	0	3	2	4
Expected free spins	10	0	3	9	4
PATTERN-RELATED					
Nearly got correct pattern for win/free spin/feature	13	1	25	5	9
OTHER					
Just before leaving/money was running low	12	4	1	2	5
Expected win, as EGMs are programmed as such	8	0	9	3	4
Saw others around me winning	4	5	0	0	3
After moving EGMs	0	1	1	0	1
Had played for too long	0	0	0	2	0
EGM hadn't paid out for previous player	0	0	0	2	0
Mid-point in play	0	0	1	2	0

a. Question - Were there any points in play when you were not winning, but felt that you were due for a win? How would you describe these points in play? (Base: All EGM players reporting feeling due for a win). Non-problem gamblers N=24, Low risk gamblers N=37, Moderate risk gamblers N=70, Problem gamblers N=32.

Chasing of EGM losses during play

Frequency of chasing EGM losses

The frequency with which EGM players reported chasing losses during play is shown in Table 45 and Figure 37.

Overall, 24% of players reported chasing losses during play. Based on the limit reported online, players exceeding limits were more likely to chase EGM losses (r=.27, p<.001) (54% of players exceeding limits chased losses at least 'a little' versus only 18% of players who did not).

Problem gamblers were less likely to report 'not at all' chasing their losses during play (OR=.20, p<.05) and were more likely to report 'definitely' chasing their losses (OR=9.89, p<.05).

Table 45. Whether players were starting to chase their losses during EGM play -
by risk for problem gambling (N=200, December 2009)[a]

Points in play where players were starting to chase their losses	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Not at all	86	75	74	56	76
A little bit	11	12	6	5	10
Somewhat	0	11	12	16	9
Definitely	3	1	8	23	5

a. Question - To what degree, did you feel you were starting to chase your losses today? (Base: All EGM players)

Figure 37. Whether players were starting to chase their losses during EGM play -
by risk for problem gambling (N=200, December 2009)[a]
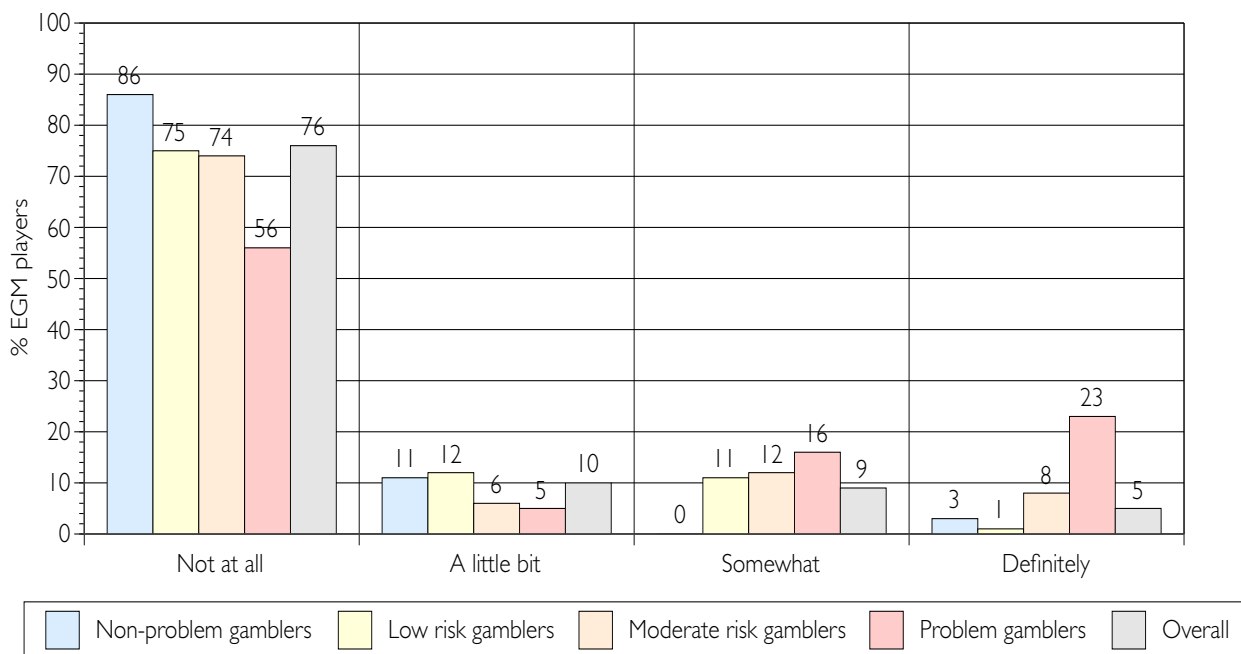
a. Question - To what degree, did you feel you were starting to chase your losses today? (Base: All EGM players)

Points in play when chasing losses

The points in play at which players reported chasing losses are described in Table 46. This is based on qualitative player feedback.

Findings suggest that chasing of losses most commonly occurred after players reached certain loss amounts (38%), after expecting or hoping for a win/feature or free spin (14%), on changing EGMs (12%), when players started to lose winnings (12%) or when the player was 'never winning' (10%).

No significant differences were observed between players exceeding limits versus those who did not exceed limits.

Compared to non-problem gamblers, problem gamblers were more likely to report chasing losses due to a hope or desire to obtain a win, free spin or feature (OR=4.04, p<.001).

Low risk gamblers were more likely to report chasing of losses when they were never winning (OR=2.2, p<.001). Moderate risk gamblers were more likely to report they placed money in the EGM following a loss (OR=2.29, p<.001).

Accordingly, findings may point to a trend for problem gamblers to have higher expectancies for wins/features and free spins during play and when expectations are not met, they may be inclined to chase losses.

Table 46. Points in play when EGM players started to chase losses - by risk for problem gambling (N=57, December 2009)[a]

Points in play when EGM players started to chase losses	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
After reaching a certain loss amount	42	47	24	27	38
Expected/hoped for win/feature/free spin	0	11	9	36	14
When changed EGMs	21	11	15	3	12
When started to lose winnings	37	11	0	0	12
When never winning	0	19	10	3	10
When put more money in post-loss	0	7	17	12	8
When free spins gave me wins	0	5	5	0	3
By targeting jackpots/features/free spins	0	5	0	0	2
Mid point during play	0	0	3	8	2
After continual losses	0	0	7	4	2
Used double-up/gamble[b] to recoup losses	0	0	10	0	2
When free spins weren't paying	0	0	0	11	2
Increased bet	0	0	5	0	1
Trying to get a feature	0	0	5	0	1

a. Question - To what degree, did you feel you were starting to chase your losses today? How would you describe these points in play when you were starting to chase your losses (Base: All EGM players reporting chasing of losses). Non-problem gamblers N=4, Low risk gamblers N=12, Moderate risk gamblers N=23, Problem gamblers N=18.

b. A game during EGM play which allows players to gamble their winnings (eg. choose red or black card and if correct, the winnings may be doubled).

Feeling absorbed and involved in EGM play

The degree to which players felt absorbed and involved in pokies play is shown in Table 47. Findings showed that 46% of players felt moderately absorbed or involved in play, 28% felt very absorbed or involved and 6% felt extremely absorbed or involved.

This implied that 95% of players felt at least 'a little' absorbed in play. This may suggest that the shadowing aspect of EGM observation was not intrusive for players to the point where they could not concentrate at all on their play (although obviously some effect would naturally occur).

Players who exceeded limits were significantly more likely to feel absorbed and involved in EGM play (based on both limits reported online and after play) (each r=.15, p<.05) (eg. 51% of players exceeding limits were at least very absorbed, compared to only 30% of players who did not exceed limits).

In addition, problem gamblers were more likely to report being 'very' absorbed and involved in EGM play (p<.05), compared to non-problem and low risk gamblers.

Regression analysis showed that being absorbed and involved in play added to the prediction of urges to continue gambling (although not whether a player exceeded their limit), above and beyond risk for problem gambling (p<.001).

Results also suggested that being absorbed and involved actually accounts for more variance in 'urges to continue' than risk for problem gambling.

This may explain why some players find it difficult to resist urges to continue gambling. High involvement may imply that such groups are less aware of their surroundings (ie. are 'fixated' on the EGM) and thus are more likely to experience urges to continue play (which may potentially increase player susceptibility to exceeding limits).

This proposition would also be supported by authors such as Baron and Dickerson (1999), who found that involvement was linked to the phenomenon of impaired control.

Table 47. Feeling of being absorbed and involved in pokies play -
by risk for problem gambling (N=200, December 2009)[a]

Level of feeling absorbed and involved in EGM play	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Not at all	2	8	3	0	5
A little	9	24	7	10	16
Moderately	66	36	44	38	46
Very	20	29	34	36	28
Extremely	3	4	12	16	6
Total % at least a little absorbed or involved	98%	92%	97%	100%	95%
Total % at least very or extremely absorbed or involved	23%	33%	46%	52%	34%

a. Question - How absorbed were you in playing pokies today? (Base: All EGM players)

Reasons why players use multiple credit bets

Frequency of multiple credit bets

Players were asked to report whether they had used multiple credit bets during play. Around 49% of EGM players used multiple credit bets. Findings are in Table 48.

Use of multiple credit bets based on self-report was not significantly associated with players exceeding limits.

However, problem gamblers were significantly more likely to report use of multiple credit bets during EGM play, compared to non-problem gamblers (OR=5.45, p<.05).

Table 48. Frequency of use of multiple credit bets - by risk for problem gambling
(N=200, December 2009)[a]

Whether player used more than a single credit bet per line	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Used multiple credit bets	56	33	60	87	49
Did not use multiple credit bets	44	67	40	13	51

a. Question - Did you use at any point more than a single credit bet during play today? (Base: All EGM players)

Reasons for multiple credit bets

Players using multiple credit bets were asked to reflect on reasons for their use. Results are in Table 49. Overall themes showed that multiple credit bets were used due to a belief that players can 'win more money' (45%), due to the perception of an increased chance of winning (17%), to get rid of small amounts of money to leave a machine (14%) and also to increase excitement or interest (14%).

The reason relating to 'getting rid of small amounts of money' to move to a new machine is particularly interesting. This may be because players cannot be 'bothered' cashing out small amounts or because machines do not cash out amounts less than $1 (hence, they feel it's easier to spend what's left).

Players exceeding limits were significantly more likely to use multiple credit bets because 'you win more' (p<.01) (74% of players exceed limits versus 38% of players keeping to limits).

No significant differences were apparent by risk for problem gambling. However, it is interesting to note that moderate risk and problem gamblers reported using multi-credit bets to 'win more' at a slightly higher level than other risk segments (especially given findings in Table 48).

Table 49. Reasons why EGM players use multiple credit bets - by risk for problem gambling
(N=129, December 2009)[a]

Why players used multi-credit bets[b]	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
You win more	37	39	53	61	45
Increase chance of winning	27	6	19	19	17
To get rid of small amounts to leave/ start a new game/new machine etc.	13	18	13	11	14
Increases excitement/interest/ motivation	11	20	16	7	14
Better chance of free spins and features	0	19	5	2	8
Raise stakes	21	0	0	0	7
Confuse EGM by changing bet patterns/try to change luck	5	5	0	2	4
To recoup/chase losses	0	2	5	7	3
Got bored - wanted to spend money quicker	0	7	4	2	3
EGM was cheap anyway/had few lines	5	2	2	0	3
Don't like to do multi-credit bets	0	5	0	0	2
Wasn't winning	0	0	2	0	0

a. Question - Did you use at any point more than a single credit bet during play today? What was the reason you used multiple credit bets per line? (Base: All EGM players reporting use of multiple credit bets). Non-problem gamblers N=18 Low risk gamblers N=27, Moderate risk gamblers N=51, Problem gamblers N=33

b. These involve betting more than 1 gaming machine credit per line during EGM play.

Role of harm-minimisation signage in adherence to precommitments

Awareness of signage

Player awareness of responsible gambling (or problem gambling) signage at the venue is shown in Table 50. Surprisingly, just under half of all players reported not noticing any signage at the venue of play.

Findings showed that players exceeding limits were more likely to <u>not</u> notice signage (r=.19, p<.01) (30% of players who exceeded limits versus 56% of players who had not).

Further analysis revealed that players who did not notice signage were significantly more involved and absorbed in EGM play (r=.17, p<.05), although no significant association with risk for problem gambling was noted.

This may be because players are too focused on play to notice signage. This may highlight potential for display of harm-minimisation messages during play (especially if they are heavily absorbed and involved in play).

Table 50. Signage noticed warning players about gambling or problem gambling - by risk for problem gambling (N=200, December 2009)[a]

Signage noticed warning players about gambling or problem gambling	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Signage noticed	58	49	50	55	52
No signage noticed	42	51	50	45	48

a. Question - Did you notice any signage warning players about gambling risks or problem gambling in any way today? (Base: All EGM players)

Specific signage noticed

The specific types or location of signage noticed by players is shown in Table 51. This was based on qualitative feedback. It was apparent from responses that players sometimes referred to messages seen and at other times, the location of signage.

Awareness of signage is interesting in view of proposals such as Monaghan and Blaszczynski (2009), who found that (pop-up) harm-minimisation messages were recalled much more than static messages (Venues within Australia generally have static messages).

Overall, players were most likely to report seeing signage near EGMs (40% of players), recalled the gambling help line number (34%), recalled signage in the toilets (22%), recalled the message 'gamble responsibly' (19%), saw signage near the entrance or foyer (16%) and saw signage by the change machine/kiosk/cashier (13%).

No differences, however, emerged based on whether players exceeded their precommitments.

Some interesting trends, however, were apparent by risk segment. Compared to non-problem gamblers, problem gamblers were more likely to report seeing signage near the entrance/door/foyer (OR=17.8, p<.05) and were more likely to see the message 'don't chase losses' (OR=3.96, p<.001).

This may indicate that this message is tapping into latent mental frameworks of problem gamblers (who also tend to chase losses - r=.27, p<.001).

In addition, compared to non-problem gamblers, at-risk gamblers were significantly less likely to see messages relating to paying bills or gambling what you can afford (OR=.046, p<.01).

Table 51. Signage noticed by EGM players - by risk for problem gambling (N=196, December 2009)[a]

Signage noticed	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Near EGMs	42	39	45	38	40
Gambling help line numbers	38	40	20	15	34
Toilets	16	24	23	30	22
Gamble responsibly	9	25	30	10	19
Near entrance/door/foyer	2	24	20	23	16
Change machine/kiosk/cashier	19	2	26	24	13
Don't chase losses	0	10	10	27	9
Message about paying bills/not to gamble more than you can afford	21	1	0	3	7
Set a limit	9	4	4	9	6
Near ATM	0	13	2	0	6
Behind/near bar	16	0	0	0	5
Couldn't recall specifics	0	9	2	0	4
Near coffee machine/water	0	4	6	0	3
Members card messaging	5	0	0	0	2
Messages about kids/family	5	0	0	0	2
Stay in control	0	4	0	6	2
Sad imagery	0	0	0	3	0
Signs with women PGs	0	0	0	3	0
Seek help	0	0	0	0	0
On TV screen	0	0	0	0	0
Message that EGMs always win	0	0	2	0	0
Everywhere (no specifics)	0	0	2	0	0

a. Question - Describe the signage you noticed (Base: All EGM players reporting seeing responsible gambling or problem gambling signage) Non-problem gamblers N=24, Low risk gamblers N=53, Moderate risk gamblers N=80, Problem gamblers N=39 (N is correct - difference may be due to interviewer skipping error)

As part of the study, players were asked to rate the degree to which gambling harm-minimisation signage helped them personally to keep to their limits.

Results are shown in Table 52.

Interestingly, only 12% of players reported such signage as being at least a little helpful. This may highlight potential to explore ways to increase the effectiveness of signage content in the future.

The more likely players were to exceed precommitments, the more helpful they rated signage (r=.23, p<.05) (41% of players exceeding precommitments found signage as at least 'a little' help, compared to 9% of players who did not exceed limits).

However, there was no association between the perceived helpfulness of signage and risk for problem gambling or the level of player involvement in gambling.

Table 52. How much gambling/problem gambling signage helped gamblers keep to their limits - by risk for problem gambling (N=200, December 2009)[a]

How much signage helped EGM players keep to their limit	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Not at all helpful	86	92	82	92	88
A little helpful	9	0	0	3	3
Somewhat helpful	5	7	11	3	7
Quite helpful	0	0	3	0	1
Very helpful	0	1	4	2	1
Total % reporting at least a little helpful	14%	8%	18%	8%	12%

a. Question - Using a scale from 1=not at all and 5=very helpful, how much did this signage help you keep to your spend limit today? (Base: All EGM players reporting seeing responsible gambling or problem gambling signage).

Impacts of non-adherence to precommitments

Spending more than player can afford

Whether players reported spending more than they could afford on pokies is shown in Table 53. Overall, only 2% of EGM players reported spending more than they could afford.

Players exceeding limits (as reported online or before play) were somewhat more likely to report spending more than they could afford, although this result was only tending towards significance (r=-.13, p=.06).

Differences between gambling risk segments were not statistically significant.

Table 53. Whether EGM players spent more than they could afford on play - by risk for problem gambling (N=200, December 2009)[a]

Whether players spent more than they could afford to spend on the pokies	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
A lot more	0	0	0	2	0
Somewhat more	0	0	1	5	1
A little more	0	2	1	5	1
Spend a lot/somewhat or a little more than they can afford	0%	2%	2%	12%	2%
Didn't spend more than can afford	100%	98%	98%	88%	98%

a. Question - Did you spend more than you can afford to spend on pokies? (Base: All EGM players)

Whether expenditure will need to be adjusted

Whether players reported needing to adjust expenditure in other life areas, as a result of EGM play, is shown in Table 54 and Figure 38. Overall, only 2% of players reported having to adjust their expenditure.

Players exceeding limits were not significantly more likely to have to adjust expenditure as a result of play. Problem gamblers, however, were significantly more likely to report having to adjust their expenditure, compared to non-problem gamblers (OR=1.32, p<.001).

This may also represent a soft measure of some level of 'harm'.

Items which players said they would sacrifice to make up for their increased spending included:

- • *Entertainment/cut down on going out this week*
- • *Clothing*
- • *Movies*
- • *Unnecessary use of vehicle or buying luxury items*
- • *Cigarettes*
- • *Alcohol*
- • *Not going out*

Table 54. Whether EGM players will have to adjust their expenditure due to play -
by risk for problem gambling (N=200, December 2009)[a]

Whether player will have to adjust spending in other areas of life due to overspending on EGM play	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Will have to reduce spending a lot	0	0	I	0	0
Will have to reduce spending somewhat	0	0	0	0	0
Will have to reduce spending a little	0	3	0	10	2
Will have to reduce spending a lot/ somewhat or a little	0%	3%	1%	10%	2%
Won't have to reduce spending	100%	97%	99%	90%	98%

a. Question - If at all, how much will you have to adjust your spending in other areas of life due to overspending today?
(Base: All EGM players)

Figure 38. Whether EGM players will have to adjust their expenditure due to play -
by risk for problem gambling (N=200, December 2009)[a]
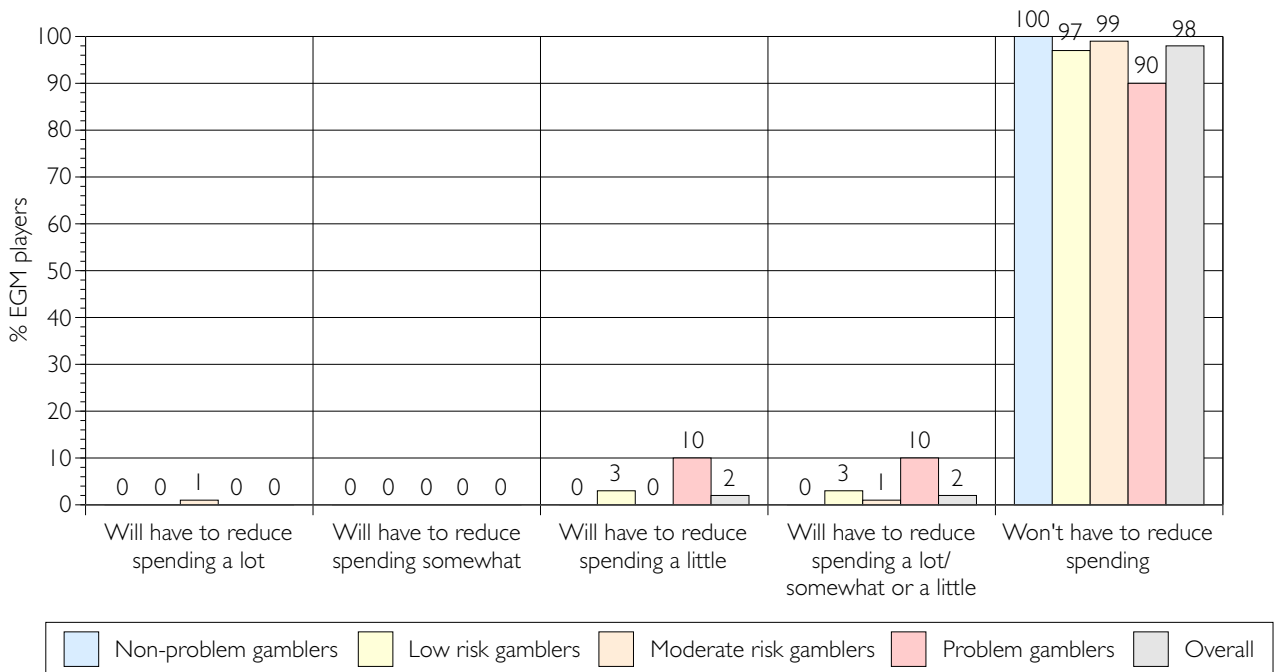
a. Question - If at all, how much will you have to adjust your spending in other areas of life due to overspending today? (Base: All EGM players)

Whether EGM play on the day of observation was seen to potentially have any negative impacts on the player is presented in Table 55 and Figure 39. This was an attempt to explore whether players envisaged that any harm would come from play on the day of observation.

