

## Special Section: *JGI* Scholar's Award, Category B

### Preferred electronic gaming machine environments of recreational versus problem gamblers: An in-venue mixed methods study

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#### Abstract

The aim of the current study was to examine the different EGM environmental preferences of recreational compared to problem gamblers in Australia. Semi-structured interviews were conducted with 59 EGM gamblers recruited from EGM venues in Queensland and New South Wales, Australia. Interview data were organised using a thematic analysis into 42 major environmental features that gamblers identified as being of importance in choosing where and what to play. The frequency with which certain environmental characteristics were mentioned was analysed quantitatively, along with demographic information and PGSI status. Results showed that the most common reason for selecting the gambling platform was social, and in-venue gambling was largely but not exclusively preferred for this reason. The most frequently mentioned reason for selecting the provider was based on being close to home and enjoying the service at the venue. Finally, games were frequently selected based on features such as free spins, minimum bet sizes, graphics and in-game sounds. The survey results identified that persons experiencing gambling problems more frequently mentioned the availability of a number of game choices and the perceived potential for winning as important aspects in choosing an EGM environment. This study provides some preliminary evidence on what features of the EGM environment are important to players, and most conducive to safer gambling environments. The findings from this study will inform policy initiatives for player protection through the development of safer EGM gambling environments.

**Keywords:** EGM, pokies, slot, fruit machine, gambling, gambling environments, mixed methods

## Résumé

L'objectif de la présente étude était d'examiner les différentes préférences quant à l'environnement d'un site d'appareils de loterie vidéo entre les joueurs qui font un usage récréatif de ces appareils et les joueurs à problèmes en Australie. Des entrevues semi-dirigées ont été menées auprès de 59 utilisateurs d'appareils de loterie vidéo recrutés dans divers lieux où de tels appareils sont accessibles dans le Queensland et en Nouvelle-Galles-du-Sud (Australie). Une analyse thématique des données des entrevues a permis d'organiser les données en 42 grandes caractéristiques environnementales ayant de l'importance pour les joueurs dans le choix d'un jeu et de l'endroit où jouer. La fréquence dans laquelle certaines caractéristiques environnementales ont été mentionnées a fait l'objet d'une analyse quantitative, de même que les données démographiques et l'indice de gravité du jeu problématique des joueurs. Les résultats indiquent que les raisons les plus communes pour le choix d'une plateforme de jeux étaient d'ordre social, et que, par conséquent, la préférence était en grande partie, mais non exclusivement, accordée aux espaces de jeu situés dans des lieux publics. La raison la plus fréquemment mentionnée pour le choix d'un lieu de jeu était la courte distance de la résidence et les services offerts par l'établissement. Enfin, le choix des jeux reposait généralement sur des caractéristiques comme l'offre de parties gratuites, le montant minimal des mises et les effets visuels et sonores du jeu. Les résultats de l'enquête indiquent que les personnes aux prises avec des problèmes de jeu mentionnaient plus fréquemment, parmi les caractéristiques importantes pour le choix d'un site d'appareils de loterie vidéo, l'éventail des jeux offerts et la perception d'une plus grande possibilité de gagner. Cette étude fournit de manière préliminaire des données probantes sur les caractéristiques environnementales des sites d'appareils de loterie vidéo qui sont importantes pour les joueurs et sur celles qui sont les plus propices à la création d'environnements de jeu sécuritaires. Les conclusions de l'étude éclaireront l'élaboration d'initiatives stratégiques visant à protéger les joueurs par l'établissement de sites d'appareils de loterie vidéo sécuritaires.

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## Introduction

Electronic Gambling Machines (EGMs) are widely regarded as the most high risk form of gambling, with between 15% and 33% of regular (at least once per week) EGM players being problem gamblers (Abbott, Bellringer, Garrett & Mundy-McPherson, 2014; Billi, Stone, Marden & Yeung, 2014; Productivity Commission, 1999, 2010). Most gambling on EGMs takes place in traditional land-based venues, but participation in online forms of gambling is increasing at a faster rate than with other modes, with 8% of Australians gambling using online platforms in 2014, compared with only 1% in 1999 (Gainsbury, 2014). Developing an understanding of those features or attributes of the current EGM environment that attract gamblers is important for enhancing knowledge about both traditional land-based venues and

online providers. Understanding the environmental preferences of certain groups of people, such as high-risk gamblers (i.e., PGSI 8+; Ferris & Wynne, 2001), will inform the development of safer gambling environments that promote features attractive to no-risk gamblers and eliminate features attractive to high-risk gamblers. The current study was part of a larger project focused on the Australian state of Victoria, and the following review of the literature gives an overview of those features that are most representative of the Australian EGM environment.

In understanding gambler choices regarding environmental features of EGM gambling, there is currently no organizational framework to allow the various features to be examined in a structured manner. Informed by Tversky's (1972) Elimination-by-Aspects (EBA) model, Thorne, Rockloff, Langham and Li (2016) propose a model for examining gambling environment decisions based upon the concepts of information availability and gambling as an experience good (Nelson, 1970). This model, the Hierarchy of Gambling Choices (HGC), states that, for someone to decide on their optimal, or at least satisfying, gambling environment, that person must, either consciously or subconsciously, follow the logical hierarchy-based decision structure of platform, then provider, then game. In other words, he or she must logically decide on, first, whether to gamble at a land-based venue, on a computer or on a wireless device (platform); second, the exact provider (e.g., a particular club, casino or website); third, the game to play. This model is used to contextualise the following literature on features of the gambling environment and to inform the method of the current study.