Around 3% of all players reported some negative effects. Players who exceeded their spend limit were somewhat more likely to report negative impacts, although this was only tending towards significance (r=-.13, p=.07). Based on the limit reported immediately after play, the result was statistically significant (r=-.15, p<.05).

Problem gamblers were also more likely to 'definitely' have to reduce their spending as a result of play on the day of observation (OR=1.23, p<.001).

Accordingly, even following a single 'typical' session of EGM play, problem gamblers and to some degree, players exceeding limits may report some level of negative impacts.

Table 55. Will EGM spending have any less positive effects for players -
by risk for problem gambling (N=200, December 2009)[a]

Will EGM spending have any less positive effects	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Definitely	0	0	1	14	1
Maybe	4	0	5	5	2
Definitely or Maybe	4%	0%	6%	19%	3%
None at all	96%	100%	94%	81%	96%

a. Question - Will you poker machine spending TODAY have any less positive effects for you?
(Base: All EGM players)

Figure 39. Will EGM spending have any less positive effects for players -
by risk for problem gambling (N=200, December 2009)[a]
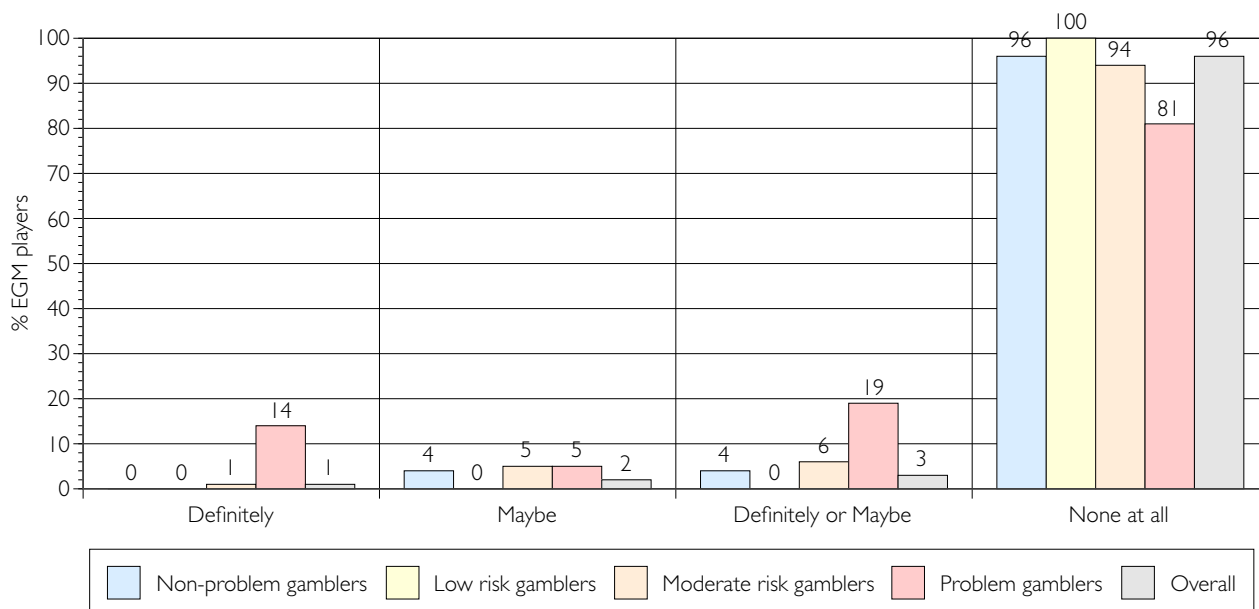
a. Question - Will your poker machine spending TODAY have any less positive effects for you? (Base: All EGM players)

Summary of findings

Several insights emerged based on player reflections on their own behaviour post-EGM play.

While the current research is exploratory in nature, players exceeding their limits may be:

- more likely to report an urge to continue play
- more likely to feel that they are 'due' for a win
- more likely to chase EGM losses
- more likely to feel absorbed and involved in play
  (and this was also linked to the urge to continue gambling)
- no more likely to use multiple credit bets
- less likely to notice harm-minimisation signage in venues, although were
  more likely to rate signage as helpful when seen (in keeping them to their limit)

Results relating to the impacts of EGM play during live play also showed that players exceeding their limits were somewhat (all results were only tending towards significance):

- more likely to spend more than they could afford
- more likely to report negative impacts

Other results highlighted that:

- problem gamblers were more likely to experience urges to continue during play
- problem gamblers were more likely to feel an urge to continue after a loss
- moderate risk and problem gamblers were more likely to 'definitely' feel like they were
  due for a win - and this was associated with hoping/desiring/experiencing urges for wins
- problem gamblers were more likely to report chasing losses - and there was an
  association between problem gambling and 'hoping/desiring' a win, free spin
  or feature *(suggesting problem gamblers may have higher win expectancy)*
- problem gamblers were significantly more likely to report use of multiple credit bets
- problem gamblers were more likely to have to reduce their expenditure during
  as a result of the EGM play

Accordingly, findings highlight a range of factors which influence adherence to spending precommitments and highlight that risk for problem gambling is also an important determinant of constructs associated with loss of control during gaming.

OTHER FINDINGS

This section presents others findings which may shed light on the attitudes, cognitions or behaviours of EGM players, which could be used to indirectly inform understanding of gambler precommitment behaviour.

This includes a description of live EGM player behaviour and many other results by risk segment for problem gambling. Unless specifically noted, variables discussed in this section were <u>not</u> directly linked to players exceeding their expenditure precommitments.

This includes the following sections:

H. Other findings - *Exploring live EGM play behaviour*

The following section presents findings relating to the observation of EGM player behaviour during live play. As there is a need to move increasingly towards understanding more about live play behaviour (eg. as recommended by McDonnell-Phillips, 2005), this section attempts to shed light on how EGMs influence players.

Variables identified as directly predicting adherence to precommitment are presented and discussed in other sections of the report (Refer detailed results commencing page 66).

Data presented in this section of the report is only descriptive (ie. describes sample behaviour) and exploratory and should thus be considered indicative, rather than definitive.

However, findings have potential relevance to precommitment, given that urge to continue EGM play was strongly associated with both risk for problem gambling and play excitement (Refer sections starting pages 66 and 80).

For this reason, behaviours of risk segments are compared. This is also useful information in view of other research, which suggests that problem gamblers may react differently to the characteristics and design of EGMs, compared to non-problem gamblers (For a brief overview, refer the section - Literature review and rationale for research design on page 25).

On this basis, key findings are structured as follows:

- Characteristics of EGMs played
- Use of coins, notes and multiple credits during EGM play
- Urge to continue and excitement experienced during EGM play
- Free spins and features and use of double-up during EGM play
- Summary of findings

Characteristics of EGMs played

The following summary of live play data is <u>descriptive only</u> and presented for exploratory interest

Denominations

The actual denominations of EGMs played during the live observations are shown Table 56. This presents the machine denominations which players were observed to use during play. For this reason, it represents some potential validation evidence of play behaviour.

While the overall trend was for 1 cent (90% of players) and 2 cent machines (17% of players) to be played, problem gamblers played more EGMs which had denominations higher than 1 cent (compared to non-problem gamblers).

In this context, it should be noted that multiple denomination machines were recorded in data, given that many players played more than a single machine (hence, multiple response data is displayed in Table 56).

For this reason, Table 56 presents proportions of players in the first section of the table (implying results add to more than 100%). However, the last row presents the percent of total EGMs played of denominations greater than 1 cent.

Table 56. EGM denominations used during observations - MULTIPLE RESPONSES (N=200, December 2009)[a]

EGM denominations used during observations	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Players who played different denomination EGMs (Multiple response)					
1c	100	90	74	81	90
2c	14	16	26	15	17
5c	9	13	13	18	12
10c	0	0	0	5	0
20c	0	1	2	3	1
50c	0	3	0	2	2
$1	6	2	2	5	4
Percent of total EGMs played					
% of EGMs more than 1c denomination	22%	27%	37%	38%	28%

a. Denomination of EGMs recorded by observer (Base: All EGM players)

*Maximum
EGM prize*

The mean maximum prizes of EGMs played during observations is shown in Table 57.

Both moderate risk and problem gamblers tended to select EGMs that offered higher prizes. The average prize for EGMs played by problem gamblers was $4397 and the average prize of EGMs played by non-problem gamblers was $3744 (the mean for moderate risk gamblers was $8396).

This is interesting in that it may suggest the interest of moderate risk and problem gamblers in larger jackpots or may imply that high-risk segments seek out higher prize EGMs. Moderate risk gamblers being attracted to even higher prize EGMs (compared to problem gamblers) may also suggest that this segment is looking for even larger payouts.

Table 57. Mean maximum prize of EGMs played - by risk for problem gambling
(N=200, December 2009)[a]

Measure	Mean maximum prize of EGMs played ($) by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Maximum prize of EGMs played	3744.10	3323.10	8396.20	4397.90	4343.70

a. Maximum prize of EGMs recorded by observer (Base: All EGM players)

Linked jackpots

Whether EGM players played a linked jackpot machine during observations is shown in Table 58. A total of 44% of players played linked jackpot machines. Higher-risk segment gamblers played a higher proportion of linked jackpot machines (especially problem gamblers), compared to lower risk segments. A total of 55% of all EGMs played by problem gamblers were linked jackpot machines.

Table 58. Whether players played a linked jackpot EGM -
by risk for problem gambling (N=200, December 2009)[a]

Whether players played a linked jackpot EGM	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Percent of total EGMs played which were linked jackpot machines					
% of total EGMs played which were linked jackpot machines	41%	43%	45%	55%	44%

a. Whether players played linked jackpot EGMs (Base: All EGM players)

Number of EGMs played

The number of EGMs played during observational research is shown in Table 59. This is presented as unweighted data, given the interest in seeing actual numbers of EGMs played. Problem gamblers played a higher number of EGMs (mean=2.8), compared to non-problem gamblers (mean=2.2) during the observational interviews.

Table 59. Number of EGMs played during observational research - by risk for problem gambling - UNWEIGHTED (N=200, December 2009)[a]

Number of EGMs played during observational research	Mean EGMs played by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Maximum EGMs played *(minimum is 1)*	8	10	7	11	11
Total of all EGMs played	67	143	189	99	498
Mean	2.2	2.6	2.4	2.8	2.5
Median	2	1.5	2	2	2

a. Number of EGMs analysed from observational data (Base: All EGM players)

Total time played

The total time spent playing EGMs during live play is presented in Table 60. Players overall spent an average of 25 minutes playing EGMs.

Time spent on EGMs increased linearly with risk for problem gambling. While non-problem gamblers spent a mean of approximately 20 minutes on EGMs, low risk gamblers spent 22 minutes, moderate risk gamblers spent 27 minutes and problem gamblers spent 28 minutes.

It should naturally also be considered that it is quite likely that all players reduced the time they spent on play, given the involvement of an unfamiliar observer. However, relative trends highlight that higher risk gamblers spent longer on machines.

Table 60. Time spent on EGMs during observational interviews - by risk for problem gambling - UNWEIGHTED (N=200, December 2009)[a]

Measure	Time spent on EGM play (in hours: minutes: seconds: and fractions of seconds) by risk for problem gambling									
	Non-problem gamblers		Low risk gamblers		Moderate risk gamblers		Problem gamblers		Overall	
	Mean	Sum	Mean	Sum	Mean	Sum	Mean	Sum	Mean	Sum
Mean time spent per EGM played	20:25.1	12:32.5	22:59.3	27:18.7	27:01.0	07:14.6	28:02.9	49:43.3	25:05.0	36:49.1

a. Time spent on EGMs analysed from observational data (Base: All EGM players)

Type of venue

The type of venue visited by EGM players for the observation of play is shown in Table 61. Casino-based play was not included in the scope of the study.

A total of 54% of all players attended hotels. Problem and moderate risk gamblers visited more hotels (respectively 69% and 56% of players), compared to non-problem and lower risk gamblers (respectively only 37% and 48% of players).

Table 61. Type of venue visited by EGM players - by risk for problem gambling
- UNWEIGHTED (N=200, December 2009)[a]

Type of venue visited by EGM players	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Hotel (pub)	37	48	56	69	54
Club	63	52	44	31	46

a. Venue type recorded by observers (Base: All EGM players)

EGMs in venue

The approximate number of EGMs in venues visited by players was recorded following play observations. This was estimated by observers based on the approximate number of banks of machines in venues (and observers were trained about how to reliably make such estimations).

The mean EGM number by player risk segment is shown in Table 62. Each venue attended had approximately 80.8 EGMs (on average). Both problem and moderate risk gamblers played in venues with smaller numbers of EGMs.

Table 62. Average number of EGMs in venue - by risk for problem gambling - UNWEIGHTED (N=197, December 2009)[a]

Measure	Average number of EGMs in venue by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Number of EGMs in venue	83.9	102.2	67.6	72.4	80.8

a. Total EGMs in venues were recorded/estimated by observers (Base: All EGM players)

Number and type
of drinks

During observations, players were encouraged to do what they normally do, even if this included consumption of alcohol, smoking or other activities (although it was expected that observation would naturally impact players).

The alcoholic drinks consumed by players during the observation are shown in Table 63. Players consumed only 0.1 of a standard alcoholic drink on average. Higher-risk gamblers consumed on average a slightly higher number of alcoholic drinks than non-problem gamblers (although differences were marginal).

Table 63. Mean alcoholic drinks consumed during EGM play - by risk for problem gambling (N=200, December 2009)[a]

Measure	Mean alcoholic drinks consumed during EGM play (glasses of alcohol)				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Mean total wines	0	0.2	0.1	0.2	0.1
Mean total beers	0.1	0.2	0.2	0.2	0.2
Mean total spirits	0.1	0	0	0.1	0
Mean total alcohol	0.2	0.4	0.3	0.5	0.3

a. Mean glasses of alcoholic drinks recorded by observers (Base: All EGM players - including those who did not drink)

Other players
nearby

The mean number of other players around the EGM being played during the observation is in Table 64. A total of 1.8 players was around each player during play. Both problem and moderate risk gamblers situated themselves in areas where there were fewer players close by.

Table 64. Mean number of EGM players within a 2m radius of play - by risk for problem gambling (N=200, December 2009)[a]

Players around player being observed	Mean number of EGM players within a 2m radius by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Mean number of players in a 2m radius of the EGM	1.8	2.0	1.7	1.4	1.8

a. The number of EGM players around the player was recorded by observers (Base: All EGM players)

Music playing

Whether there was music playing in the background during the EGM play observation is presented in Table 65.

A total of 62% of players undertook their live play observation with music playing. While there were few differences across risk segments, moderate risk gamblers visited more venues which played music (ie. CDs, live bands or music from any other source).

Table 65. Whether music was playing in background during EGM play -
by risk for problem gambling (N=200, December 2009)[a]

Measure	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Music playing during EGM play	66	57	73	64	62

a. Whether music was playing in the background during EGM play (recorded by observers)
(Base: All EGM players)

Use of coins, notes and multiple credits during EGM play

The following summary of live play data is descriptive only and presented for exploratory interest

Coins used

As part of the study, the number of coins placed onto the EGM credit meter in a single feed (ie. onto the credit meter before play commenced) was recorded by observers. This was to explore how much players put on to the credit meter prior to drawing down (ie. spending) the money (ie. before pressing buttons to start games).

The coins placed onto the credit meter in a total feed are shown in Table 66 (Table 67 shows results for notes). While all players tended to mostly feed coins in lots of $5 before starting play (43% of players), some players tended to feed in larger amounts.

Findings showed that 9% of total coin feeds of problem gamblers were $20 or higher. This was higher than for non-problem gamblers (where 1% of total coin feeds were $20 or higher). The absence of note acceptors within South Australia (one of the participating jurisdictions) should be noted in this context.

Table 66. Coins placed onto EGM credit meter in a single feed prior to commencing EGM play - by risk for problem gambling - MULTIPLE RESPONSES (N=200, December 2009)[a]

Coins placed onto EGM credit meter in a single lot ($)	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Coins placed onto EGM credit meter (% players - multiple responses)					
1	31	31	49	34	34
2	38	39	30	34	37
3	37	24	32	24	28
4	10	16	12	36	15
5	63	34	37	53	43
6	5	2	5	13	4
7	2	2	7	14	3
8	7	1	4	10	3
9	0	0	3	0	0
10	0	17	37	10	15
11	0	2	2	0	1
12	5	1	0	0	2
13	0	0	0	3	0
14	0	0	2	0	0
15	5	6	12	4	7
17	5	0	0	0	1
18	5	0	2	0	1
20	2	9	7	7	7
29	0	0	1	0	0
30	0	0	1	10	1
33	0	0	0	3	0
37	0	0	0	3	0
50	0	0	1	0	0
200	0	0	0	4	0

Table 66. Coins placed onto EGM credit meter in a single feed prior to commencing EGM play -
by risk for problem gambling - MULTIPLE RESPONSES (N=200, December 2009)[a]

Coins placed onto EGM credit meter in a single lot ($)	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Percent of total coin feeds					
% of total coin feeds put onto the credit meter in a single batch over $20	1%	5%	2%	9%	4%

a. Coins placed on to the EGM credit meter were recorded by observers (Base: All EGM players)

Notes used

The notes placed onto the EGM credit meter in a single note feed are in Table 67. While most players fed in $20 (55% of players) or $10 amounts at a time (41% of players) prior to drawing down money, problem and moderate risk gamblers fed in larger amounts such as $50 before commencing play (respectively 25% and 27% of each segment).

In total, 32% of note feeds of moderate risk gamblers were over $20 and 16% of total note feeds of problem gamblers were over $20. In contrast, very few of the total feeds of non-problem or low risk gamblers were similar amounts (respectively, only 5% and 3%).

This may highlight that higher risk segments are more inclined to put more money on the credit meter before playing the money down.

Table 67. Notes placed onto EGM credit meter prior to commencing EGM play ($) -
by risk for problem gambling - MULTIPLE RESPONSES (N=148, December 2009)[a]

Notes placed onto EGM credit meter by players ($)	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Notes placed on EGM (% players - multiple responses)					
5	26	27	7	9	22
10	33	50	25	44	41
15	0	0	2	2	1
20	55	54	47	65	55
25	0	0	0	2	0
30	0	0	12	0	2
40	0	3	0	0	1
50	5	0	27	25	8
60	0	0	0	2	0
Percent of total note feeds					
% of total note feeds which were over $20 (in total feed)	5%	3%	32%	16%	9%

a. Notes placed on to the EGM credit meter were recorded by observers (Base: All EGM players in Qld and Victoria which have note acceptors - SA has no note acceptors so was excluded from the analysis)

Expenditure

The overall EGM coin and note expenditure during the observational study is presented in Table 68. Players spent an average of $22.50 in coins and $35.20 in notes.

It should be again considered in this context that South Australian EGMs only allow coins and have no note acceptors. Moderate risk and problem gamblers spent a higher amount in both notes and coins, compared to non-problem gamblers.