### **Platform Choice**

Electronic gaming platforms include both traditional land-based venues and the more recent online options available on computers or wireless devices. Research into online platform choice has focussed on casino-style games and poker (Griffiths & Barnes, 2008), with preferences specifically regarding online EGM platforms receiving little research attention. Those persons who play EGM-style games online may have preferences that differ from those who gamble on other online games. Gainsbury, Russell, Blaszczynski and Hing (2015) found that there were indeed differences between land-based-only gamblers, internet-only gamblers and mixed-mode gamblers in terms of EGM play. Specifically, land-based gamblers and mixed-mode gamblers were equally as likely to participate in EGM gambling, while internet-only gamblers were far less likely to gamble using this form.

Based on the more general research on internet gambling, factors that influence gamblers' choices to play online rather than in land-based venues have been found to include anonymity, affordability, convenience, and a desire to escape emotionally (Griffiths, 2003; Wood & Griffiths, 2008; Wood & Williams, 2009). However, online gamblers have also expressed concern that the lack of social mediation available online increases the risk that they will overspend compared to in-venue EGM gambling (Wood & Williams, 2009). Furthermore, uncertainty regarding fairness of

the game and financial security of the website, as well as the lack of “real cash” winnings, acts as a deterrent from gambling online for certain gamblers (Wood & Williams, 2009). This may be especially the case in jurisdictions such as Australia—where the current study is set—as any website providing online EGM games to Australians is in fact operating illegally (Interactive Gambling Act, 2001).

### **Preferred Providers**

In moving to the second level of the gambling choices framework, convenience and accessibility have been reported to be the main drivers of EGM venue choice, with a large longitudinal study reporting that over 50% of gamblers in the Australian state of Victoria travel less than five kilometres to reach their preferred venue. In addition, it was found that problem gamblers are significantly more likely than other gamblers to rate “the venue being close to home” as a top feature of their favourite venue (Hare, 2009). Similar findings have been reported in different jurisdictions (Astbury, & Reith, 2014; Pearce, Mason, Hiscock, & Day, 2008; Wardle, Keily, Welte, Wiczorek, Barnes, & Tidwell, 2006). These findings suggest that the role that accessibility plays in land-based venue choice is important. Given problem gamblers’ preference for convenient gambling providers, it is possible that online gambling may be particularly attractive to this group and represent a significant risk for gambling-related harm.

The opportunity for social interaction is another factor driving EGM provider choice. The level of “sociability” desired in a venue has indeed been found to differ by PGSI status, but the findings still reveal certain contradictions. Gambling with others has been found by specific researchers to be a protective factor from gambling problems (Clarke et al., 2007), yet a large study in New Zealand found that those participants in the moderate-risk to problem gambling group were more likely to gamble with one other person than alone (Abbott et al., 2014). Playing in a venue may create an illusion of social interaction, especially compared with online gambling, but in reality players maintain distance and anonymity; a feature shown to be relatively more attractive to problem gamblers (ACNielsen & New South Wales Department of Gaming and Racing, 2003). These conflicting findings show that the social aspect of gambling is complex.

In the case of land-based venue providers, a number of environmental features—e.g., specific lighting, including flashing coloured lights; and sound effects in gambling venues—have been found to increase gambling intensity to at-risk levels (Stark, Saunders, & Wookey, 1982; White et al., 2006). The availability of other forms of entertainment beyond the presence of EGMs, including other gambling modes, variety and pricing of food, and general venue atmosphere, have also been reported as important features in EGM gamblers’ venue selection (Hare, 2009; Hing & Haw, 2010; White et al., 2006).

### **Gaming Machine Characteristics**

The third level of the Hierarchy of Gambling Choices (Thorne et al., 2016) is the choice of game. Game preferences are driven by the features such as sounds and

lights, game themes, jackpots, and bonus features. Although these features seem to be attractive to most EGM gamblers, the importance that gamblers place on their preferred game having certain features has been shown to differ by problem gambling status. For instance, as a group, EGM gamblers report high levels of enjoyment from the sounds and music associated with the games (Delfabbro, 2006; Livingstone, Woolley, Zazryn, Bakacs & Shami, 2008; Palmer du Preez et al., 2014). However, high-risk gamblers are more likely to rate music and lights as important, when compared to low-risk and no-risk gamblers. Additionally, the specific appearance and themes of EGMs appeal to gamblers in general but are likely to be a more important consideration in problem gamblers' decisions (Livingstone et al., 2008).

Whereas jackpots in general do intensify gambling across both lower and higher risk gamblers (Rockloff & Hing, 2013; Rockloff et al., 2014), the presence of jackpots also influences gamblers' EGM game-choice preferences. Delfabbro (2008) found that 30 percent of problem gamblers go to particular venues to play linked jackpot machines compared to three percent of non-problem gamblers. Similarly problem gamblers report an increased attraction to free spins (Livingstone et al., 2008). Thomas, Mora, and Rive (2010) suggest that jackpots and free spins being paired with lights and music creates a conditioning effect, with the latter acting as a secondary positive reinforcer. They argue further that this increases the likelihood of these features contributing to risky gambling. These findings are supported by Palmer du Preez et al. (2014), who found that EGM gamblers reported that the lights and sounds associated with winning free spins heightened the excitement associated with these wins and encouraged EGM use.