Table 68. Mean coins/notes spent by EGM players -
by risk for problem gambling (N=200, December 2009)[a]

Measure	Mean EGM expenditure in coins/notes by risk for problem gambling ($)				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Mean Coins - Dollar Value	21.10	17.40	30.70	53.40	22.50
Mean Notes - Dollar Value	30.30	29.10	45.20	58.00	35.20
Total coins/notes ($)	30.20	31.10	45.40	71.90	36.80
Total coins/notes ($) *Unweighted - actual expenditure*	29.90	33.50	48.20	85.30	48.00

a. Average total notes and coins spent by EGM players (Base: All EGM players)

Multi-credit bets

The number of multi-credit bets[1] used by EGM players during live play is shown in Table 69. Bets were recorded as tally marks by observers (although the size of the bet was not recorded, as this was too complex, given the fast-moving data recording).

In total, 45.9 multi-credit bets on average were used by EGM players. Both moderate risk and problem gamblers used a higher number of multi-credit bets, compared to lower risk segments. Problem gamblers used a mean of 115.6 multi-credit bets and moderate risk gamblers a mean of 55.3 multi-credit bets. The total number of possible opportunities for use of multi-credit bets was not recorded in the study (so proportions of total opportunities could not be assessed).

Table 69. Multiple credit bets made in total - by risk for problem gambling (N=200, December 2009)[a]

Measure	Mean multiple credit bets used by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Multiple credit bets made in total	45.5	29.8	55.3	115.6	45.9

a. Multiple credit bets were recorded as tally marks (one mark each time a multi-credit bet was placed - however, the size of the multi-credit bet was not recorded (Base: All EGM players - including those who did not use multiple credit bets)

Figure 40. Multiple credit bets made in total - by risk for problem gambling (N=200, December 2009)[a]
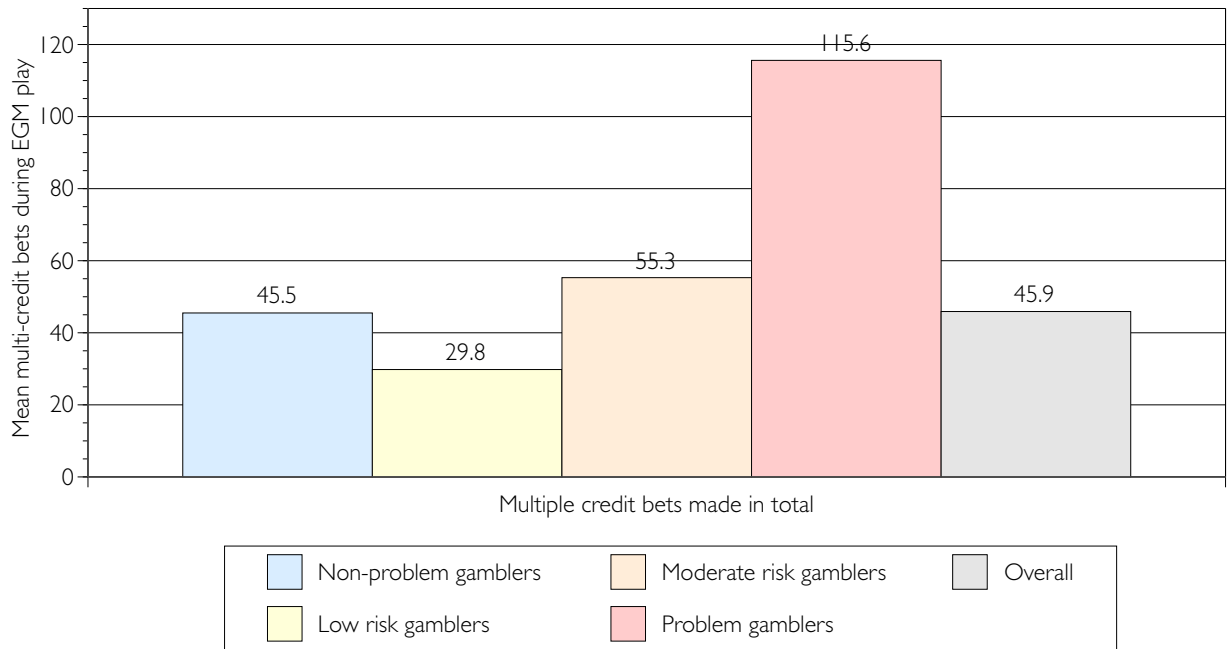
a. Multiple credit bets were recorded as tally marks (one mark each time a multi-credit bet was placed - however, the size of the multi-credit bet was not recorded (Base: All EGM players - including those who did not use multiple credit bets)

1. These involve betting more than 1 gaming machine credit per line during EGM play.

Urge to continue and excitement experienced during EGM play

As player excitement was related to the urge to continue play and players who exceeded limits were more likely to report higher urges to continue (eg. Refer page 81), statistically significant results are also identified in the following section.

Excitement and urge to continue ratings made during play

As part of the observational component to the study, players were asked to rate their urge to continue play and their play excitement approximately every five minutes live during play.

Players were briefed that ratings would be asked prior to play commencement and were familiarised with the ratings scale, so that only a number out of five had to be mentioned (ie. players were well-prepared to minimise distraction and interference with the play process).

Ratings were recorded at both an intra-play and a overall play level, implying that players who played more than a single EGM had more than one mean rating per machine. The purpose of measures was to assess the degree to which players felt stimulated by the games they were playing, along with the play dynamics.

Findings showed that problem gamblers reported significantly higher excitement ratings (mean=3.1), compared to both non-problem gamblers and the lower risk segments (each mean=2.7). Urge to continue ratings followed the same pattern, with higher urges reported by problem gamblers (mean=3.3) and moderate risk gamblers (mean=3.1).

The mean excitement and urge to continue ratings for each EGM played (up to a total of 11 EGMs are shown in Table 70. This presents an aggregated mean total for each EGM of all intra-play ratings (associated with an EGM - note that intra-play ratings are not shown).

While this section of the report is primarily <u>descriptive</u>, as urge to continue emerged as an important variable in previous analyses (Refer section - Factors which predicted exceeding limits - influence of EGM design on page 77), significance testing was undertaken.

This showed that the difference between mean urge ratings was statistically significant (comparing non-problem and problem gamblers and non-problem and moderate risk gamblers - each $p<.05$).

While small samples present challenges for statistical power, findings may suggest that problem and moderate risk gamblers are more stimulated by EGM play than other risk segments.

Table 70. Mean excitement and urge to continue ratings made for each EGM player - by risk for problem gambling (N=198, December 2009)[a]

Measures of excitement and urge to continue play	Mean (1=very low, 5=very high) rating by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Excitement - EGM 1 Mean	2.7	2.8	2.7	3.1	2.8
Excitement - EGM 2 Mean	2.5	2.2	2.5	3.2	2.4
Excitement - EGM 3 Mean	2.8	2.6	3	2.6	2.7
Excitement - EGM 4 Mean	3.2	1.8	2.5	2.3	2.4
Excitement - EGM 5 Mean	2.9	1.8	2.3	2.9	2.3
Excitement - EGM 6 Mean	2.4	2.8	2.7	2.6	2.6
Excitement - EGM 7 Mean	2.5	1.8	2.3	1.8	1.9
Excitement - EGM 8 Mean	4	2	-	2.5	2.4
Excitement - EGM 9 Mean	-	2.1	-	2	2.1
Excitement - EGM 10 Mean	-	1	-	2	1.1
Excitement - EGM 11 Mean	-	-	-	2	2
Excitement - OVERALL Mean	2.7	2.7	2.7	3.1	2.7
Urge - EGM 1 Mean	2.8	2.9	3.2	3.4	3

Measures of excitement and urge to continue play	Mean (1=very low, 5=very high) rating by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Urge - EGM 2 Mean	2.8	2.6	2.9	3.5	2.8
Urge - EGM 3 Mean	2.5	2.9	3.4	3.1	2.9
Urge - EGM 4 Mean	3.5	1.8	3.1	3.5	2.8
Urge - EGM 5 Mean	3	2.1	2.6	3.6	2.6
Urge - EGM 6 Mean	2.4	2.9	2.6	3.1	2.7
Urge - EGM 7 Mean	2.5	1.9	2	1.7	2
Urge - EGM 8 Mean	4	2	-	3.4	2.5
Urge - EGM 9 Mean	-	1.5	-	5	1.7
Urge - EGM 10 Mean	-	1	-	5	1.3
Urge - EGM 11 Mean	-	-	-	5	5
Urge to continue - OVERALL Mean	2.6	2.8	3.1	3.3	2.9

a. Question - How would you rate your excitement? How would you rate your urge to continue playing?
(Base: All EGM players - with zero used as missing value)

Mean excitement - comparisons

Mean excitement ratings for the first three EGMs played are shown in Figure 41. Only the first three EGM ratings can be reliably compared, as most players did not play more than three EGMs (implying that sample sizes after EGM three were often small).

As shown in Figure 41, excitement ratings for problem gamblers remained relatively similar for the first two EGMs played (means=3.1 and 3.2), however, dropped at EGM three.

In comparison, other risk segments seemed to show a different pattern. Not only were mean EGM-level excitement ratings lower than problem gamblers, but excitement decreased from EGM one to two, then increased at EGM three.

This 'oscillating' pattern of excitement may indicate that changing EGMs has some degree of stimulation effect. That is, while excitement is high on the first EGM, it drops on the second and then increases on the third.

As problem gamblers play a large number of EGMs (eg. Refer Table 59), it is also possible that this cycle is longer than a single EGM. For instance, looking at the data in Table 70, problem gambler excitement ratings are higher for two EGMs, then drop for two, then are higher for two and then drop for two.

While only exploratory, this may provide some emerging evidence that EGM excitement is somewhat influenced when players change machines and that peak excitement periods are longer (ie. over more than a single EGM) for higher risk players (although much additional research would naturally be required to confirm this).

Figure 41. Mean excitement ratings made for the first three EGMs played -
by risk for problem gambling (N=198, December 2009)[a]
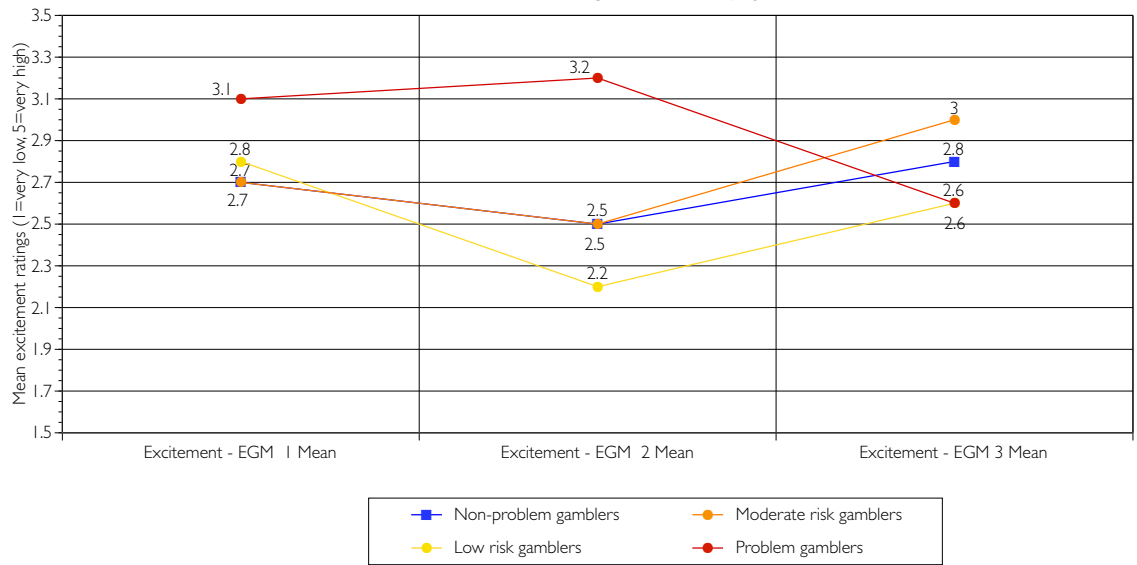
a. Question - How would you rate your excitement? (Base: All EGM players - with zero used as missing value)

Comparisons by risk segments based on urge to continue ratings (again for the first three EGMs) are presented in Figure 42. Findings again suggested that the urge to continue play for problem gamblers was high and fairly constant for the first two EGMs, while it dropped for low and moderate risk players from EGM one to two.

Non-problem gamblers also stayed constant from EGM one to two, but were lower overall for the first EGM played (compared to the very high risk segments).

By EGM three, a comparison of risk segments suggests that at-risk gamblers have greater urges to continue compared to non-problem gamblers (p<.05).

**Figure 42. Mean urge to continue ratings made for the first three EGMs played -
by risk for problem gambling (N=198, December 2009)[a]**
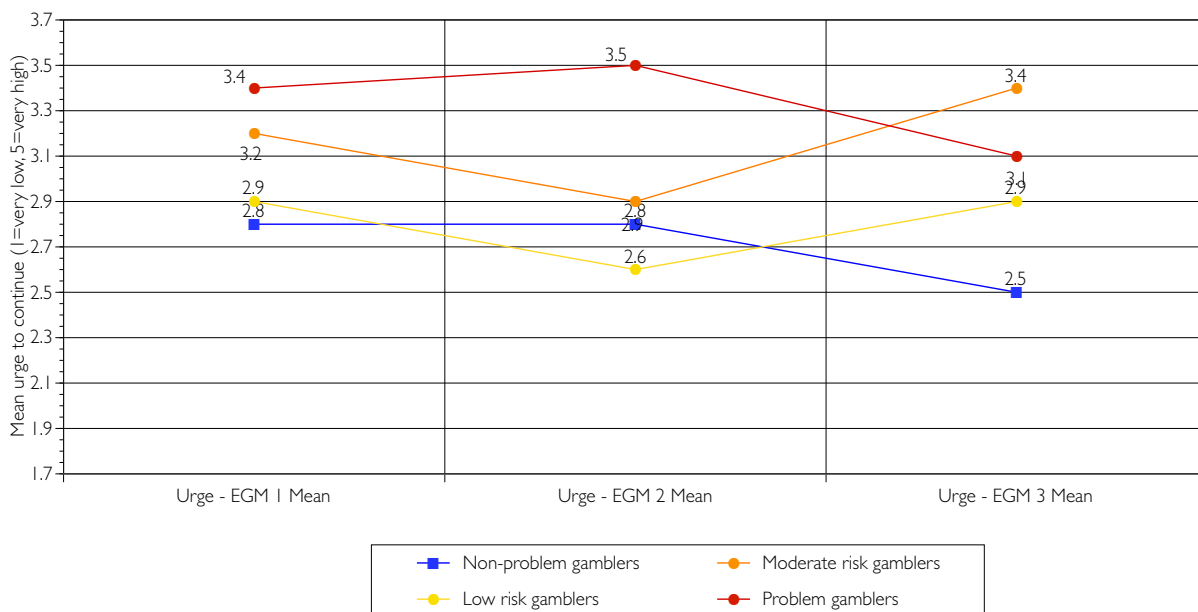
a. Question - How would you rate your urge to continue play? (Base: All EGM players - with zero used as missing value)

Free spins and features and use of double-up during EGM play

As free spins and features were related to the urge to continue play (eg. Refer page 81), statistically significant results are also identified in the following section.

Free spins

The mean level of excitement and urge to continue play due to free spins, as rated by EGM players, is presented in Table 71 and Figure 43. When players received a free spin, they were asked to rate their level of excitement and urge to continue play (as associated with the free spin), similar to the other general ratings.

Means for each subsequent free spin received are presented for exploratory interest. As shown in Figure 43, problem and moderate risk gamblers both experienced a higher mean excitement level and urge to continue play, compared to non-problem gamblers.

The difference relating to urge to continue play was also statistically significant comparing non-problem and moderate risk/problem gamblers (p<.05). This may highlight that free spins have a more stimulating effect for moderate risk and problem gamblers.

Table 71. Mean excitement/urge to continue following FREE SPINS (1=very low, 5=very high) - by risk for problem gambling (N=198, December 2009)[a]

Measures of excitement and urge to continue play	Mean excitement/urge to continue associated with free spins (1=very low, 5=very high)				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Excitement - FREE SPIN EGM 1 Mean	3.9	4.1	4	4.3	4.1
Excitement - FREE SPIN EGM 2 Mean	3.5	3.3	3.6	4.2	3.5
Excitement - FREE SPIN EGM 3 Mean	3.5	2.9	4.1	4	3.4
Excitement - FREE SPIN EGM 4, Mean	-	-	4.3	3.4	4
Excitement - FREE SPIN EGM 5 Mean	-	4	2.7	4	3.6
Excitement - FREE SPIN EGM 6 Mean	-	4	5	3.3	4
Excitement - FREE SPIN EGM 7 Mean	-	5	3.3	-	4.2
Excitement - FREE SPIN EGM 8 Mean	-	-	-	-	.
Excitement - FREE SPIN EGM 9 Mean	-	2	-	-	2
Excitement - FREE SPIN EGM 10 Mean	-	-	-	-	-
Excitement - FREE SPIN EGM 11 Mean	-	-	-	-	-
Excitement - OVERALL FREE SPIN Mean	3.9	3.8	4.1	4.2	3.9
Urge - FREE SPIN EGM 1 Mean	3.6	3.9	3.8	4.2	3.9
Urge - FREE SPIN EGM 2 Mean	2.6	3.8	3.8	4.3	3.4
Urge - FREE SPIN EGM 3 Mean	2	3	4.3	3.9	3.1
Urge - FREE SPIN EGM 4 Mean	.	.	4.3	3	3.9
Urge - FREE SPIN EGM 5 Mean	.	3.8	2.7	4	3.5
Urge - FREE SPIN EGM 6 Mean	.	4	5	3	4
Urge - FREE SPIN EGM 7 Mean	.	4	1.8	.	3
Urge - FREE SPIN EGM 8 Mean	.	3	.	.	3
Urge - FREE SPIN EGM 9 Mean	.	3	.	.	3
Urge - FREE SPIN EGM 10 Mean	.	.	.	.	.
Urge - FREE SPIN EGM 11 Mean	.	.	.	.	.
Urge - OVERALL FREE SPIN Mean	3.1	3.6	4	4.2	3.6

a. *Question - How would you rate your excitement? How would you rate your urge to continue playing? (associated with free spins received during play) (Base: All EGM players - with zero used as missing value)*

Figure 43. Mean excitement and urge to continue ratings as linked with free spins received - by risk for problem gambling (N=198, December 2009)[a]
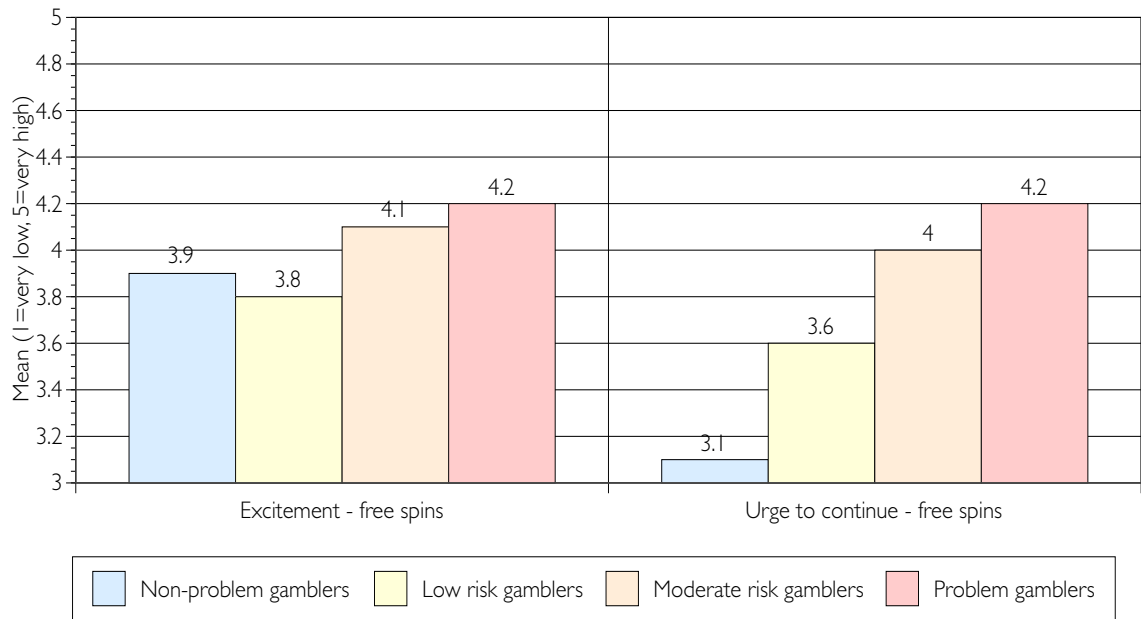
a. Question - How would you rate your excitement? How would you rate your urge to continue playing? (associated with free spins received during play) (Base: All EGM players - with zero used as missing value)

Features

Ratings for mean excitement and urge to continue gambling, as associated with features received during play, are presented in Table 72 and graphically in Figure 44.