### **The Current Study**

The current study explores the gambling preferences and experiences of EGM gamblers using an embedded mixed methods approach. We undertook semi-structured qualitative interviews with 59 EGM gamblers to investigate which EGM environmental features they preferred and the reasons for their respective choices. By converting discussed themes into binary variables, we aimed to identify the environmental and contextual features that EGM players prefer, and whether or not these choices were in fact associated with their gambling risk status. The following research questions were addressed:

1. What are the commonly identified characteristics of preferred Electronic Gaming Machine (EGM) environments?
2. What differences exist between low-risk and higher-risk gamblers in preferences for EGM environments?
3. How do low risk and higher risk gamblers justify or explain their EGM environment preferences?

## Method

### Participants

The participants in this study ( $N=59$ ) included 31 males and 28 females aged between 20 and 81 years old ( $M=55.2$ ). Participants were from diverse backgrounds (58% born in Australia, 7% Vietnam, 5% Lebanon, and 30% a mix other ethnicities). Within the sample, 27% had experience playing EGMs online or on another portable electronic device. Appendix Table 1 provides a summary of the sample characteristics.

### Materials & Procedure

Participants were recruited from one large “casino style” EGM venue in the inner suburbs of Sydney, Australia, as well as four medium-to-small club and pub style venues in various suburbs of the Gold Coast, Queensland, Australia. These venues were selected to access patrons from diverse gambling environments. The recruitment process consisted of setting up signage at the venues that advertised the study, and waiting for customers to approach the uniformed researcher. Participants were compensated for their time with a \$50 supermarket voucher. Only customers who

Table 1  
*Sample characteristics*

PG Status	Born	Gender	Age	Count (N)
Low	Australia	Male	Below 55	3
Low	Australia	Male	55 or above	1
Low	Australia	Female	Below 55	1
Low	Australia	Female	Age withheld	1
Low	Australia	Female	55 or above	3
Low	Vietnam	Female	55 or above	1
Low	Other	Male	55 or above	1
Low	Other	Female	Below 55	1
Low	Other	Female	Age withheld	1
Low	Other	Female	55 or above	2
High	Australia	Male	Below 55	10
High	Australia	Male	55 or above	5
High	Australia	Female	Below 55	5
High	Australia	Female	55 or above	5
High	Vietnam	Male	55 or above	2
High	Vietnam	Female	55 or above	1
High	Lebanon	Male	Below 55	2
High	Lebanon	Male	55 or above	1
High	Other	Male	Below 55	1
High	Other	Male	55 or above	4
High	Other	Female	Below 55	1
High	Other	Female	Age withheld	1
High	Other	Female	55 or above	5
High	N/A	Male	Below 55	1

were over 18 years of age that had experienced playing EGMs were permitted to participate. The university’s internal review board issued ethical approval for the study (H13/08-150) and each participant gave signed informed consent prior to the commencement of the interview.

**Script.** An interview script was created to ensure each interview followed a standard structure (see Figure 1) and key questions were addressed. First, at the beginning of the interview, participants were shown pictures of the different “levels” of interest (see Figure 1, Panel A). It was explained that they would first be asked about their preferred platform (i.e., in-venue, on computer, or smartphone/tablet application). Second, they were asked about their preferred location of play and their reasons for this preference. Finally, participants were asked about their preferred games and reasons for their respective choices.

**Interviews.** Semi-structured interviews were conducted using a question guide. While extracting key information, participants were also encouraged to express views and reflections related to gambling that fell outside of the scripted topics. Interviews took place in the venue within sight of the gaming room so that participants could point out features of the gaming or venue environment to the interviewer without being overheard by other patrons and staff. Interviews were audio recorded and transcribed verbatim into text documents. Interviews ranged from 10 to 60 minutes in length ( $M = 22$  mins).

**Problem Gambling Status.** Following the interview, participants were asked to complete the Problem Gambling Severity Index (PGSI) (Ferris & Wynne, 2001).



Figure 1. Overview of interview structure including visual aids supplied to participants

The scale consists of nine questions including “Have you bet more than you could really afford to lose?” Answered on a 4-point Likert scale, PGSI scores are summed determines one’s level of gambling risk (Holtgraves, 2009). Cronbach’s alpha for the current study was high ( $\alpha = .88$ ).

**Demographics.** Participants completed a brief demographics questionnaire, one which asked for age, gender, marital, cultural, income, education, and employment status.

### Qualitative Analysis

Interview transcripts were coded using NVivo 10 qualitative data management software and analysed using an interpretive methodological approach (Mason, 2002). The second author created the a priori codes on the basis of the interview questions. To ensure inter-rater reliability the first and second author reviewed and refined the finalized coding framework (see Appendix Table 2 for code structure).

Once codes were finalized, a binary yes/no variable was created for each code whereby participants were given a score of 1 if they did mention an item representing that code, and a score of 0 if they did not. Binary variables were then cross-tabulated with gender, age and PGSI status and Chi square statistics were examined to investigate significant relationships between codes and sample characteristics.

## Results

The results reported are a combination of findings from the qualitative interviews, and the associated demographic information and PGSI-status of participants. Our explicit use of embedded mixed methods was judged to be most appropriate for addressing our three key research questions: (1) the commonly identified characteristics of preferred EGM environments, (2) how these answers potentially differed between people with and without gambling problems, and (3) the reasons provided for these preferences. The following findings are presented in sections that reflect certain of the key themes that emerged in the interview process, including (1) gambling as a social activity, (2) various online and in venue provider preferences, such as security, and facilities, (3) preferences that differed by gender and gambling status, and (4) game preferences such as graphics and value for money.

Table 1 describes the characteristics of the sample of interest, including the frequency of participants classified in each age, gender, cultural, and gambling status group. Just under half of the participants (42%) were classified as low-risk (0–2 on PGSI scale) and just over half of the sample (58%) were classified as moderate to high-risk gamblers (3+ on the PGSI scale). Of those participants who reported their age (three participants declined to), 44.6% were under 55 and 46.4% were 55 or above.



Table 2

*EGM environment preferences and reasons for preference shown for total sample, and split by problem gambling status and gender*

Preference	Reason	Total %	% Low PGSI (n = 25)	% High PGSI (n = 34)	% Male (n=31)	% Male (n=28)
In-venue EGMs	More social	36%	32%	38%	35%	36%
	More interesting	24%	32%	18%	26%	21%
Device	Real money	20%	12%	26%	19%	21%
	Not possessing the technology	22%	28%	18%	13%	32%*
	Avoid the risk of over spending	19%	8%	26%*	23%	14%
	Preferring the hardware/functions	53%	67%	50%	60%	43%
	Convenience	24%	33%	21%	20%	29%
	Prevention of addiction and money loss	18%	33%	14% <sup>^</sup>	20%	29%
Home	Able to do other activities	18%	0%	21% <sup>^</sup>	10%	29%
	Comfort	18%	0%	21% <sup>^</sup>	20%	14%
Venue	Close to home	80%	76%	82%	81%	79%
	Service	80%	76%	82%	81%	79%
	Clientele	54%	56%	53%	52%	57%
	Social	54%	52%	56%	58%	50%
	Availability of other activities	68%	80%	59%	68%	68%
	Availability of good/cheap food and drink	49%	52%	47%	48%	50%
	General atmosphere	51%	44%	56%	39%	64%**
	Other opportunities to win money	20%	16%	24%	6%	36%**
	Amount of EGMs	36%	12%	53%**	42%	29%
	Familiarity	32%	28%	35%	35%	29%
	Size	32%	28%	35%	35%	29%
	Perception of winning more	27%	8%	41%**	39%**	14%
	Physical layout of the venue	58%	64%	53%	58%	57%
	Busy	27%	24%	29%	32%	21%
	Safety features	25%	32%	21%	26%	25%
Member benefits	29%	24%	32%	29%	29%	
Prices at venue	31%	28%	32%	35%	25%	
Online Provider	More accessible	29%	33%	29% <sup>^</sup>	20%	43%
	Familiar	29%	0%	36% <sup>^</sup>	40%	14%
	Good/wide selection of games	24%	33%	21% <sup>^</sup>	20%	29%
	Value	24%	0%	29% <sup>^</sup>	20%	29%
	Recommended	29%	67%	21% <sup>^</sup>	20%	29%
Game	Features (e.g., free spins, extra games)	64%	56%	71%	58%	71%
	Jackpots	56%	44%	65%	65%	46%
	Perceived chance of winning	78%	80%	76%	65%	46%
	Value (cost of each spin)	49%	56%	44%	39%	61%*
	Familiarity	46%	48%	44%	48%	43%
	Graphics	69%	72%	68%	65%	75%
	Modernity	36%	28%	41%	32%	39%
	Combinations required to win	27%	32%	24%	19%	36%
	Sounds	20%	16%	24%	42%	86%*
	Sophistication of hardware	32%	24%	38%	19%	21%

\*\*significantly more likely to mention this item according to Pearsons, Chi-Square test, p < .05.

\* p < .1 (marginal result). Figures reported for items applicable to only online/device gambling are based on a sample including only participants which reported this behaviour (n=17). <sup>^</sup> = can't compute chi square because of low cell count.

## Gambling as a Social Activity

Table 2 shows the most common<sup>1</sup> reasons provided by participants for preferring specific playing platforms, locations, and games. The social aspects of gambling in a venue (rather than on a device) was the most popular single response regarding platform selection: 36% of the sample mentioned it. For example, when asked why they preferred their favourite venue over others, certain participants described the club as a meeting place for them and their friends:

I know a lot of people here. I've got a lot of friends within the club... So [it's a] meeting place, I guess for some people... it's a meeting place to meet up, see people we know. Maybe if we're good friends, if we know each other's pay day, maybe we swap money. (F, 73 years)

Another participant enjoyed the social aspect of discussing his EGM gambling with acquaintances:

[T]here's a couple of blokes that come in here that I know—and one of them likes the machine next to the one I play—so we sit there conferring notes. (M, 70 years)

Other popular reasons for playing in venue were that subjects found it more interesting (24%) than playing online and associated playing in a venue with winning real money (20%). Certain participants mentioned that online EGM play was a less exciting option:

I know it sounds weird, but I don't find any of them entertaining to the extent of being in a club. Because, you know, you've got nothing falling out of the slot... If you don't put nothing in, there's nothing coming out. I might sometimes I have \$15,000 worth of credit, but its simulated money. (M, 74 years)

Certain participants also reported that playing in-venue safeguarded them against extreme money losses associated with gambling online (19%), and expressed concern at how others gamble on their phones and other devices:

Because you can win, win, win but there's always a time to lose—and if you play at home you can play while you're asleep too ... I play games on my phone before I sleep. (M, 53 years).