Similar to results for free spins, problem and moderate risk gamblers showed a tendency to provide a higher excitement and urge to continue rating when a feature was received, compared to each lower risk segment (p<.05).

This may highlight that features have a larger effect on higher-risk segments, compared to non-problem and lower risk gamblers.

Table 72. Mean excitement/urge to continue following FEATURES (1=very low, 5=very high) - by risk for problem gambling (N=200, December 2009)[a]

Measures	Mean excitement/urge to continue associated with features (1=very low, 5=very high)				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Excitement - FEATURE EGM Mean	2.5	4.1	3.9	4.4	3.8
Excitement - FEATURE EGM Mean	3.5	4.6	3.6	4.1	3.9
Excitement - FEATURE EGM Mean	2.3	3.7	4.6	3.6	3.5
Excitement - FEATURE EGM Mean	-	-	4	3	3.5
Excitement - FEATURE EGM Mean	-	-	3.1	4	3.4
Excitement - FEATURE EGM Mean	-	4	4	-	4
Excitement - FEATURE EGM Mean	-	5	2.5	3	4
Excitement - FEATURE EGM Mean	5	-	-	3	4.7
Excitement - FEATURE EGM Mean	-	-	-	-	-
Excitement - FEATURE EGM Mean	-	-	-	-	-
Excitement - FEATURE EGM Mean	-	-	-	-	-
Excitement - OVERALL FEATURE Mean	3.1	4	4	4.2	3.8
Urge - FEATURE EGM Mean	3.1	4.2	3.8	4.6	4
Urge - FEATURE EGM Mean	3.3	4.6	4.1	4	3.9
Urge - FEATURE EGM Mean	2.5	3.7	4.5	3.9	3.6
Urge - FEATURE EGM Mean	-	-	4	3	3.5
Urge - FEATURE EGM Mean	-	-	3.7	4	3.8
Urge - FEATURE EGM Mean	-	4	4	-	4
Urge - FEATURE EGM Mean	-	5	2.5	3	4
Urge - FEATURE EGM Mean	5	-	-	3	4.7
Urge - FEATURE EGM Mean	-	-	-	-	-
Urge - FEATURE EGM Mean	-	-	-	-	-
Urge - FEATURE EGM Mean	-	-	-	-	-
Urge - OVERALL FEATURE Mean	3.2	4.1	4	4.2	3.9

a. Question - How would you rate your excitement? How would you rate your urge to continue playing? (associated with features received during play) (Base: All EGM players - with zero used as missing value)

Figure 44. Mean excitement and urge to continue ratings as linked with features received -
by risk for problem gambling (N=198, December 2009)[a]
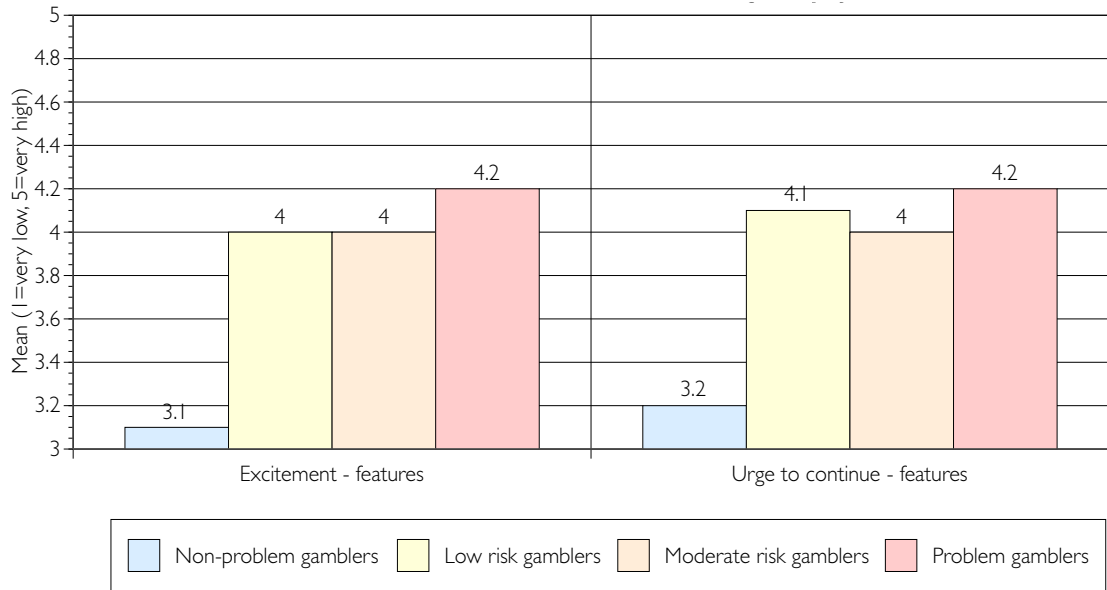
a. Question - How would you rate your excitement? How would you rate your urge to continue playing? (associated with features received during play) (Base: All EGM players - with zero used as missing value)

Number of free spins and features to feel satisfied with EGM play

The mean number of free spins and features players received by whether they were satisfied with their free spins or features is shown in Table 73.

Players who were 'fairly satisfied' received a significantly higher number of free spins and features, compared to players who were not at all satisfied ($p<.05$).

A mean of 3.0 free spins or 4.4 features per EGM play session was required to feel 'fairly satisfied' overall.

Table 73. How many free spins/features players received based on their overall satisfaction with free spins/features recorded during play (N=200, December 2009)[a]

Free spins received	Mean free spins/features received by how satisfied the player was with the free spins/features received		
	Not at all satisfied	A little satisfied	Fairly satisfied
Mean total free spins received during play	0.7	2.4	3.0
Mean total features received during play	0.6	1.6	4.4

a. Question - Using a scale where 1=not at all satisfied and 5=very satisfied, how satisfied are you with the number of free spins or features received? (Base: All EGM players)

Use of double-up

Double-up involves players making a decision about whether they would like to gamble their EGM winnings in the context of play. Typically this involves picking a card colour or suit (such as red or black) or similar games. A win may result in the doubling of monetary winnings.

While double-up did not predict the urge to continue play (Refer page 81), it is interesting to examine from a problem gambling risk perspective.

While higher-risk players who play EGMs longer would be exposed to a great number of opportunities to use double-up, exposure does not mean that opportunities will be taken.

Table 74 and Figure 45 present findings relating to use of double-up, as observed during play.

Problem gamblers (and higher-risk segments more generally) tended to use double-up more frequently on average than non-problem gamblers. All mean differences were also statistically significant ($p<.05$).

This may highlight that higher-risk segments have a pre-disposition towards risking winnings for the prospect of a greater return.

Table 74. Use of double-up (gamble) feature during EGM play - by risk for problem gambling (N=200, December 2009)[a]

Results relating to use of double-up[b]	Means by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
BASED ON ONLY PLAYERS WHO USED DOUBLE-UP					
Tally - Double up wins	2	5.6	7.2	16.6	7.3
Tally - Double up losses	1	3	3.2	8.1	3.6
Total tallies - Double up	1	3.1	7.4	12.3	4.9
Mean tallies for wins and loss use of Double-up	2.0	5.6	7.2	16.6	7.3
BASED ON ALL PLAYERS					
Tally - Double up wins	0.1	1	1.1	4	1
Tally - Double up losses	0	0.5	0.4	1.4	0.4
Total tallies - Double up	0	0.5	0.7	2.5	0.6
Mean tallies for wins and loss use of Double-up	0.1	1.0	1.1	4.0	1.0

a. Use of double-up/gamble recorded as a single tally mark each time it was used during observations (Base: All EGM players)

b. A game during EGM play which allows players to gamble their winnings (eg. choose red or black card and if correct, the winnings may be doubled).

Figure 45. Mean use of double-up during EGM play - by risk for problem gambling (N=200, December 2009)[a]
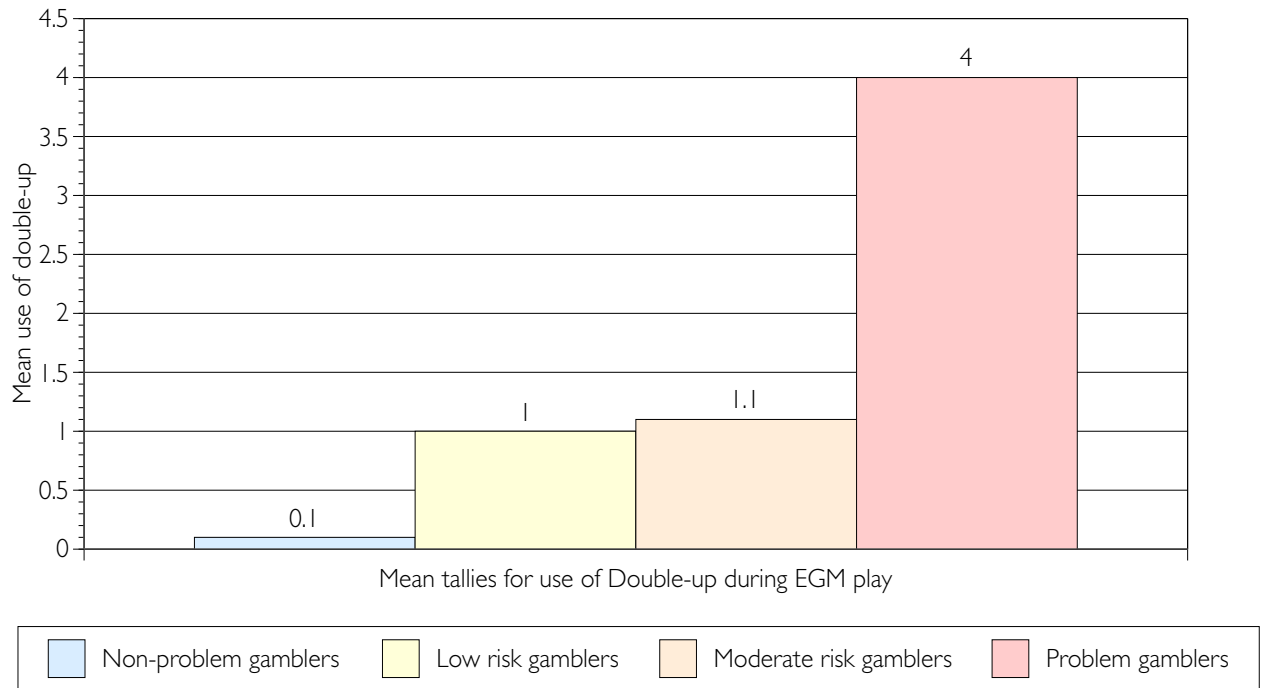
a. Question - How would you rate your excitement? How would you rate your urge to continue playing? (associated with features received during play) (Base: All EGM players - with zero used as missing value). Double-up is a game during EGM play which allows players to gamble their winnings (eg. choose red or black card and if correct, the winnings may be doubled).

Summary of findings

Exploratory analysis of live play behaviour provides some interesting insights into how the observed player sample interacted with EGM during play.

While only intended as <u>descriptive</u> and <u>exploratory</u>, the EGM players observed exhibited the following interesting play behaviours:

- most played 1c and 2c machines and problem gamblers played a greater proportion of higher-denomination machines and spent more than other players (with moderate risk gamblers spending second-most)

- the average maximum prize of EGMs played was $4343.70 and problem and moderate risk gamblers played higher-denomination machines (with respectively mean maximum prizes of $4397.90 and $8396.20)

- 44% of players played linked jackpot machines and a higher percent of machines played by moderate risk and problem gamblers were linked jackpot EGMs (respectively 45% and 55% of all EGMs played)

- players on average played for 25 minutes - problem gamblers played slightly longer, on more machines and more frequently at hotels (69% of problem gamblers versus 37% of non-problem gamblers)

- 62% of players had music playing while undertaking the observation and 73% of moderate risk gamblers attended venues with music (the highest percent of all segments)

- while players mostly used small denominations while playing, 32% of note feeds of moderate risk gamblers were $20 or higher and the same figure for problem gamblers was 16% (compared to only 5% of non-problem and 3% of low risk gamblers)

- in total, 45.9 multi-credit bets were used on average during play, with the most multi-credit bets made by problem gamblers (115.6) (followed by moderate risk gamblers - 55.3)

In addition, a number of significance tests were undertaken to further examine play behaviour. Possibly most notable was the finding suggesting that problem gamblers experienced a higher mean excitement level and higher urge to continue when free spins occurred (compared to non-problem gamblers). The same pattern of results also applied to features.

Results similarly showed that players who tended to be more satisfied with play, received a higher number of both free spins and features during play (and 3 free spins and 4.4 features were needed to feel 'fairly satisfied').

Finally, while double-up was used infrequently by all players (only about once per session), problem gamblers were also found to play a significantly higher number of double-ups, compared to non-problem gamblers. This may also be an indication that they have a pre-disposition to risking winnings, as previously suggested by Walker (2003).

I. Other findings - *What players like about gaming venues and the EGMs they play*

As loyalty points and incentives are designed to entice any patron to a venue, it is plausible that availability of such incentives may be related to urges to continue EGM play (eg. refer Table 31). Although it has been noted by authors such as Nisbet (2005) that problem gamblers may not always participate in loyalty schemes (eg. the percentage of problem gamblers in clubs has been estimated at approximately 14% of reward or loyalty card-using members in NSW and 16% in Nova Scotia Canada). On this basis, this section explores what players like about venues and the EGMs they play, including the role of venue-based factors.

Unless presented in other sections of the report, variables presented in this section were not found to be directly associated with exceeding expenditure precommitments.

Areas examined included why players prefer venues, seating preferences at venues, preferences for company during play (ie. sitting next to another player), EGM branding preferences and other general preferences for EGM characteristics.

While only exploratory, results particularly compare gamblers of different risk segments to further shed on venue and EGM characteristics which may influence player behaviour. This is also because a number of interesting trends were apparent.

Within this context, findings include:

- •• Role of venue-based factors in the decision to attend venues
- •• Where players prefer to sit at the pokies
- •• Player preferences for EGM branding
- •• Summary of findings

Role of venue-based factors in the decision to attend venues

*Why players
prefer venues*

Why EGM players preferred the venue they attended for the observational interview is presented in Table 75 and Figure 46. The importance of different aspects of venues was rated on a scale where 1 was not at all important and 5 was very important.

The most relevant overall reasons for attending venues were that venues was close to home (mean=4.0), the venue had nice decor or nice staff (each mean=3.8), the venue had good quality food (mean=3.5) or the venue had good food and drink pricing (mean=3.4).

Compared to non-problem gamblers, problem gamblers were significantly more likely to place importance on the venue having their preferred EGM brand (p<.05). In addition, problem gamblers were less likely to place importance on loyalty points and incentives and quality food, compared to non-problem gamblers (p<.05).

Placing less value on loyalty points and incentives seems a curious finding, given that such programs are typically designed for regular players and reward regular gambling expenditure.

Table 75. Importance of different factors in the decision to attend a venue for EGM play - by risk for problem gambling (N=200, December 2009)[a]

Why EGM players like to attend their preferred venue	Mean importance by risk for problem gambling (1=not at all important, 5=very important)				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Local to where you live	4.1	4	4.1	4	4
Nice surroundings/decor in the pokies room	3.7	3.8	3.8	4	3.8
Nice staff working on the gaming floor	3.7	3.8	4	3.8	3.8
Good range of poker machines	3.3	3.3	3.2	3.8	3.3
Comfortable seats at the pokies	3.3	3	3.4	3.8	3.2
Has your favourite poker machine brand	2.9	2.6	3.2	3.7	2.8
Good food or drink pricing	3.4	3.6	3.3	3.1	3.4
Good food quality	3.8	3.5	3.4	2.9	3.5
Nice smokers areas	2.1	1.9	1.8	2.8	2
New poker machine brands	2.2	2.5	2.5	2.5	2.4
Get free food/drinks while playing pokies	2.2	2	2.4	2.3	2.2
Promotions/prizes offered to poker machine players	2.4	2.7	2.4	2.2	2.5
Good loyalty points or incentives offered to pokies players	2.9	2.9	2.4	2.1	2.7

a. Apart from receiving the research incentive, if 1=not at all important and 5=very important, how important were the following factors in your decision to go to this specific venue TODAY for pokies? (Base: All EGM players)

Figure 46. Importance of different factors in the decision to attend a venue for EGM play - by risk for problem gambling (N=200, December 2009)[a]

Mean importance
(1=not at all, 5=very important)

| Non-problem gamblers | Low risk gamblers | Moderate risk gamblers | Problem gamblers | Overall |
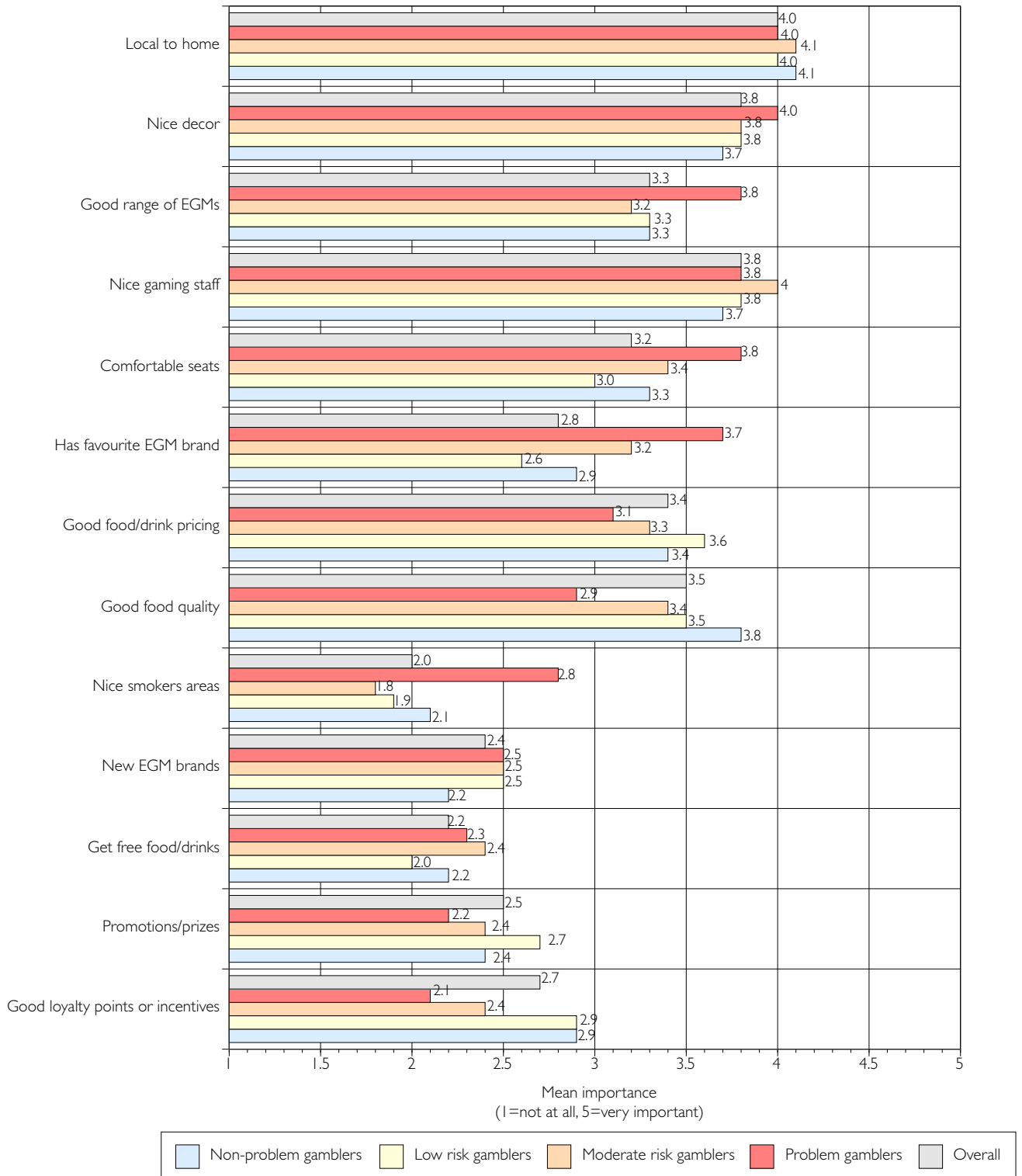
a. Apart from receiving the research incentive, if 1=not at all important and 5=very important, how important were the following factors in your decision to go to this specific venue TODAY for pokies? (Base: All EGM players)

Where players prefer to sit at the pokies

Preferred location

While venue seating preferences did not directly predict adherence to precommitments, player seating preferences at the pokies are presented for exploratory interest in Table 76.