Other participants talked about how they were able to set limits for themselves when they gambled in-venue and how that protection may not be possible when gambling online:

You might just get a bit too taken away with it, so if I come to the pub with a limited amount of money—I spend that and I go home—and I don't worry about it. (F, 63 years)

<sup>1</sup>Preferences reported by 10 or more participants, or 3 or more of the device using participants for preferences regarding device use.

Those participants who preferred playing on digital devices rather than at a venue most commonly mentioned the hardware or functionality (53%) and the convenience (24%) as a reason for preferring a device. One participant talked about the ease at which he can access multiple EGM gambling sites online from his computer:

On the game you've got—like there's more ways like you can play on the computer. But on the tablet you've got less pokies that you can play because you've got to download them ... on a computer it's all on the Internet—so it's easier to get onto the actual pokie machine. (M, 20 years)

Among the most commonly mentioned reasons for preferring to play on a device at home rather than at a venue included the opportunity to do other activities (18%) and comfort (18%). One participant discussed the comfort of playing EGM games on his phone while in bed:

Home is like ... you can lay down and relax. When you get bored ... when you feel sleepy—you can sleep straight away. Because if you go outside—you can't sleep straight away. (M, 20 years)

### **Provider**

The two most commonly mentioned reasons for choosing the venue/provider were the service (i.e., staff and management) and the proximity of venue in relation to home, work or other facilities (80%). One middle-aged participant talked about how he felt so welcome at his preferred club:

So when I go to [my club] I don't have to produce my card at all, whatever. I get a laugh, smile with the service, no matter what. This is the difference. (M, 53 years)

Another young man talked about how the staff made him feel valued:

It's just like the service. When they come up to you they ask how's your day, how's it going. Just those little bit of conversations. (M, 20 years)

Other popular reasons for venue selection were aspects of the physical set up of the venue (58%) and general atmosphere (51%), the availability of other activities (68%), and social aspects, such as friendly or polite clientele (54%). Certain participants talked about the clientele at different venues, saying, for example:

I don't want to judge people, but I guess they're more family oriented here. Where when you go into pubs—they're like single guys on their own. Might get the odd female and that; and it's just not a very comfortable place. So I myself chooses [sic] these places because I tend to like the sense of family. (F, 43 years)

### **Online Provider**

Popular responses regarding preferred online EGM providers included accessibility (24%), familiarity of a particular website or online store (24%), and a wide selection of

games (24%). One middle-aged woman talked about her strong preference for mobile EGM apps, citing the variety and accessibility on offer:

Well there's so many to choose from. So easy to get into, so easy to download—I love everything about it. (F, 43 years)

## Games

The most common reason given for selecting a particular game (online or in venue) or machine (in venue) was the perceived chance of winning—that is, 78% of interviewees chose to play a specific game (both online or in venue) because they each believed it was lucky as a result of past wins, that it paid out more often or, in the case of machines in venue, because of pay out based on previous play. Machine and game features were of importance also; 64% of the sample chose a game based on the amounts of features in the game including: free spins, bonus rounds and extra chances to multiply winnings. The presence of a jackpot (56%) was also deemed of particular importance. One participant maintained that bonus features, especially free spins, were the biggest factors in attracting EGM players to a venue:

Yeah, that's what you come here for [free spins]. They're not designed to do that really, they're designed to take your money, I'm fully aware of that... (F, 52 years)

Another middle-aged participant expressed his disappointment in those EGM gambling sessions that do not yield an adequate amount of bonus features:

Yes, well just that satisfaction of getting a free game. There's nothing worse than spending \$20 or \$50 and not getting a free game. (M, 41 years)

The minimum cost of each spin was also mentioned frequently (49%), along with familiarity of the machine (46%), attractiveness of graphics (69%) and sounds (20%), and the sophistication of the hardware itself (32%). Interestingly, players reported substantially different preferences in terms of what they found attractive about these attributes. For example, many persons preferred modern games with bright graphics, unpredictable sounds and complex player options, whereas others preferred more traditional, familiar, less “flashy” formats. One participant described the theme of her favourite game in detail and how exciting the unexpected graphics are:

It's entertaining. When the feature comes—because it comes up randomly—and just comes out and it just [unclear...] and you're not paying really—you're paying more attention to hitting the buttons or talking or [unclear] and it just gives you a bit of a shock and then you find out how many bats you can get to how much money you can win and then there's another bat spin. It's just something that's entertaining, especially when—playing with my mother, it's entertaining for her because [unclear] another bat spin. She just thinks it's funny. (F, 63 years)

One 38 year old man described his preference for the games that he had always played in the past:

I just like the older machines. The ones that I know. I don't like any new ones...All these new ones I don't know the free games and that. (M, 38 years)

Similarly, a 63 year old woman talked about how new machines are not as enjoyable:

They're a bit harder to understand, yeah, for the elderly, yeah. The young ones, well they can pick up anything quickly. They can pick up that you don't go [makes noise] and they know exactly what they're doing. (F, 63 years)

One young man linked game-age with beliefs about winning:

I suppose I tend to go towards the old machines if I can. Only because I've heard that the odds are better on those. (M, 26 years)

### **Differences According to Gambling Status and Gender**

Responses were also compared for gambling risk status and gender, revealing certain substantive differences in EGM player preferences between the levels of each group (see Table 2). Participants categorized as high risk of problem gambling tended to mention the amount of machines available and a perceived chance of winning more often than low-risk gamblers as important factors when selecting a venue to attend.