Theoretically, the position of seating in-venue could influence precommitment in a number of ways. For instance, if a player sits around others, it may have a social facilitation effect (especially if other players are believed to be 'winning', as is suggested by Rockloff and Dyer, 2007).

In other cases, it could also be argued that sitting in certain areas (eg. next to cashiers) may lead to an increased tendency to change money for pokies play. Sitting away from others may also imply less interrupted play (implying more 'focused' play).

Findings showed that, while the most common response was that gamblers did not have a preferred location for seating in venues (35% of players), 20% of players reported sitting near their favourite EGM.

Problem gamblers reported sitting away from people in areas of the venue such as 'in the corner' (22%), at the back (12%) and away from other players (8%). It is similarly noteworthy that problem gamblers mentioned sitting around machines with the best features or jackpots (8%). The finding pertaining to a preference to sit away from others is intriguing, given that problem gamblers have been identified to gamble for social reasons (eg. Hare, 2009).

This may suggest that they are interested in social aspects of gaming, but prefer not to sit close to other players. Alternatively, findings may be due to aspects of venue layout which have not been able to be identified or measured in the current study (ie. unknown influences).

Table 76. Preferred seating location of EGM players in venues -
by risk for problem gambling - MULTIPLE RESPONSES (N=200, December 2009)[a]

Where EGM players prefer to sit at the pokies venue	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
No particular spot	37	40	24	25	35
In corner	0	2	0	22	3
Near favourite EGM	32	9	33	14	20
Back of venue	0	0	2	12	1
Close to front/front door	5	0	4	10	3
Away from people/where it is quieter	12	11	4	8	10
Machines with best features/jackpots	0	4	6	8	4
Around lower denomination EGMs	7	13	13	5	10
Near kiosk/place for changing money	5	0	0	5	2
Around other people	0	1	2	4	1
Move around a lot	9	1	4	3	4
In middle/in a middle bank of EGMs	0	1	4	3	1
Any Free EGM	1	16	15	2	10
Near higher denomination EGMs	0	4	2	0	2
Where there are no people alongside	7	5	2	0	5
Touchscreens	0	0	1	0	0
Around comfy chairs	0	0	1	0	0
EGMs that have won/pay out in past	0	0	3	0	0
Around new EGMs	0	0	2	0	0
Away from air-conditioning vents	6	1	0	0	2

a. Question - In the venue, how would you describe where you usually prefer to sit to play pokies? (Base: All EGM players)

Player preferences for company during pokies play are presented in Table 77 and Figure 47. The overall trend showed no clear preference either way (ie. 50% of players preferred company and 50% preferred no company).

Possibly confirming that problem gamblers prefer 'quieter' areas away from others, 65% preferred no-one around during play. While a non-significant result, this is noteworthy given previous trends (refer Table 76).

Table 77. EGM player preference for sitting next to another player at pokies -
by risk for problem gambling (N=200, December 2009)[a]

Player preference for people sitting next to them while playing	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Prefers to sit around other people	48	57	39	35	50
Prefers no-one around	52	43	61	65	50

a. Question - Do you prefer people sitting next to you while playing the pokies? (Base: All EGM players)

Figure 47. EGM player preference for sitting next to another player at pokies -
by risk for problem gambling (N=200, December 2009)[a]
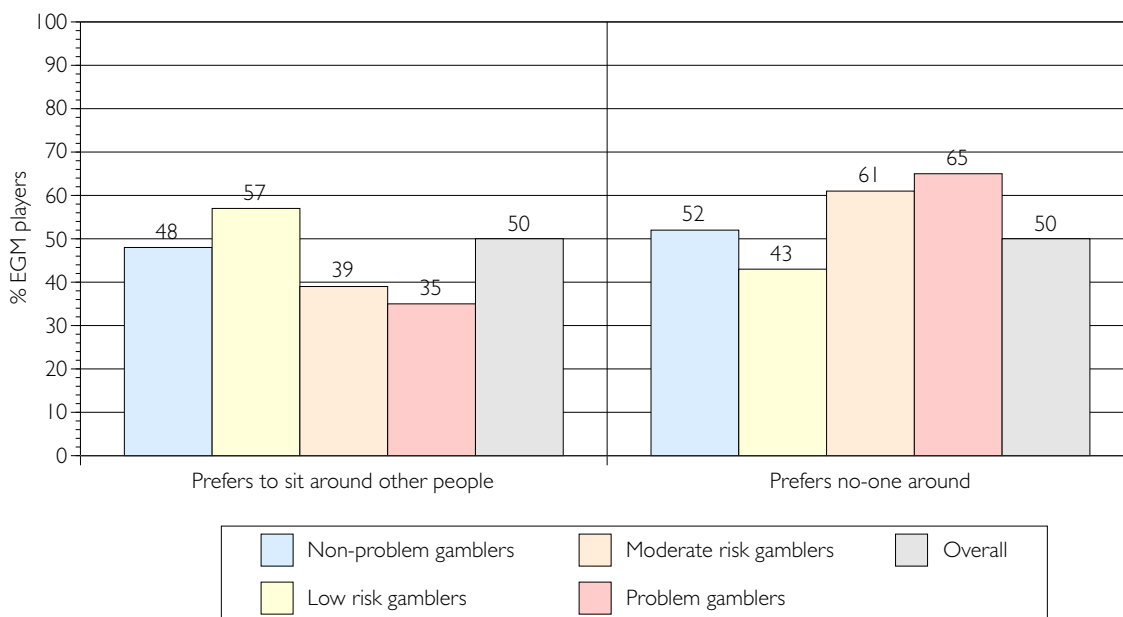
a. Question - Do you prefer people sitting next to you while playing the pokies? (Base: All EGM players)

Player preferences for EGM branding

EGM branding themes

EGM branding themes (eg. escapism, love, war etc.) were coded and examined for research interest. The purpose of analysis was to explore how the branding of EGMs may be associated with players of different gambling risk segments.

Themes associated with the favourite EGMs of players revealed some noteworthy trends. Results are in Table 78 and Figure 48.

Overall, the most popular themes for all players related to winning money (27%), Egyptian and wildlife nature topics (each 15%), followed by the themes of mystique and magic (11%).

Problem gamblers were significantly more likely to prefer mystique-themed EGMs (ie. about themes such as magic and mystical powers) (OR=18.39, p<.05), love-themed EGMs (OR=1.31, p<.001) and Asian-themed EGMs (OR=2.72, p<.001).

Table 78. Theme of player's favourite EGM - by risk for problem gambling (N=200, December 2009)[a]

Theme of favourite EGM	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Winning/gold/money/number power/luck	39	17	31	30	27
Mystique/mystical powers/magic	1	16	14	15	11
Asian	0	8	5	15	6
Egyptian/ancient civilisation/Greek mythology/medieval	9	18	19	13	15
Escapism/fictitious characters (eg. Pink Panther, Red Baron)	18	5	2	8	8
Festival and carnival theme	4	9	15	8	8
Love	0	1	2	8	1
War/combat	0	0	1	8	1
Wildlife/animals/nature	20	12	18	7	15
Sport	0	0	0	3	0
No favourite EGM	15	9	3	2	9
Travel	0	2	1	1	1
Water/beaches/paradise	3	5	4	0	4
Royalty/princess/kings	0	3	2	0	2
Gambling	5	1	1	0	2
Dancing/music	0	4	1	0	2

a. Question - Why is this your favourite machine? (Base: All EGM players) (Machine brands then coded by theme of EGM)

Figure 48. Theme of player's favourite EGM - by risk for problem gambling (N=200, December 2009)[a]

Winning/gold/money/number power/luck
- Overall: 27
- Problem gamblers: 30
- Moderate risk gamblers: 31
- Low risk gamblers: 17
- Non-problem gamblers: 39

Asian
- Overall: 6
- Problem gamblers: 15
- Moderate risk gamblers: 5
- Low risk gamblers: 8
- Non-problem gamblers: 0

Mystique/mystical powers/magic
- Overall: 11
- Problem gamblers: 15
- Moderate risk gamblers: 14
- Low risk gamblers: 16
- Non-problem gamblers: 1

Egyptian/ancient civilisation/Greek mythology/medieval
- Overall: 15
- Problem gamblers: 13
- Moderate risk gamblers: 19
- Low risk gamblers: 18
- Non-problem gamblers: 9

Escapism/fictitious characters (eg. Pink Panther, Red Baron)
- Overall: 8
- Problem gamblers: 8
- Moderate risk gamblers: 2
- Low risk gamblers: 5
- Non-problem gamblers: 18

Love
- Overall: 1
- Problem gamblers: 8
- Moderate risk gamblers: 2
- Low risk gamblers: 1
- Non-problem gamblers: 0

Festival and carinval theme
- Overall: 8
- Problem gamblers: 8
- Moderate risk gamblers: 15
- Low risk gamblers: 9
- Non-problem gamblers: 4

War/combat
- Overall: 1
- Problem gamblers: 8
- Moderate risk gamblers: 1
- Low risk gamblers: 0
- Non-problem gamblers: 0

Wildlife/animals/nature
- Overall: 15
- Problem gamblers: 7
- Moderate risk gamblers: 18
- Low risk gamblers: 12
- Non-problem gamblers: 20

Sport
- Overall: 0
- Problem gamblers: 3
- Moderate risk gamblers: 0
- Low risk gamblers: 0

No favourite EGM
- Overall: 9
- Problem gamblers: 2
- Moderate risk gamblers: 3
- Low risk gamblers: 9
- Non-problem gamblers: 15

Travel
- Overall: 1
- Problem gamblers: 1
- Moderate risk gamblers: 2
- Low risk gamblers: 0

Water/beaches/paradise
- Overall: 4
- Problem gamblers: 0
- Moderate risk gamblers: 4
- Low risk gamblers: 5
- Non-problem gamblers: 3

Dancing/music
- Overall: 2
- Problem gamblers: 0
- Moderate risk gamblers: 1
- Low risk gamblers: 4
- Non-problem gamblers: 0

Gambling
- Overall: 2
- Problem gamblers: 0
- Moderate risk gamblers: 1
- Low risk gamblers: 1
- Non-problem gamblers: 5

Royalty/princess/kings
- Overall: 2
- Problem gamblers: 0
- Moderate risk gamblers: 2
- Low risk gamblers: 3
- Non-problem gamblers: 0

% EGM players

Legend:
- Non-problem gamblers
- Low risk gamblers
- Moderate risk gamblers
- Problem gamblers
- Overall

a. Question - Why is this your favourite machine? (Base: All EGM players) (Machine brands then coded by theme of EGM)

Reason for preferring EGM

Reasons provided by players for preferring a certain EGM are in Table 79 and Figure 49. The most commonly reported reasons included feeling that the machine was 'lucky' or had been lucky in the past (40%), liking the EGM's features (14%) and liking the frequency of free spins offered by the EGM (13%).

Findings also showed that, compared to non-problem gamblers, problem gamblers (and at-risk gamblers more generally) were significantly more likely to choose their preferred EGM because they held a view that it offered good value (OR=10.33, p<.05) or because it was seen to offer good or better jackpots (OR=1.11, p<.001).

While not significant, it is worth observing that problem gamblers were reasonably more likely to mention 'features and free spins' as a reason for their preference.
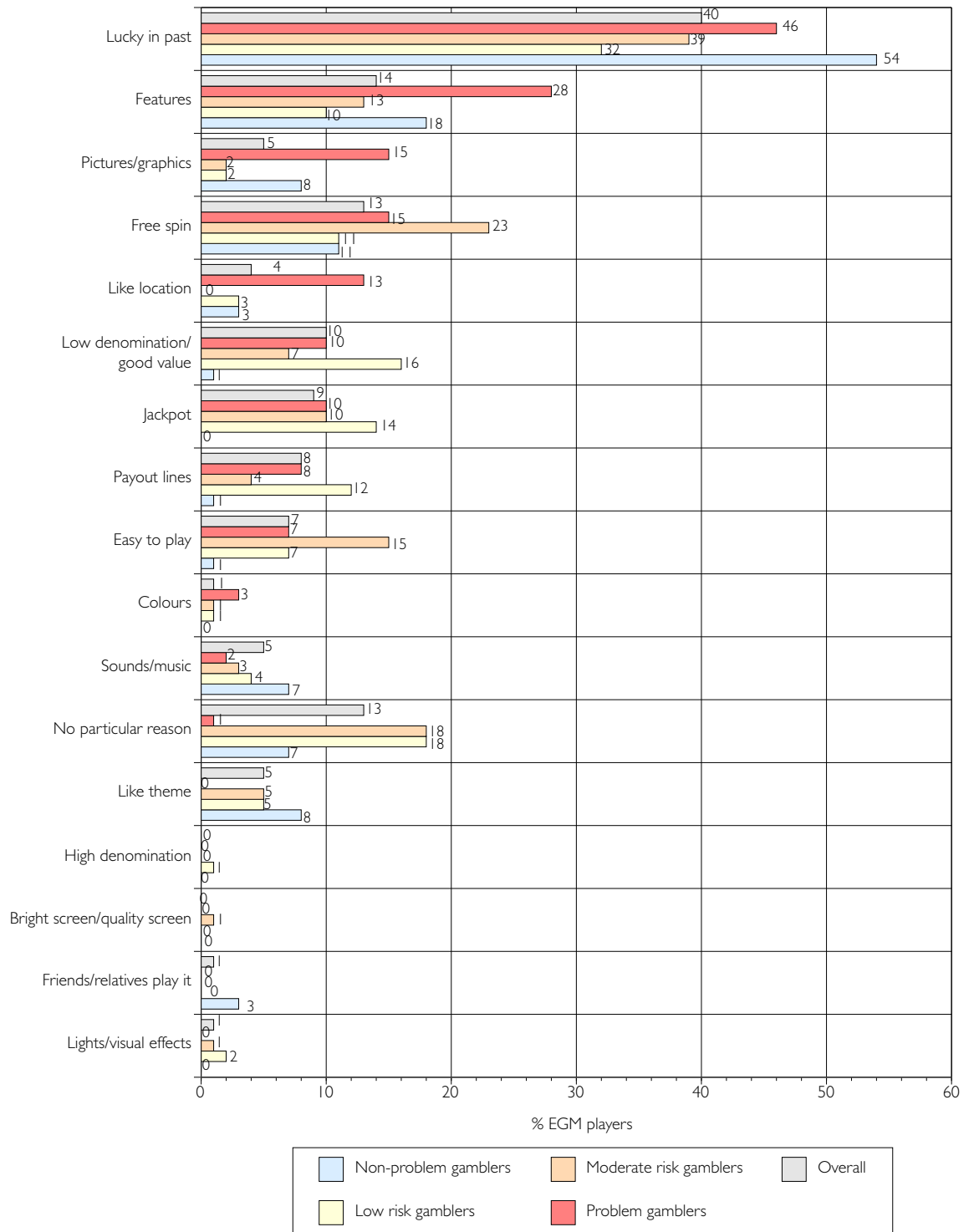
This is only noteworthy in the context of previous findings suggesting that excitement from features and free spins was related to the urge to continue play (Refer page 81) and excitement associated with features was related to adherence to precommitments (Refer page 77).

Table 79. Reason why players like their favourite EGM - by risk for problem gambling (N=168, December 2009)[a]

Reason why player likes their favourite EGM	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Lucky in past with EGM/seem to win more	54	32	39	46	40
Features	18	10	13	28	14
Free spin	11	11	23	15	13
No particular reason	7	18	18	1	13
Low denomination/good value for money	1	16	7	10	10
Jackpot	0	14	10	10	9
Payout lines (eg. easier to see, no pay lines, style of lines, allows multiple win combinations)	1	12	4	8	8
Know how to play/easy to play	1	7	15	7	7
Pictures/graphics	8	2	2	15	5
Sounds/music	7	4	3	2	5
Like theme/relate to theme	8	5	5	0	5
Like location in the venue	3	3	0	13	4
Colours	0	1	1	3	1
Lights/visual effects	0	2	1	0	1
Friends/relatives play it	3	0	0	0	1
Bright screen/quality screen	0	0	1	0	0
High denomination	0	1	0	0	0

a. Question - What is this poker machine your favourite machine? (Base: All EGM players)

Figure 49. Reason why players like their favourite EGM - by risk for problem gambling (N=168, December 2009)[a]

Reason	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Lucky in past	54	32	39	46	40
Features	18	10	13	28	14
Pictures/graphics	8	2	2	15	5
Free spin	11	11	23	15	13
Like location	3	3	0	13	4
Low denomination/good value	1	16	7	10	10
Jackpot	0	14	10	10	9
Payout lines	1	12	4	8	8
Easy to play	1	7	15	7	7
Colours	0	1	1	3	1
Sounds/music	7	4	3	2	5
No particular reason	7	18	18	1	13
Like theme	8	5	0	5	5
High denomination	1	0	0	0	0
Bright screen/quality screen	0	0	1	0	0
Friends/relatives play it	3	0	0	1	1
Lights/visual effects	0	2	1	0	1

% EGM players

a. Question - What is this poker machine your favourite machine? (Base: All EGM players)

Preferred EGM characteristics

As part of the study, players rated their most preferred EGM's characteristics on a seven point semantic differential scale. Players selected the number closest to the most relevant descriptor (ie. a number to the left if the left scale anchor applied and a number to the right if the right scale anchor applied).

Results are presented in Table 80 and Figure 50.

The EGM characteristics rated highest by players included the preferred EGM having bright colours (mean=5.1), having exciting features (mean=4.5) and having good rates of payouts or nice quality lights (each mean=4.3).

However, it was not deemed as necessary for the machine 'theme' or brand to have personal meaning to players (mean=2.8) and players did not place as high importance on the age of the machine (mean=3.9), nor the music produced (mean=4.0). Interestingly, colours were rated as more important than lights and lights as more important than music or sound.

This may suggest that the physical look of a machine through the use of colour is important in a player's choice of EGM (with music and lights playing a lesser role).

Problem gamblers were also more likely to prefer newer machines (over older machines), compared to non-problem gamblers (p<.05).