One participant described how his preferred EGM venue was the casino because of the amount of machines available:

It's just that there's so many to choose—like you've got many options. If you don't like that machine, there's like 1000 more to choose from. (M, 43 years, high-risk gambler)

High-risk gamblers also mentioned preventing risk of over-spending or addiction when discussing their platform of choice, and mentioned this aspect more often than low-risk gamblers. One participant preferred gambling on EGMs on his mobile phone and tablet as opposed to gambling in-venue, as he could play with simulated money:

Probably it fills up the time or keeps you away from losing money, I guess. (M, 39 years, high-risk gambler)

Conversely, another participant felt that gambling on EGMs in-venue was a safer option than online:

It's just the experience would be a bit different. Because I think coming in—if you bring in a certain amount: you use that much—whereas if you do it through a phone or a laptop, you can't really control how much you use ...I guess it's

just the fact that you decide how much you're willing to use on that day. So, for example, I might bring in \$50 for that day. So before I go in—I might leave my debit card at home. (M, 20 years, high-risk gambler)

Gender differences were also apparent. Female gamblers were more likely to base their venue preferences on atmosphere and other opportunities to win prizes, when compared to men. One woman described the myriad of entertainment options available at her preferred club, saying:

... we go there for the raffles, and we go there to play Bingo... sometimes they just have musical nights—and we're there for that, and we play lawn bowls there [too]. It's not just about playing the pokies there—it's a bit of everything. (F, 64 years)

Men mentioned more often than women that “perceived chance of winning” was a reason for selecting a particular venue. One man believed that the EGMs at his preferred venue paid out at a higher rate than a venue nearby, saying:

It's just that the ones at [the other venue] don't pay that very good... I find the ones at [the other venue] sort of rip you off a bit more. (M, 43 years)

No differences were apparent regarding features of the games themselves. However, female gamblers were more likely to mention the value of a machine, and their sounds, as a reason for selection a particular game. One older female gambler talked about how she enjoyed the sounds and music of her favourite “island girl” themed machine:

“I like the little music. It's very attractive... It's very tropical. Something different and, you know, if you're in the mood, why not?” (F, 61 years)

## Discussion

This paper reported on gambling environment preferences of EGM gamblers in terms of platform, provider and game characteristics. A small sample of regular EGM gamblers were recruited from metropolitan and suburban clubs in Queensland and New South Wales, Australia. An embedded mixed-methods approach was used to analyse data in an exploratory manner, using both qualitative and quantitative methods. Although this study is limited in that the sample is a small and non-representative one, findings indicate that both high- and low-risk gamblers preferred the social aspect of using EGMs within a land-based venue, compared to the perceived solitude of online EGM gambling. Women were more likely to prefer venues that had a good atmosphere and provided other avenues to win money, such as playing bingo. These findings are consistent with previous studies suggesting EGM gambling fulfils social needs for many players (Thomas et al., 2010; White et al., 2006). For EGM gamblers who chose to play in land-based venues, their preferred venue typically featured quality customer service and personable staff who

gave the impression that they cared about their customers. Positive interactions with venue staff added to the valued social experience that in-venue gambling provided. The older average age of the current sample may have contributed to the preference for land-based EGM venues as being more social. Older persons may be less likely to embrace technology and less likely to seek out gambling opportunities online where there is interaction with other players, such as platforms that offer the option of “chatting” with other players while gambling.

The majority of gamblers tended to find in-venue gambling more interesting than online or mobile gambling. They enjoyed the “real money” aspect of being able to win cash at a venue, rather than credits online, even if these credits were redeemable for payment. The excitement and risk associated with “real cash” gambling is likely because of the tangible nature of cash in hand. In contrast, when gambling online, one is removed from the reality of spending money when instead of inserting cash, gamblers use electronic forms of payment. In terms of the use of purely simulated money (or points rather than credits), this lack of perceived risk and tangible reward provides an explanation to why the majority of gamblers did not find this form of “gambling” as exciting. Significantly, however, one participant *preferred* gambling online. This preference was because simulated money could be used rather than real money, indicating that this kind of “gambling” may be a reasonable harm-minimisation strategy for certain persons.

Furthermore, many participants reported that certain features of land-based venues protected them against over-spending against their limits. For example, certain participants mentioned that online gambling was too convenient and accessible, and was, moreover, an easy way to lose control. Because of harm minimization policies in Australia, large amounts of cash are often difficult to obtain at land-based venues. Harm minimization strategies, such as the removal of ATMs from gambling venues in certain jurisdictions, and restrictions on how much cash can be taken out at one time from the in-venue cashier, help to limit player investment, which is a protective feature not available by default when using a credit card online. Reports of spending control at land-based gaming venues may be a promising indication that certain gamblers set limits by only taking a certain amount of cash to the venue.

High-risk gamblers showed an awareness that gambling online was highly accessible and had the potential to cause overspending of both time and money. This introspection suggests that in-venue EGM high-risk gamblers engage in strategies to prevent themselves from excessive gambling. However, that they also self-identified as high-risk gamblers (by the PGSI) shows that they are still experiencing a high rate of problems and harms despite these attempts to control their gambling.

Notwithstanding the noted value of spending limits, having easy access to EGMs was an important criterion in land-based venue selection. This finding was consistent with research showing that, controlling for ages, sex and deprivation level, persons living closest to gambling venues are accordingly most likely to gamble, and are therefore most at risk of becoming problem gamblers (Pearce et al., 2008). High-risk

gamblers were more likely to select a certain venue because they perceived they had a better chance of winning, (i.e., the venue was luckier or fairer). In addition, men were more likely than women to choose a particular venue or game because they perceived it to be associated with a greater likelihood of their winning.

### **Limitations**

There are limitations to this study that are worthy of noting. In addition to being a small self-selected convenience sample, participants were recruited solely from land-based gambling venues, a feature of the research which was likely to have led to the low number of online gamblers in the sample. The mean participant age of the sample being 55 years may have also skewed the sample towards exclusively land-based EGM gamblers, as older persons may be less likely to embrace new technology than younger persons. However, the study nonetheless provides a starting point for research into EGM specific preferences. It is suggested that future research address the limitations in the current study by recruiting a larger and more representative sample.

### **Conclusion**

The current study was an exploratory one into the key environmental and contextual features of online, mobile and in-venue EGM gambling that drive consumer choices. Although the findings are only indicative because of the limitations mentioned above, they highlight the diversity in EGM environment preferences and the differences in preferences between low- and high-risk gamblers. From a policy perspective, features of the gambling environment that disproportionately attract high-risk gamblers can be discouraged, whereas features that attract recreational gamblers with fewer problems may be safer for expansion. As many of the participants in this study commented, gambling can be an enjoyable and sociable pastime. This study further enhances our understanding of what features of the environment are most important in gamblers making gambling choices, and provides evidence on what features are most consistent with safe levels of play.

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## Appendix A

Table A1

*Participant demographics, platforms used and gambling status.*

ID*	Gender	Age	Country of Birth	Platforms experienced			Risk of PG (PGSI)	High Gambling Use (CPSG)
				In Venue	Computer	Phone		
004	Male	57	Fiji	✓			No risk	Yes
005	Female	64	Denmark	✓	✓	✓	Mod	Yes
006	Male	68	Australia	✓			Mod	Yes
007	Male	20	Philippines	✓	✓	✓	Mod	Yes
008	Male	66	Lebanon	✓			No risk	Yes
009	Male	39	-	✓	✓	✓	Problem	Yes
010	Female	61	Mauritius	✓			Mod	No
011	Male	53	Lebanon	✓			No risk	Yes
012	Female	-	Greece	✓	✓	✓	Mod	Yes
013	Male	47	Lebanon	✓		✓	Mod	Yes
014	Male	33	Australia	✓			Problem	Yes
015	Female	43	Australia	✓	✓	✓	Low	Yes
016	Female	63	Australia	✓			Mod	Yes
017	Female	59	Vietnam	✓			Mod	No
018	Male	57	Vietnam	✓			Mod	Yes
019	Male	20	Australia	✓			Low	No
020	Male	20	Australia	✓			Mod	Yes
021	Male	62	Vietnam	✓			Mod	Yes
022	Female	80	Australia	✓			No risk	Yes
023	Male	59	Pakistan	✓	✓	✓	Mod	Yes
024	Female	50	Philippines	✓	✓	✓	Problem	Yes
025	Female	67	Australia	✓		✓	No risk	Yes
026	Male	67	Egypt	✓			Low	Yes
027	Female	58	Vietnam	✓			Low	Yes
028	Male	41	Australia	✓		✓	No risk	Yes

Table Continued.

ID*	Gender	Age	Country of Birth	Platforms experienced			Risk of PG (PGSI)	High Gambling Use (CPSG)
				In Venue	Computer	Phone		
029	Male	65	Scotland	✓			Mod	No
030	Female	40	Australia	✓			Problem	Yes
031	Female	-	Australia	✓			No risk	No
032	Female	50	Australia	✓	✓		Mod	Yes
033	Female	64	Australia	✓			Low	No
035	Male	81	Australia	✓			Mod	Yes
036	Female	47	Australia	✓			No risk	No
037	Female	67	Australia	✓			No risk	No
038	Female	-	Spain	✓			Low	No
039	Male	38	Australia	✓			Mod	No
040	Male	50	Australia	✓	✓	✓	Mod	Yes
041	Male	50	Australia	✓			Problem	Yes
042	Male	41	Australia	✓	✓		Problem	Yes
043	Male	43	Australia	✓		✓	Problem	Yes
044	Male	70	Australia	✓			No risk	No
045	Male	61	Australia	✓			Problem	Yes
046	Male	48	Australia	✓			No risk	Yes
047	Female	78	Germany	✓			Mod	Yes
048	Female	60	England	✓			No risk	No
049	Male	26	Australia	✓			Mod	No
050	Female	77	England	✓			Low	Yes
051	Male	47	Australia	✓			No risk	Yes
052	Female	73	Australia	✓			Mod	No
053	Female	44	Australia	✓	✓	✓	Mod	Yes
054	Male	79	Australia	✓			Mod	Yes
055	Female	74	Australia	✓			No risk	Yes
056	Female	56	Germany	✓			No risk	Yes
057	Female	34	NZ	✓			Mod	No
058	Male	85	Australia	✓			No risk	Yes
059	Female	83	Australia	✓			No risk	Yes
060	Female	72	Hungary	✓			Problem	Yes
061	Male	74	NZ	✓	✓		Mod	Yes
062	Female	52	Australia	✓			No risk	Yes
063	Male	20	Australia	✓	✓	✓	Mod	Yes

\* Participants 001 – 003 and 034 were removed from the sample because of incomplete interviews.