Table 80. Characteristics of favourite EGM - by risk for problem gambling (N=200, December 2009)[a]

EGM characteristic	Mean rating by risk for problem gambling (1=left descriptor, 7=right descriptor)				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Average colours - Bright colours	5.3	4.9	4.9	5.6	5.1
Average quality features - Has exciting features	5	4.2	4.4	5.1	4.5
Average rate of payouts - Good rate of payouts	4.1	4.4	4.3	4.7	4.3
Average lights than other machines - Nice quality lights than other machines	4.3	4.2	4.1	4.8	4.3
Offers standard prizes - Offers big prizes	4.3	4.1	4.2	4.8	4.2
Plays average quality sounds/music - Plays nicer quality sounds/music	3.7	4	4.3	4	4
Older design machine - New design machine	3.9	3.8	3.8	4.9	3.9
Theme doesn't have personal meaning - Theme has personal meaning	3.1	2.8	2.7	2.7	2.8

a. Question - How would you rate your favourite poker machine on the following dimensions? (Base: All EGM players)

Figure 50. Characteristics of favourite EGM - by risk for problem gambling (N=200, December 2009)[a]
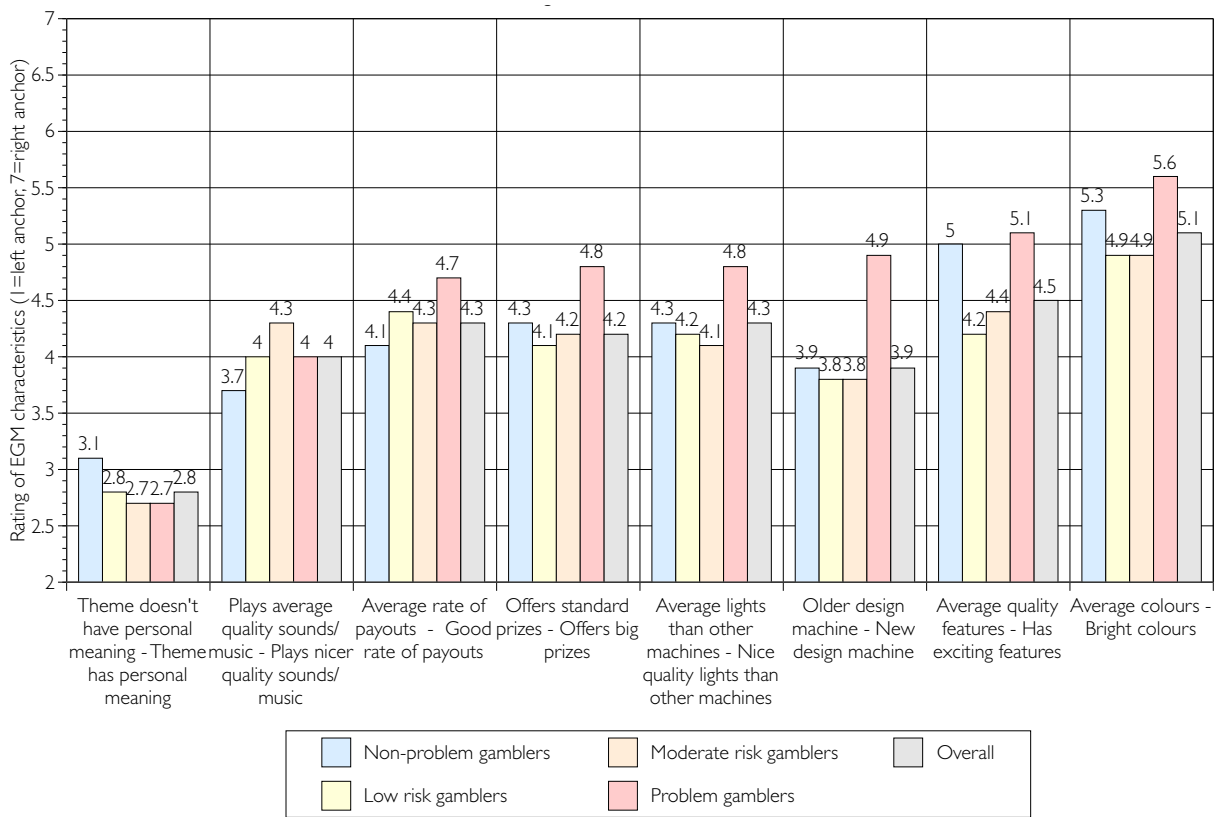
a. Question - How would you rate your favourite poker machine on the following dimensions? (Base: All EGM players)

Summary of findings

EGM players attended venues mostly because they were close to home, had nice decor or nice staff, had quality food or good food and drink pricing. Problem gamblers were also more likely to place importance on available EGM brands and less likely to place value on issues such as loyalty points/incentives and quality food (compared to non-problem gamblers).

The finding relating to loyalty point attraction also converges with findings of Nisbet (2005), which suggests that problem gamblers may have low participation in gaming loyalty schemes (eg. the percentage of problem gamblers in NSW clubs was estimated at only 14% of reward or loyalty card members).

This is an interesting trend, given that loyalty points and incentives may theoretically offer greater value to regular and high-spending players.

Seating preferences similarly revealed a number of trends. While the most common response was that gamblers did not have a preferred venue seating location (35% of players), 20% of players tended to sit near their favourite EGM.

Interestingly, problem gamblers reported sitting away from people in areas of the venue such as 'in the corner' (22%), at the back (12%) and 'away from others' (8%). This is also intriguing in view of other live play observations, where problem gamblers were observed in venue locations with fewer players (Refer Table 64 on page 124).

EGM branding preferences were also described. The most popular EGM themes related to winning money, Egyptian and wildlife nature topics (both were similarly rated) and the themes of mystique and magic. Problem gamblers were more likely to prefer mystique-, love- and Asian-themed EGMs. While reasons for preferences are unclear, the impact of some branding effect cannot be discounted.

In terms of physical presentation, EGM colours were rated as the most desirable characteristic of EGMs, followed by exciting features, good payouts and nice lights. Colours were also more important than lights and lights were more important than music or sound.

Interestingly, this does not converge with findings of a study by Spenwyn, Barrett and Griffiths (2009), who found that the effects of lights on gaming play was non-significant (although this study indirectly pointed to some role for colour, as fast tempo music under red light resulted in faster gambling).

J. Other findings - *Psychological and cognitive factors*

The final section of the analysis explored the psychological and cognitive states, which were reported by or characterised EGM players upon attendance at venues.

As several psychological factors were predictors of adherence to precommitments (eg. Refer page 66), such constructs have potential to further inform understanding of player behaviour. On this basis, the next section describes the psychological and cognitive states of the observed EGM players by risk for problem gambling.

This analysis is also important of view of emerging evidence which suggests that problem gamblers may be more likely than non-problem gamblers to exceed their expenditure precommitments (Refer page 54) and additionally present to play with negative mood (Refer page 89).

Findings are similarly of value in light of research by Nower and Blaszczynski (2010) who identified that problem gamblers were motivated to gamble to escape problems

Accordingly, key findings of this final section of the report include:

- •• Psychological and affective states characterising EGM players
- •• Player motivations to gamble on EGMs
- •• Pre-play cognitions about EGM play, promotions and jackpots

Psychological and affective states characterising EGM players

Wellbeing and recent life events

As part of the pre-observational component to the study, EGM players completed the Kessler-10 for levels of general psychological distress (based on the previous four weeks) (Kessler, Colpe, Hiripi, Mroczek, Normand, Walters and Zaslavsky, 2002[1]) and indicated if they had experienced a number of life events or daily hassles in the past 12 months (Daily hassles were based on the scale created by Holm and Holroy, 1992).

Such measures were purely exploratory and included in the study on the basis of previous research which suggests that psychological distress and life events may be linked to problem gambling behaviour (eg. Hare, 2009).

Findings showed 82% of observed EGM players reported feeling well, with 18% showing signs of some level of mental health disorder. The past year life events most commonly reported included major illnesses (43% of players), deaths and major changes to financial situations (each 41% of players), followed by changes in living and work conditions (30% of players).

While only a few variables were directly linked to precommitment (refer detailed findings on page 66), analyses showed a range of trends by risk for problem gambling.

These are summarised for reader interest in Table 81.

Overall trends suggested that problem gamblers presented to play with negative psychological states and experienced a wide range of negative life events, hassles and concerns.

Table 81. Comorbid states significantly associated with problem gambling

Measures	Problem gamblers were significantly...
Poor mental health	• less-likely to be well (OR=.14, p<.001) • more likely to be scored as having a severe mental disorder (OR=35.32, p<.01) • more likely to report concerns over inner conflicts (OR=30.81, p<.001) • more likely to report regrets about past decisions (OR=9.1, p<.01)
Low self-esteem	• more likely to have concerns over the meaning of life (OR=42.7, p<.001) • more likely to report concerns about personal appearance (OR=9.71, p<.05) • more likely to report troubling thoughts about the future (OR=10.58, p<.01)
Relationship issues	• more likely to report severe arguments with someone close (OR=4.14, p<.05) • more likely to report hassles from a boss or supervisor (OR=12.1, p<.01) or from fellow workers (OR=15.00, p<.05) • more likely to report hassles with family (OR=5.41, p<.05) and friends (OR=9.80, p<.05).
Financial stresses	• more likely to report not having enough money for housing (OR=26.94, p<.001) or recreation (OR=89.06, p<.001)
Health concerns	• more likely to report concerns about their own health (OR=4.89, p<.05) or someone else's health (OR=17.93, p<.001)

· ·
1. This scale segments subjects into different levels of psychological well-being ranging from feeling 'well' to experiencing 'severe mental disorders'.

Player motivations to gamble on EGMs

Reasons why EGM players felt motivated to play EGMs on the day of the observation are presented in Table 82 and Figure 51. The top major responses included social reasons (64% of players) and to take one's mind off life events and stresses (33%). In addition, feeling 'lucky' (25%) and wanting to win money (23%) were important.

Relative to non-problem gamblers, problem gamblers were more likely to report playing EGMs to win money to change their life (OR=4.24, p=.05), to take their mind off life events and stresses (OR=10.50, p<.01) and due to feeling bored (OR=22.99, p<.01). The finding relating to stresses also converges with findings of Nower and Blaszczynski (2010), which identified that problem gamblers may sometimes gamble for escape rather than fun.

Table 82. Main reasons for playing the pokies at venue -
by risk for problem gambling - MULTIPLE RESPONSE (N=200, December 2009)[a]

Main reason for playing the pokies	% EGM players by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
Takes your mind off other life events or stresses	18	31	44	70	33
Social reasons - like being around other people	68	70	47	47	64
Just desired to win money to change my life	16	12	24	43	18
Wanted to win money to buy something	16	23	25	38	23
Felt lucky or that I was going to win	34	16	30	37	25
Felt bored	2	11	28	36	13
Felt lonely or isolated	0	5	5	13	5
Needed money for bills and expenses	1	12	1	3	7
Habit	3	5	1	3	4
For the excitement	0	0	0	3	0
Entertainment	18	0	11	1	7
Membership draws and prizes	0	2	0	0	1
To play after/before meal, lunch or drinks	7	4	4	0	4

a. Question - Apart from the research incentive, what are the main reasons you are playing pokies today? (Base: All EGM players)

Figure 51. Main reasons for playing the pokies at venue -
by risk for problem gambling - MULTIPLE RESPONSE (N=200, December 2009)[a]
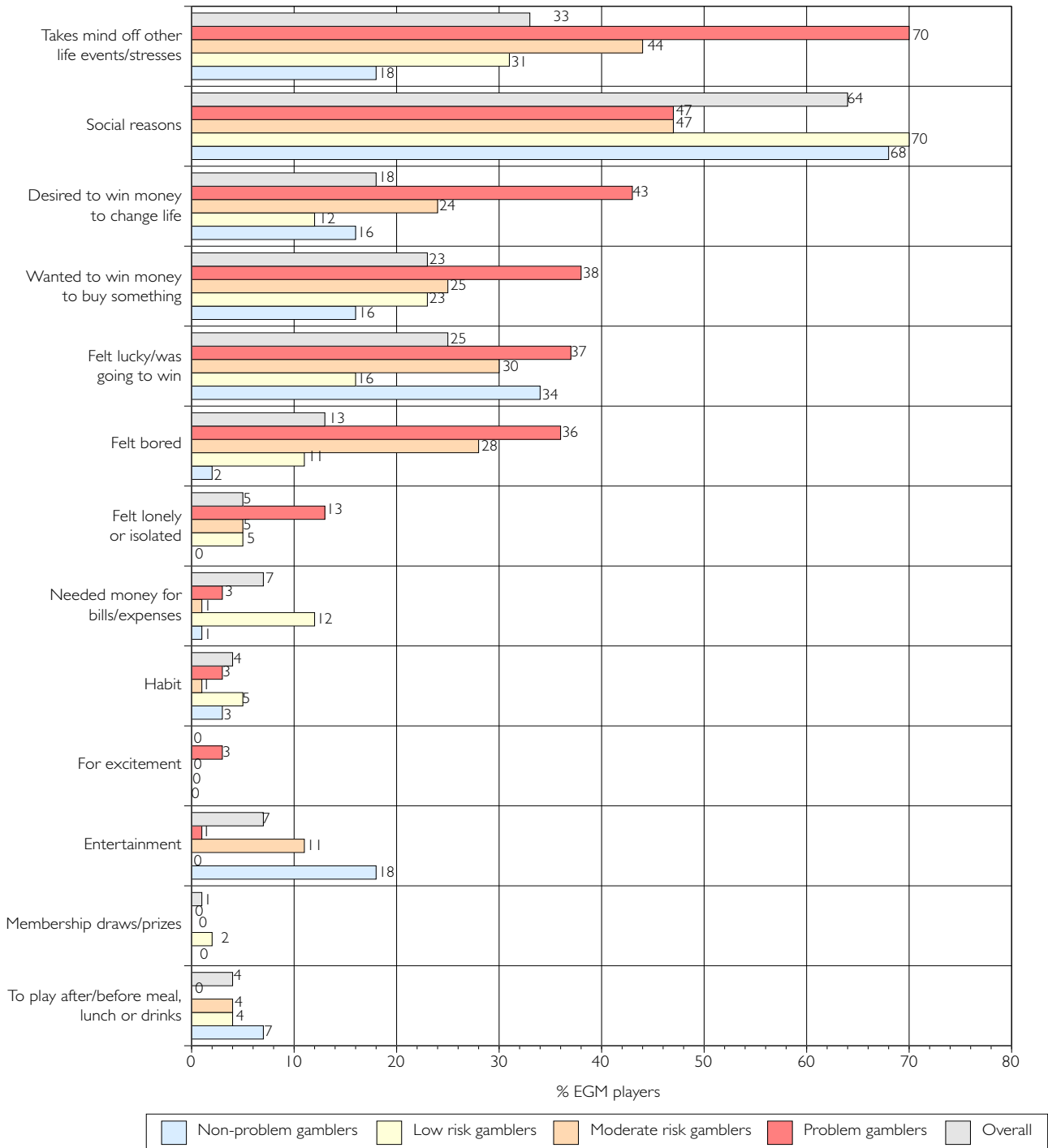
a. Question - Apart from the research incentive, what are the main reasons you are playing pokies today? (Base: All EGM players)

Pre-play cognitions about EGM play, promotions and jackpots

Thoughts about EGM play

Prior to observations, players were asked to indicate how frequently they had been thinking about a number of aspects of play (ie. prior to arrival at the pokies). This was to explore pre-play cognitions. As some variables significantly predicted play excitement (refer Table 32 for an overview), further exploratory analysis was undertaken to examine how cognitions varied by risk for problem gambling.

Findings are shown in Table 83 and Figure 52.

While 'dreaming about winning' moderately characterised players generally, problem gamblers were more likely to think about certain aspects of play in the lead up to venue attendance, compared to non-problem gamblers.
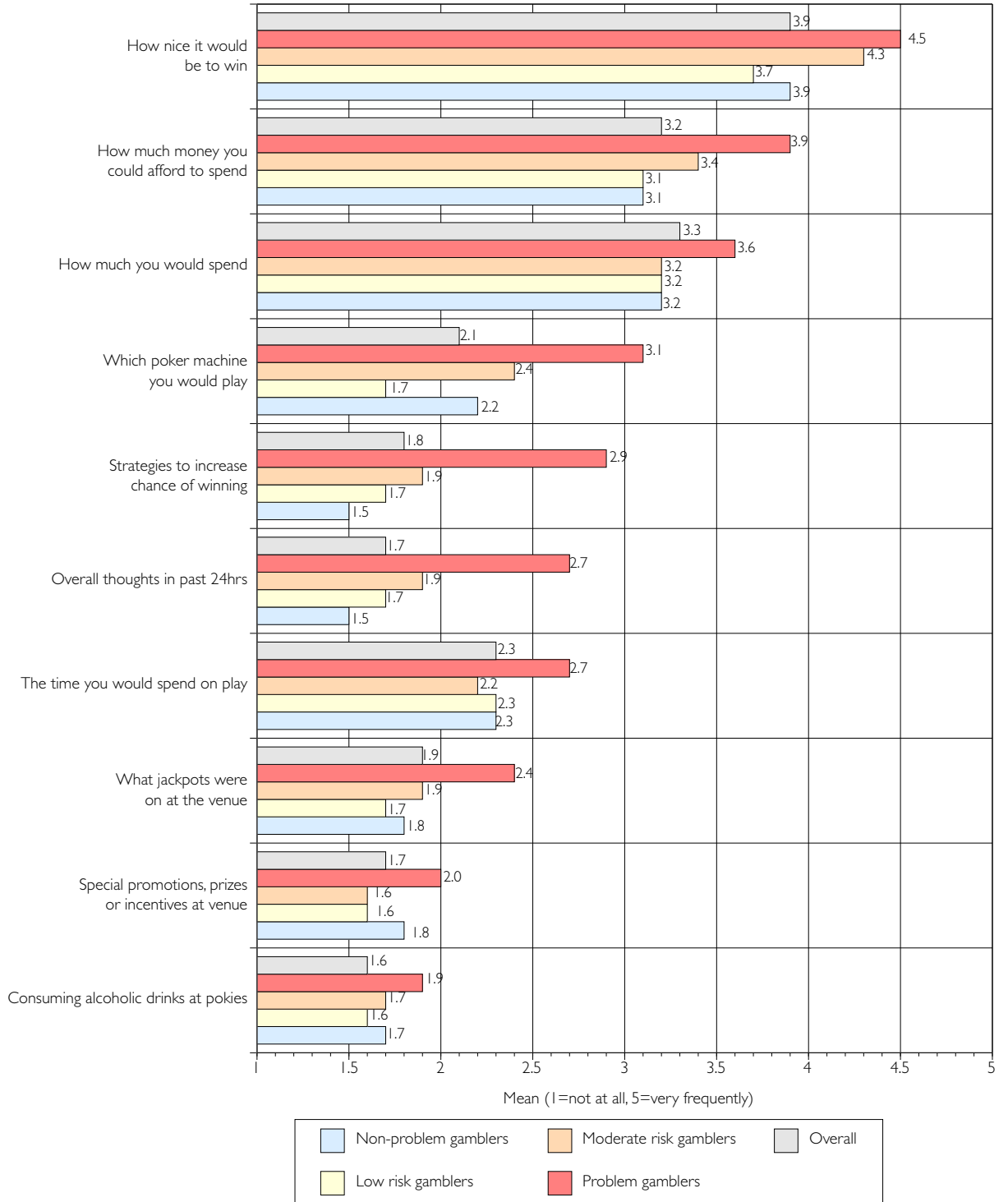
This included being more likely to think about which EGM they would play (p<.05) and the 'strategies' they would use to increase their chance of winning (p<.05). This also converges with findings of authors such as Xian et. al (2008), which clearly identify cognitive distortions as characterising the mind-set of problem gamblers.

Table 83. Player thinking about EGM play prior to arrival at the venue - by risk for problem gambling (N=200, December 2009)[a]

Aspects of EGM play which may be considered prior to arrival at the venue	Mean frequency of thought (1=not at all, 5=very frequently) by risk for problem gambling				
	Non-problem gamblers	Low risk gamblers	Moderate risk gamblers	Problem gamblers	Overall
How nice it would be for you to win at the pokies today	3.9	3.7	4.3	4.5	3.9
How much money you could afford to spend on pokies	3.1	3.1	3.4	3.9	3.2
How much you would spend on poker machine play	3.2	3.2	3.2	3.6	3.3
Which poker machine you would play	2.2	1.7	2.4	3.1	2.1
The strategies you were going to use to increase your chance of winning at the pokies	1.5	1.7	1.9	2.9	1.8
The time you would spend on poker machine play	2.3	2.3	2.2	2.7	2.3
What poker machine jackpots were on at the venue	1.8	1.7	1.9	2.4	1.9
What other special promotions prizes or incentives were being offered at the venue	1.8	1.6	1.6	2	1.7
Consuming alcoholic drinks at the pokies today	1.7	1.6	1.7	1.9	1.6
Unweighted means of above items	2.4	2.3	2.5	3.0	2.4
If at all, how often in the past 24 hrs did you think about poker machine play	1.5	1.7	1.9	2.7	1.7

a. Question - If 1=not at all and 5=very frequently, to what degree did you think about the following at any point before arriving at the pokies today? (Base: All EGM players)

Figure 52. Player thinking about EGM play prior to arrival at the venue -
by risk for problem gambling (N=200, December 2009)[a]

Mean (1=not at all, 5=very frequently)

Non-problem gamblers   Moderate risk gamblers   Overall
Low risk gamblers   Problem gamblers

a. Question - If 1=not at all and 5=very frequently, to what degree did you think about the following at any point before arriving at the pokies today? (Base: All EGM players)

Summary of findings

Findings revealed a number of important insights about the psychological and cognitive states of EGM players. While most players were well (82%), nearly one in five (18%) showed some signs of mental health disorder. Findings similarly suggested that problem gamblers may experience negative psychological states and a range of negative life events, hassles and concerns.