## Appendix B

### Coding the Interview Data

The second author went through each transcript identifying 2,049 statements where participants mentioned preferences and reasons for preferences. Repeated and contextually identical statements (within participants) were disregarded, resulting in a list of 173 statements for coding. The second author then applied the framework in Figure B1 allocating each statement to one of the 173 codes. This framework was

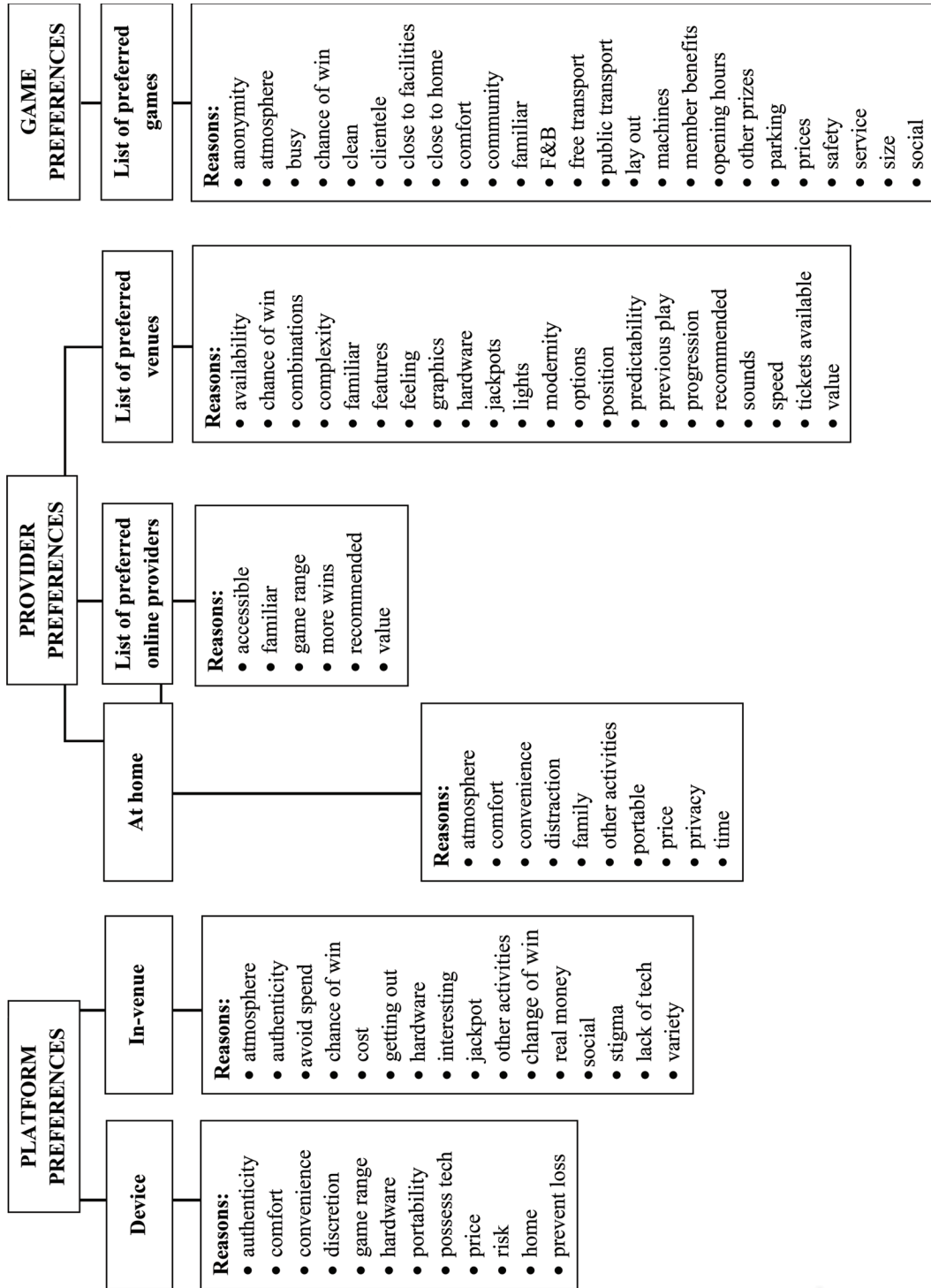


Figure B1. Flow chart of coding framework for interview data.

developed by the first, third and fourth authors in collaboration based on the initial study framework (see Thorne et al., 2016) and common themes that emerged from interview data. The list of 173 statements was then given to the first author, who independently allocated each statement into each code using the same framework. This statement allocation was near identical to the second author's, thus establishing inter-rater reliability.