While most players attended venues for social reasons (64%), around one third (33%) attended to take their mind of a life event or stress (33%) and approximately one in four (25%) felt 'lucky' or wanted to win money (23%).

Problem gamblers were also more likely to play EGMs for reasons of some concern - including to win money to change their life, to alleviate stresses, or due to feeling 'bored'.

Cognitive states of players revealed several trends of interest. While players most commonly had thoughts about how 'nice' it would be to win prior to venue attendance, the next most common thought related to how much to spend and how much they could afford. This is encouraging in that it shows that some players consider spending affordability prior to venue attendance.

Relative to non-problem gamblers, however, problem gamblers were more likely to think about which EGM they would play and the 'strategies' they would use to increase their chance of winning. This may thus indicate the presence of cognitive distortions, as previously suggested in other research (Xian, Kamini, Phillips, Scherrer, Volberg and Eisen, 2008).

APPENDIX

The appendix contains sample demographics and the study research instruments. This includes the protocol used during cognitive interviewing, along with the observational shadowing instrument used during live EGM play.

Demographic profile of study participants by jurisdiction

Overview   Findings showed no significant differences in the demographics of players exceeding spending precommitments versus those not exceeding spending precommitments in the study. However, the following demographic data is presented for sample description purposes.

Age and gender   The age and gender profile of participants in the study is shown in Table 84.

Table 84. Gender and age profile of sample by state and by risk for problem gambling (N=200, December 2009)[a]

Risk for problem gambling	Age group	% of EGM players by Australian state					
		VIC (N=70)		QLD (N=70)		SA (N=60)	
		Male	Female	Male	Female	Male	Female
Non-problem and Low risk gamblers	Younger (18-34yrs)	38	18	9	12	0	25
	Middle age (35yrs-49yrs)	13	24	18	35	13	38
	Older age (50yrs and older)	50	59	73	54	88	38
Moderate risk gamblers	Younger (18-34yrs)	8	6	43	8	0	11
	Middle age (35yrs-49yrs)	31	22	29	23	22	50
	Older age (50yrs and older)	62	72	29	69	78	39
Problem gamblers	Younger (18-34yrs)	33	25	40	38	0	17
	Middle age (35yrs-49yrs)	17	38	60	38	0	33
	Older age (50yrs and older)	50	38	0	25	100	50

a. Question - What is your date of birth? Gender recorded (Base: All EGM players)

Highest completed education level   The highest level of completed education of study participants is shown in Table 85.

Table 85. Highest completed education level by state (N=200, December 2009)[a]

What is your highest level of completed education?	% EGM players by Australian state		
	VIC (N=70)	QLD (N=70)	SA (N=60)
No schooling	0	0	0
Completed year 8 or less	0	3	5
Completed year 10	14	29	23
Completed year 12	26	20	23
Advanced diploma/diploma/certificate/ trade qualification	36	30	37
Bachelors degree	16	13	8
Post-graduate degree	9	6	3

a. Question - What is your highest completed level of education? (Base: All EGM players)

Household type   The type of household of study participants is shown in Table 86.

Table 86. Household type by state (N=200, December 2009)[a]

Household type	% EGM players by Australian state		
	VIC (N=70)	QLD (N=70)	SA (N=60)
Couple with child or children	33	34	25
One parent family	7	4	12
Other family	7	6	2
Couple without children	29	33	35
Group household (not related)	1	6	3
Lone person	17	10	17
Other Household	6	7	7

a. Question - Does your household consist of? (Base: All EGM players)

*Languages other
than English*   Languages other than English spoken at home by study participants are shown in Table 87.

Table 87. Languages other than English spoken at home (N=200, December 2009)[a]

Languages spoken at home other than English	% EGM players by Australian state		
	VIC (N=70)	QLD (N=70)	SA (N=60)
Speaks only English	91	96	93
Other languages spoken	9	4	7

a. Question - Do you speak any languages other than English at home? (Base: All EGM players)

Play frequency   The frequency of EGM play of study participants by state is shown in Table 88.

Table 88. Frequency of EGM play by state (N=200, December 2009)[a]

Frequency of EGM play in past 12 months	% EGM players by state		
	VIC (N=70)	QLD (N=70)	SA (N=60)
Once a week or more	37	43	33
Once a fortnight	31	21	22
Once a month	31	36	45
Once every few months	0	0	0
Less frequently	0	0	0

a. Question - How often have you played poker machines in the past 12 months on average? (Base: All EGM players)

Employment status The employment status of study participants is shown in Table 89.

Table 89. Employment status by state (N=200, December 2009)[a]

Employment status	% EGM players by state		
	VIC (N=70)	QLD (N=70)	SA (N=60)
Employed, work full-time	36	34	23
Employed, work part-time	21	20	25
Employed - away from work	4	1	2
Unemployed, looking for full time work	0	9	2
Unemployed, looking for part time work	7	3	12
Not in labour force/not looking for work	31	33	37

a. Question - Do you currently work or are you looking for work? Full or part-time?
(Base: All EGM players)

Personal income The approximate annual personal income of study participants is shown in Table 90.

Table 90. Annual personal income by state (N=200, December 2009)[a]

Approximate annual personal income	% EGM players by state		
	VIC (N=70)	QLD (N=70)	SA (N=60)
Negative income	1	4	0
Nil income	4	4	2
$1-$149 ($1-$7,799)	9	4	2
$150-$249 ($7,800-$12,999)	6	12	18
$250-$399 ($13,000-$20,799)	24	16	25
$400-$599 ($20,800-$31,199)	11	12	13
$600-$799 ($31,200-$41,599)	10	10	15
$800-$999 ($41,600-$51,999)	13	10	5
$1,000-$1,299 ($52,000-$67,599)	10	13	13
$1,300-$1,599 ($67,600-$83,199)	6	10	3
$1,600-$1,999 ($83,200-$103,999)	3	1	2
$2,000 or more ($104,000 or more)	3	3	2

a. Question - What is your approximate total personal income? (Weekly or annual personal income -
before tax - including any government payments) (Base: All EGM players)

Risk for problem gambling by jurisdiction

The sample by risk for problem gambling and jurisdiction is presented in Table 91.

Table 91. Number of respondents by jurisdiction and risk segment (N=200, December 2009)[a]

Risk for problem gambling	VIC (N=70)	QLD (N=70)	SA (N=60)	Total sample
Non-problem gamblers	6	16	8	30
Low risk gamblers	19	21	16	56
Moderate risk gamblers	31	20	27	78
Problem gamblers	14	13	9	36

a. State and risk for problem gambling recorded (Base: All EGM players)

Protocol used for conduct of cognitive interviews

Overview   This protocol was used to guide cognitive interviewing in the exploratory qualitative stages of the project exploring factors affecting gambler adherence to precommitments. It was purposely broad to allow exploration of issues in a semi-structured manner.

Findings of cognitive interviews were particularly used to develop the instrument for quantitative and qualitative measurement during the observational stage of the project (ie. N=200 interviews). A total of 45 exploratory cognitive interviews were undertaken to develop the study instruments and to refine study questions.

Player briefing
- •• Brief player about cognitive interviewing process
- •• Emphasise importance of play 'as is' (trying to ignore the observer)
- •• Emphasise need to answer questions, but not to hold conversation with observer unless requested to answer certain questions

PRE-PLAY FACTORS

Venue characteristics
- •• What triggers you to play pokies when you do? (is it planned or more spontaneous?)
- •• Apart from the voucher, what influenced your decision to play pokies today?
- •• Why do you like this venue? What attracts you to the venue?
- •• Explore views about how important venue features are such as:
  - • being close to home
  - • quality of facilities
  - • perceived features of venue
  - • other factors? (etc.)

Pre-play mood
- •• How would you describe how you are currently feeling prior to play? (describe any influences in past week and explore mental state)
- •• Why do you like to play pokies? What makes it enjoyable?
- •• How often do you play? With others or alone? How long are your sessions?
- •• How motivated do you feel today to play pokies?

Venue atmosphere
- •• How would you describe the atmosphere in the venue today?
- •• Do you prefer to play when others are around? Or when it's quieter? Why?

EGM floor
- •• Where do you like to play the pokies? In which area of the venue? Why? (probe reasons)
- •• Do you like or dislike it when there's someone playing in the seat right next to you? How about when someone is a few seats away?
- •• If you were designing a pokies venue, where would you locate the EGMs? Why? (eg. separate room, in main area etc.) What would the pokies room look like?

Choice of EGM
- •• What is your favourite poker machine game? Why?
- •• Looking at the pokies game, what part of the display and game make play most attractive?
- •• Can you provide an example of a machine that you don't like? Why do you say this? (Record any notable EGM design features)
- •• How attractive are features on the machine you're playing on? (describe)
- •• How would you rate the sounds? How about the lights? Colours? Is there anything else that makes play enjoyable?

INTRA-PLAY FACTORS

EGM play

•• Now I'd like you to just play as you normally would and I'd like you to verbalise how you're feeling when you play...

Prompts at
critical events

•• *Credits/lines* - Why do you play with the lines you do? Why did you choose the credits you did? Why are your varying the lines and credits/keeping them the same?

•• *Money brought to venue* - How much money did you bring to the venue today? Did you bring your EFTPOS or credit card? Why or why not?

•• *If ATM accessed for cash* - Why did you access cash at the ATM? How much did you take out and why? Is the cash to cover just gaming or other items?

•• *Observe use of notes and note acceptor* - You have just put a $X note/coins into the poker machine. What influenced your choice of notes?

•• *Observe use of alcohol/caffeine/cigarettes* - How often do you drink when playing? How much do you usually consume? How often do you smoke? When during gaming do you usually do these things? Why?

•• *Observe play* - Now I'd like you to play the pokies as you prefer and tell me your thoughts for each step along the way?

Take note at all EGM 'events' - such as:

Changing bets/lines played
Wins (take note of size)
Losses (take note of size)
Features (explore)
Free spins (explore)
Double-up/gamble (explore)
Special lights/sounds
Putting more money into EGM
Use of certain note combinations
Going to the ATM/accessing money via EFTPOS
Taking a break
Did they change EGMs? (Why?)
Do you plan to use any 'strategies' for your gaming today? (describe) Why?

Ask questions following the events such as:
Why are you are doing that?
How do you feel after that?
Why did you do that?
What did you like or dislike about that?
How motivated do you feel to continue play?
How motivated do you feel to spend more or less money? Why?
How motivated do you feel to spend more or less time gaming? Why?

POST-PLAY FACTORS

Following play

(To avoid influencing adherence to limits, these follow after play)

- How much money did you spend overall? (track and note whether player was correct in their assessment)
- How much money did you want to spend prior to starting? How much did you actually spend?
- Did you feel compelled to continue to play at any point during gaming more than others overall? Why and when? What had the greatest effect on your overall play?
- What factors if any led you to spend more than you wanted to? What factors led you to spend more than your limit?
- How satisfied were you with the volume of features and free spins you received during play? How about the quality of lights/sounds/music from the EGM?
- How many features and free spins do you need to feel happy with your pokies play? How many did you get? (try to keep track) How many did you want?
- Will today's gaming play influence your spending later in the week/month?

Gambling budget or limit

Today you've just spent $XX on the pokies. May I ask:

- How often do you set a limit when you played? Why or why not?
- *(If limit)* How do you work out your limit? What factors influenced your decision to set that precise limit?
- (If says *'it just felt right'*) Now I'm going to say progressively higher amounts that you could potentially spend on gambling and I'd like you to tell me the first thing that comes to mind and how you feel when I say each figure? (eg. increase limit by $5 increments)
- Were there any factors that influenced your adherence to this limit or budget today?
- If you had to categorise your household spending, how would you describe where you spend your money? (what are the main categories)
- Where does gaming machine play fit into this budgeting process?
- Were there any expenses in the past week that influenced your spending today? What sort of things/expenditure items?
- Will your spending be affected in the following weeks as a result of today's play?

Conclusion

- Conclude the interview and provide the reward shopping voucher to the play
- Thank the player for their time and input

. . . .

Observational methodology and live play data collection instrument

1. Which of the following leisure activities do you currently play or are involved in?

1. Watching sports (eg. on TV or live)
2. Playing sports (eg. competitions or for leisure)
3. Visiting gyms (for exercise)
4. Playing poker machines
5. Recreational fishing
6. None of the above

> *IF NOT POKIES - 'Sorry - you do not qualify for the current study. But thanks anyway for your time'*

2. [If poker machines] How often have you played poker machines in the past 12 months on average?

1. Once a week or more
2. Once a fortnight
3. Once a month
4. Once every few months
5. Less frequently

3. [If once a month or greater] In the next month, how many times are you likely to go to play poker machines at a local club or pub/hotel? _____

> *IF 0 - 'Sorry - you do not qualify for the current study. But thanks anyway for your time'*

4. Which type of venue will you visit to play the pokies?

1. Pub/hotel
2. Club

5. How often do you set yourself a pokies spent limit when you play the pokies (ie. an amount you try not to spend over)?

How often do you set yourself a pokies spent limit when you play the pokies - that is, a spend amount which you try not to spend over?

1. Never
2. Rarely
3. Sometimes
4. Often
5. Always

6. [if Yes] In relation to just your pokies play...

A. What is your typical daily pokies spend limit - that is, the amount you prefer not to spend over (even if you don't keep to it) $_____

B. How long do you typically spend playing the pokies in minutes on a typical daily visit? _____ minutes

We are conducting a study to explore how people play electronic gaming machines (pokies). The study will explore ways to minimise the potential harms of gambling. A researcher is accompanying poker machine players to their preferred venue to observe how people play. Players will be asked to answer questions before, during and after their play.

These sessions can be during the day, after hours or anytime as preferred. Would you be interested in having a researcher accompany you the next time you play at your preferred pokies venue for a free $50 shopping voucher?

The voucher can be spent at many stores and your input into this important study will contribute to minimising the harms of gambling across Australia.

This study is NOT undertaken by a company involved in promoting gambling. Rather, this is an important social research project. You spend your own money and go to a familiar venue of your own choice at a time when you prefer.

Please confirm your interest below:

1. Yes - I'm Interested
2. No - Not interested

7. [If yes] Great. May we contact you to organise your involvement in this study over the phone in the next days?

A. Please provide your phone number we can call to organise a time (mobiles best) _____
B. Please provide your name _____
C. Please suggest a suitable time to call (mobile preferable) _____
D. What is the name of suburb at which you are most likely to play the pokies _____
E. What is the name of the venue you will be likely to play pokies _____

8. Thanks for that... We would now like to ask you a few more questions.

The next questions refer to all your gambling in the past 12mths...

Canadian Problem Gambling Severity Index (9 item measure with Australian nationally used scale anchors)

CPGI_1 - Thinking about the past 12 months, how often have you bet more than you could really afford to lose? Would you say (PROMPT):
0. Never
1. Rarely
1. Sometimes
2. Often
3. Always

CPGI_2 - Thinking about the past 12 months, how often have you needed to gamble with larger amounts of money to get the same feeling of excitement? (PROMPT): WOULD YOU SAY
0. Never
1. Rarely
1. Sometimes
2. Often
3. Always

CPGI_3 - Thinking about the past 12 months, WHEN YOU GAMBLED, how often have you gone back another day to try to win back the money you lost? (PROMPT): WOULD YOU SAY
0. Never
1. Rarely
1. Sometimes
2. Often
3. Always

CPGI_4 - Thinking about the past 12 months, how often have you borrowed money or sold anything to get money to gamble? (PROMPT) WOULD YOU SAY
0. Never
1. Rarely
1. Sometimes
2. Often
3. Always

CPGI_5 - Thinking about the past 12 months, how often have you felt that you might have a problem with gambling? (PROMPT) WOULD YOU SAY
0. Never
1. Rarely
1. Sometimes
2. Often
3. Always

CPGI_6 - Thinking about the past 12 months, how often have people criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true? (PROMPT) WOULD YOU SAY
0. Never
1. Rarely
1. Sometimes
2. Often
3. Always

CPGI_7 - Thinking about the past 12 months, how often have you felt guilty about the way you gamble, or what happens when you gamble? (PROMPT) WOULD YOU SAY
0. Never
1. Rarely
1. Sometimes
2. Often
3. Always

CPGI_8 - Thinking about the past 12 months, how often has your gambling caused you any health problems, including stress or anxiety? (PROMPT) WOULD YOU SAY
0. Never
1. Rarely
1. Sometimes
2. Often
3. Always

CPGI_9 - Thinking about the past 12 months, how often has your gambling caused any financial problems for you or your household? (PROMPT) WOULD YOU SAY
0. Never
1. Rarely
1. Sometimes
2. Often
3. Always

Thank you for that.

9 CPGSI items summed using codes displayed:
- 0. Never
- 1. Rarely
- 1. Sometimes
- 2. Often
- 3. Always

4 groups to be formed based on sum of 9 CPGSI items:
- Non-problem gamblers - total score=0
- Low risk gamblers - total score=1-2
- Moderate risk gamblers - total score=3-7
- Problem gamblers - total score=8-27

9A. If you had to break down your weekly expenditure, what are the main items that you need to budget for in an average week? (display open fields).

_____ (x 10 lines - minimum of 3 without cell validation, so participants must have minimum of 3 responses)

<u>Then on the next screen, present each of the fields and ask:</u>

9B. Do you have a maximum spending budget for [prompt field] each week? (an amount you aim not to spend over - even if you don't keep to that figure)
1. Yes - I have a clear budget
2. Yes - I have some spending guidelines
3. No - no budget or spending guidelines

9C. [If 1 or 2] How often do you overspend your preferred budget for [prompt field]?
1. Never
2. Rarely
3. Sometimes
4. Often
5. Always

10. The next questions are about how you have been feeling during the past 4 weeks. During the past 4wks, about how often did you feel...?

How people feel (Kessler-10 - measurement of psychological distress)	None of time	A little of the time	Some of the time	Most of the time	All of the time
1. Tired out for no good reason	1	2	3	4	5
2. Nervous	1	2	3	4	5
3. So nervous that nothing could calm you down	1	2	3	4	5
4. Hopeless	1	2	3	4	5
5. Restless or fidgety	1	2	3	4	5
6. So restless that you could not sit still	1	2	3	4	5
7. Depressed	1	2	3	4	5
8. That everything was an effort	1	2	3	4	5
9. So sad that nothing could cheer you up	1	2	3	4	5
10. Worthless	1	2	3	4	5

Life events in past year

11. Now I'd like you to think about things that happened in your life during the past 12mths. Which of the following life events did you experience in the past 12mths?

Life events	Experienced in past 12mths	Life events	Experienced in past 12mths
1. Death of someone close to you	1. Yes 2. No	7. Retirement	1. Yes 2. No
2. Divorce	1. Yes 2. No	8. Pregnancy or new family additions	1. Yes 2. No
3. Legal difficulties	1. Yes 2. No	9. Major change to your financial situation	1. Yes 2. No
4. Major injury or illness to either yourself or someone close to you	1. Yes 2. No	10. Taking on a mortgage, loan or making a big purchase	1. Yes 2. No
5. Marriage or finding a relationship partner	1. Yes 2. No	11. Increase in the number or severity of arguments with someone you are close to	1. Yes 2. No
6. Troubles with your work, boss, or superiors	1. Yes 2. No	12. Major change in living or work conditions (eg. renovations, new job)	1. Yes 2. No

Daily Hassles in past 2 weeks

12. How much have the following daily hassles affected you in the past <u>two weeks</u>?

Daily hassles[a]	Didn't occur	Occurred, but not severe	Occurred, somewhat severe	Occurred, moderately severe	Occurred, very severe	Occurred, extremely severe
Inner concerns						
Concerns over an inner conflict	0	1	2	3	4	5
Regrets about past decisions	0	1	2	3	4	5
Concerned over meaning of life	0	1	2	3	4	5
Being lonely	0	1	2	3	4	5
Concerned over your appearance	0	1	2	3	4	5
Troubling thoughts about your future	0	1	2	3	4	5
Financial concerns						
Not enough money for basic things	0	1	2	3	4	5
Not enough money for housing	0	1	2	3	4	5
Not enough money for recreation	0	1	2	3	4	5
Concerns about owing money/debts	0	1	2	3	4	5
Time pressures						
Too many things to do	0	1	2	3	4	5
Too many responsibilities	0	1	2	3	4	5
Work hassles						
Job dissatisfaction	0	1	2	3	4	5
Hassles from boss or supervisor	0	1	2	3	4	5
Hassles from fellow workers/staff	0	1	2	3	4	5
Concerns over job security	0	1	2	3	4	5
Relationship hassles						
Problems or hassles with family	0	1	2	3	4	5
Problems or hassles with friends	0	1	2	3	4	5

Daily hassles[a]	Didn't occur	Occurred, but not severe	Occurred, somewhat severe	Occurred, moderately severe	Occurred, very severe	Occurred, extremely severe
Problems or hassles with spouse/partner	0	1	2	3	4	5
Health hassles						
Concerns about your health	0	1	2	3	4	5
Concerns about someone else's health	0	1	2	3	4	5

a. Based on Daily Hassles Scale-Revised (DHS-R) - Holm and Holroy (1992)

13. Please complete the following questions to help us ensure that we get a good cross-section of people for the study.

DEMO_1. What is your date of birth?	DEMO_2. Do you speak any languages other than English at home?	DEMO_3. What is your gender?
_____	1. Yes (which?) _____ 2. No	1. Male 2. Female
DEMO_4. What is your highest level of completed education?	**DEMO_5. Does your household consist of...**	**DEMO_6. Do you currently work or are you looking for work? Full or part-time? (record)**
1. No schooling 2. Completed year 8 or less 3. Completed year 10 4. Completed year 12 5. Advanced diploma/diploma/ certificate/ trade qualification 6. Bachelors degree 7. Post-graduate degree	1. Couple with child or children 2. One parent family 3. Other family 4. Couple without children 5. Group household (not related) 6. Lone person 7. Other Household (record) ____	1. Employed, work full-time 2. Employed, work part-time 3. Employed - away from work 4. Unemployed, looking for Full Time work 5. Unemployed, looking for Part Time work 6. Not in labour force/not looking for work
DEMO_7. What is your approximate total personal income? (weekly or annual personal income - before tax - including any government payments)	**DEMO_8. Do you currently have any debts that you are currently paying off? (MULTIPLE)**	**ADD TO END OF WEB SURVEY**
1. Negative income 2. Nil income 3. $1–$149 ($1–$7,799) 4. $150–$249 ($7,800–$12,999) 5. $250–$399 ($13,000–$20,799) 6. $400–$599 ($20,800–$31,199) 7. $600–$799 ($31,200–$41,599) 8. $800–$999 ($41,600–$51,999) 9. $1,000–$1,299 ($52,000–$67,599) 10. $1,300–$1,599 ($67,600–$83,199) 11. $1,600–$1,999 ($83,200–$103,999) 12. $2,000 or more ($104,000 or more)	1. No - have none 2. Credit cards 3. Personal loans (eg. car) 4. Pay-day lender loans 5. Home loans 6. I have a loan or IOU from a friend/family member	Thank you for your time. We'll be in touch in the next few days regarding the research.

<u>Phone discussion to recruit player for $50 voucher incentive</u>

During the phone discussion to organise the interview, advise that -

- a shadow interviewer will accompany you for the entire single session of play

- you can eat/drink/take breaks during play or do anything as you normally would during pokies play

- the shadow interviewer will ask you some questions during play

- if you normally go with others, that's fine too, but they need to ask you a few questions during this period, so you need to be happy to answer these before, during and after play

- you should not commence pokies/gambling until we get there - please don't start until we're there so it's as real to life as possible

- there are 3 parts - at first we get you to do a pre-play survey sitting down at a table, then the shadow interviewer will sit with you at the pokies and observe how you like to play and then finally a few questions at the table again afterwards

- there are no right or wrong answers - it's just observational research on pokies play

- everything is confidential and your individual results won't be identified

<u>FOR FEMALES IF THEY PREFER FOR SAFETY - ADVISE THAT THEY CAN HAVE A FEMALE INTERVIEWER</u>

Also confirm agreed:

1. Venue name _____

2. Venue address/suburb _____

3. Date of play: _____

4. Time of observation _____

5. Player home address/suburb _____

6. Date of birth of player _____

7. Mobile number _____

<u>Reaffirm with player to not play the pokies before they arrive and ensure interviewer gets to venue 15min before agreed time. Interviewer then to ring the player 10min before agreed time to announce that they are there.</u>

NOTE - DISCUSS WHAT IS INVOLVED IN DETAIL and ANSWER ANY QUESTIONS TO ENSURE THERE IS CLEAR INFORMED CONSENT.

Interviewer's name: _____

Name of venue _____ Suburb _____ Date _____

Interviewee name _____ Date of birth _____ Start time _____

PRE-PLAY SURVEY OF PLAYER PREFERENCES

Pokies players to please complete the following questions.

Why player likes to attend the venue

1. Apart from receiving the free voucher, If 1=not at all important and 5=very important, how important were the following factors in your decision to go to this specific venue TODAY for pokies?

    1. Good range of poker machines _____

    2. New poker machine brands _____

    3. Has your favourite poker machine brand (ie. name of machine - eg. Zorro, Money train) _____

    4. Comfortable seats at the pokies _____

    5. Nice surroundings/decor in the pokies room _____

    6. Nice staff working on the gaming floor _____

    7. Get free food/drinks while playing pokies _____

    8. Promotions/prizes offered to poker machine players _____

    9. Good loyalty points or incentives offered to pokies players _____

    10. Good food or drink pricing _____

    11. Good food quality _____

    12. Nice smokers area _____

    13. Local to where you live _____

2. What other factors were important in your decision to play at this this specific venue? (describe in detail)

    _____

    _____

    _____

    _____

When player first started thinking about pokies play today

3. If at all, how often in the past 24hrs did you think about poker machine play? (1=not at all, 5=very frequently)

    _____

4. If 1=not at all and 5=very frequently, to what degree did you think about the following at any point before arriving at the pokies today...

(i) Which poker machines you would play _____

(ii) How much you would spend on poker machine play _____

(ii) The time you would spend on poker machine play _____

(iii) How much money you could afford to spend on pokies _____

(iv) What poker machine jackpots were on at the venue _____

(v) What other special promotions, prizes or incentives were being offered at the venue _____

(vi) How nice it would be for you to win at the pokies today _____

(vii) The strategies you were going to use to increase your chance of winning at the pokies _____

(xiii) Consuming <u>alcoholic</u> drinks at the pokies today (eg. having a nice glass or wine or beer) _____

How you are feeling now just before playing pokies and generally in the past month?

5. Right at this moment, can you please rate how you are feeling on each of these four scales.....
(pick a number on each question from A to D - close to the word which says how you feel)

A. Bad _1_____ 2_____ 3_____ 4_____ 5_____ 6_____ 7_ Good

B. Unpleasant _1_____ 2_____ 3_____ 4_____ 5_____ 6_____ 7_ Pleasant

C. Sad _1_____ 2_____ 3_____ 4_____ 5_____ 6_____ 7_ Happy

D. Negative _1_____ 2_____ 3_____ 4_____ 5_____ 6_____ 7_ Positive

Recent pokies play

6. How many times have you been to the pokies in the past month (4 weeks)? _____ times

7. How much would you have spent or lost on pokies in the past 4 weeks - that is, the nett expenditure which takes account of all your wins and losses?

$_____ - Circle whether money - (A) **WON OR (B) LOST**

8. What is your typical spend limit for the pokies for a day like today - a general amount you prefer NOT to spend over when you play? $_____ per day

Main reasons for playing the pokies

9. Apart from getting a free voucher, what are the main reasons you are playing pokies today
(circle one or more reason):

1. Social reasons - like seeing/being around other people
2. Needed money for household bills/expenses
3. Wanted to win money to buy something
4. Just desired to win money to change lifestyle
5. Takes your mind off other life events or stresses
6. Felt bored
7. Felt lonely or isolated
8. Felt lucky or that was going to win
9. Other reason (record)_____

Money brought to the pokies

10. Now could you please check your own wallet/purse/pocket and indicate below....

1. How much cash/coins in TOTAL you have brought to pokies today in wallet/purse/pockets/on your person (ie. total money)

$_____

2. Did you bring an EFTPOS (ie. your bank savings) card in your wallet/purse? (circle below)

a. Yes - I brought an EFTPOS card
b. No - I didn't bring an EFTPOS card

3. Did you bring a credit card in your wallet/purse? (eg. Visa, Mastercard, Diners, Amex - circle below)

a. Yes - I brought a credit card
b. No - I didn't bring an credit card

4. Did you stop at an ATM or use EFTPOS prior to arrival here today to get money to bring to pokies? (circle one or more below)

a. Yes - got money from ATM
b. Yes - got money from EFTPOS
c. No - didn't get any money from ATM or EFTPOS today

5. (If Yes to ATM or EFTPOS) How much cash did you get from either an ATM or through EFTPOS as mentioned above?

$_____

Where you prefer to sit to play the pokies

11. In the venue, how would you describe where you usually prefer to sit to play pokies? (please describe in detail)

_____

_____

12. Why do you prefer to sit in this location to play the pokies? (please describe reason in detail)

_____

_____

13. Do you prefer people sitting next to you while playing the pokies?
    1. Prefer to sit around other people
    2. Prefer no-one around me

Other gambling today

14. How much money have you spent/lost on the pokies **TODAY** prior to starting this survey?

$_____ - Circle whether money - (A) **WON OR (B) LOST**

(Put $0 if haven't played pokies at all today)

PLEASE HAND SURVEY BACK TO YOUR INTERVIEWER

INTERVIEWER CHECK ALL RESULTS ON SELF-COMPLETE PART ARE COMPLETE!

PAGE 177 OF 187

Favourite machine - <u>ASK PLAYER TO LOCATE THEIR FAVOURITE MACHINE IF CANNOT RECALL NAME</u>

15. Record brand/name of favourite machine **at this venue**
    _____

16. Record pokies machine denomination (eg. 1c, 2c, 5c)
    _____

17. Why is this poker machine your favourite machine? (UNPROMPTED)

    _____

    _____

    _____

18. How would you rate your favourite poker machine on the following dimensions?

    A. Average rate of pay outs _1____ 2____ 3____ 4____ 5____ 6____ 7_ Good rate of pay outs

    B. Average colours _1____ 2____ 3____ 4____ 5____ 6____ 7__ Bright colours

    C. Average lights as other machines _1____ 2____ 3____ 4____ 5____ 6____ 7_ Nicer quality lights than other machines

    D. Plays average quality sounds/music_1____ 2____ 3____ 4____ 5____ 6____ 7_ Plays nicer quality sounds/music

    E. Theme doesn't have personal meaning _1____ 2____ 3____ 4____ 5____ 6____ 7_ Theme has personal meaning

    F. Older design machine _1____ 2____ 3____ 4____ 5____ 6____ 7_ Newer design machine

    G. Average quality features _1____ 2____ 3____ 4____ 5____ 6____ 7_ Has exciting features (ie features due to winning)

    H. Offers standard prizes _1____ 2____ 3____ 4____ 5____ 6____ 7_ Offers big prizes

19. INTERVIEWER TO CIRCLE whether this favourite machine is a:

    A -------- 1. Very new machine <u>OR</u> 2. New machine <u>OR</u> 3. Older machine

    B --------- 1. Touch screen <u>OR</u> 2. Non-touchscreen

L I V E   E G M   P L A Y   O B S E R V A T I O N S

Now I'd like you to play as you normally would and I'll ask questions from time to time. Please don't talk to me while you're playing. Just enjoy your play as you normally would.

But feel free to talk to others if you prefer, just not myself. You can drink, have smoke or food breaks and do as you please. You can also move around from machine to machine.

I'll ask you to make some ratings during play on a 5 point scale: 1 is lowest and 5=highest. This will include your play excitement (1=not at all excited, 5=very excited) and your urge to continue playing (1=no urge, 5=very strong urge). **CHECK UNDERSTANDING WITH PLAYER**

So now let me make a few notes before you start play (FILL IN A AND B!)

<u>QUESTIONS - 'How exciting was that?' / 'What's your urge to continue?'</u>

A. EGM	B. Max EGM prize	Money IN		MULTI BETS	Spins/games associated with LOSSES OR WINS					FREE SPINS/FEATURES WON			Double up/gamble	
		C. COINS ($)	D. NOTES ($)	J. Multi-credit bets	E. Money lost	F. Win $0.01-$5	G. Win $5.01-$10	H. Win $10.01-20	I. Wins more than $20	K. Free spins won	L. Features won	M. Won from free spins/ features	N. Tally	O. Amount won/lost $
(i) NAME												$	**WINS**	
(ii) DENOM 1c / 2c / 5 c	B1. Is this machine a linked jackpot? (circle) Yes / No													
(iii) AGE Very new / new / older					**Every 5min (5=highest score)** Excitement - ____ Urge - ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____					**After F/spin** Excitement - ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ Urge - ____ ____ ____ ____	**After Feat.** Excitement - ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ Urge - ____ ____ ____ ____		**LOSSES**	
(iv) T/SCRN Yes / No														
(iv)2m radius														

P. Songs playing?	Q. Sound of other EGM coins falling (EXCLUDING player's)		R. Alcoholic drinks consumed (part or full)	S. Money accessed from ATM or EFTPOS (provide $) - EVEN IF NOT SPENT		U. Money cashed OUT TOTAL $	
Yes / No			WINE: BEERS: SPIRITS:	ATM: EFTPOS:			

T. OTHER ACTIVITIES or events (list each and minutes)		V. FINISH TIME -->
		X. PLAY SATISFACTION (5=highest)

QUESTIONS TO ASK PLAYERS AFTER FINISHING EGM PLAY (EITHER AT TABLE OR SEATED AT EGM)

20. Were there any points today when you felt a strong urge to continue gambling, but thought you should stop playing?

    1. Not at all
    2. A little bit
    3. Somewhat
    4. Definitely

21. (If 2-4) How would you describe these points in play?

    _____

    _____

    _____

22. Were there any points today when you were not winning, but felt you were 'due' for a win?
    1. Not at all
    2. A little bit
    3. Somewhat
    4. Definitely

23. (If 2-4) How would you describe these points in play?

    _____

    _____

    _____

24. To what degree did you feel you were starting to chase your losses today?
    1. Not at all
    2. A little bit
    3. Somewhat
    4. Definitely

25. (If 2-4) How would you describe these points in play when you were starting to chase your losses?

    _____

    _____

    _____

26. To what degree did you feel in control of the poker machine today?
    1. Not at all
    2. A little bit
    3. Somewhat
    4. Definitely

27. (If 2-4) How would you describe the points in play when you felt that you were in control of the poker machine?

    _____

    _____

    _____

28. Did you use at any point more than a single credit bet per line during play today?
    1. Yes
    2. No

29. (If 1) What was the reason you did you use a multiple credit bet per line?

    _____

    _____

    _____

A F T E R   P L A Y I N G   T H E   P O K I E S   (N O T   F A C I N G   P O K I E S   A R E A)

<u>INTERVIEWER TO SIT DOWN WITH PLAYER AT A TABLE WITH PLAYER'S BACK TO THE GAMING AREA</u>

Pokies spending and budgets

30. Without looking in your wallet/pursue, how much would you guess you spent or lost at the pokies today? (that is, your nett expenditure which takes account of all your wins and losses)

    (<u>MUST BE GUESSED in 10 seconds</u> - **NO CALCULATIONS ALLOWED**)
    $_____

31. Did you end up spending more than your desired pokies spend limit today (that is, have you spent more than the amount you ideally prefer to spend on pokies)?
    1. Yes - a lot more
    2. Yes - somewhat more
    3. Yes - a little more
    4. No - didn't spend more than limit
    5. No - spent under limit

32. (If 1-3) What factors influenced you to spend more than your desired pokies spend limit today? (describe)

    _____

    _____

    _____

33. Now that you have spent this amount at the pokies, how does it make you feel?
    (circle response on each line)

    A. Bad _1____ 2____ 3____ 4____ 5____ 6____ 7_ Good

    B. Unpleasant _1____ 2____ 3____ 4____ 5____ 6____ 7_ Pleasant

    C. Sad _1____ 2____ 3____ 4____ 5____ 6____ 7_ Happy

    D. Negative _1____ 2____ 3____ 4____ 5____ 6____ 7_ Positive

34. When did you decide on your pokies spend limit for today? (UNPROMPTED)
    1. More than a day before playing the pokies (eg. it was what you always spend)
    2. On the day of play - but <u>before arriving at the venue</u>
    3. <u>After you arrived at the venue</u> - but before starting play
    4. During play at the venue today
    5. Didn't set any limit at all

35. Did you spend more today than you believe that you can afford to spend on the pokies?
    1. Yes - a lot more
    2. Yes - somewhat more
    3. Yes - a little more
    4. No - didn't spend more than can afford

36. How much did you set yourself as a pokies spend limit TODAY - That is, a general amount you tried not to spend over, even if you didn't keep to that amount? $_____

37. If at all, how much will you have to adjust your spending in other areas of life due to overspending today?
    1. Will have to reduce spending a lot
    2. Will have to reduce spending somewhat
    3. Will have to reduce spending a little
    4. No - won't have to reduce spending

38. If you plan to reduce your spending, what **categories** of spending will you reduce? (Be specific, not just 'bills' or groceries or entertainment - specific like no chocolates, no movies etc.)

    _____

    _____

    _____

39. Will your poker machine spending TODAY have any less positive effects for you?
    1. Yes - Definitely
    2. Yes - Maybe/possibly
    3. None at all

40. Did you <u>try to</u> use any strategies to help <u>keep you</u> to your pokies spend limit during play today or if you didn't have a spend limit - did you use strategies to avoid spending too much (even if they didn't work)?

    1. Yes
    2. No

41. (If 1) what strategies did you use to help keep you to your pokies spend limit during play or to avoid overspending?

    _____

    _____

    _____

    _____

42. (i) Did you set yourself a bet size limit on the credits you could bet PER pokies line TODAY? Yes / No

    (If YES) (ii) What was your maximum credit bet limit <u>PER LINE</u>? (i) Single credit (ii) Two credits (iii) More than 2 credits per line

    (iii) Did you keep to your bet size limit?

                        (a) Not at all
                        (b) Somewhat
                        (c) Definitely

43. (i) Did you set yourself a pokies time limit TODAY? (a maximum time you could spend playing) Yes / No

    (If YES) (ii) How many minutes was the limit? (even if you didn't keep to the limit) _____ minutes

    (iii) Did you keep to your pokies time limit today?

                        (a) Not at all
                        (b) Somewhat
                        (c) Definitely

44. Did you notice any signage warning players about gambling risks or problem gambling in any way today? Y/N

45. **(If YES)** Describe the signage noticed and location:

   _____

   _____

   _____

   _____

   _____

46. **(If YES)** Using a scale from 1=not at all to 5=helped a lot, how much did this signage help you keep to your spend limit today? _____

47. How friendly were the staff at the venue today (1=not at all, 5=very friendly)?
   _____

48. How absorbed and involved were you in playing pokies today (1=not at all, 5=very absorbed/involved)? _____

49. Using a scale where 1=not at all satisfied and 5=very satisfied, how satisfied are you overall with....

   1. The wins you have had today _____

   2. The total <u>number</u> of features you got during pokies play _____

   3. The quality of features you got during pokies play (ie. whether the good ones came up) _____

   4. The number of free spins you got during pokies play _____

   5. Your overall poker machine play experience today _____

50. How much do you think that being observed influenced your pokies play today? (1=not at all, 5=a lot)_____

51. Would you be interested in being added to a small panel of pokies players who are interested in undertaking social research relating to gambling in the future?

   (A) Yes - please add me to panel / (B) No - please do not add me to panel

52. Using a scale from 1 to 5, where 1=not at all to 5=very useful, how useful would it be for you personally to have a card that you can use for pokies play to keep track of your expenditure _____
   (ie. You put money on the card and use the card instead of cash for pokies play)

<u>GIVE PERSON A VOUCHER, EXPLAIN HOW INFO WILL BE USED AND CONCLUDE</u>

OTHER DATA TO RECORD POST-PLAY

53. How many lines did the player use during play of pokies?

    1. Always or nearly always ALL LINES
    2. Mostly ALL LINES (eg. 80% or more of time)
    3. Tended to vary lines frequently (eg. Less than 80% of time)

54. Type of venue

    1. Pub/hotel
    2. Club

55. Number of EGMs in venue (please count roughly) _____

56. Did player play...?
    1. With another person
    2. Alone

57. Record any other notes about other factors that may have influenced play today?

    _____
    _____
    _____
    _____
    _____
    _____
    _____
    _____
    _____
    _____
    _____

58. Please take a card or other complementary item from the venue to allow us to confirm that the
    visit was undertaken
    1. Completed - staple to survey
    2. Not-completed

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