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AN EMPIRICAL STUDY OF GAMING MACHINE PLAY AMONGST
FEMALE CLUB MEMBERS

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ABSTRACT

This paper helps address a deficiency of gender specific research into gambling. Using predominantly non-parametric tests, the paper analyses data from 1 257 female and 1 743 male respondents in a telephone survey of 3 000 members selected randomly from six large Sydney clubs. The results support female gambling stereotypes of lower individual bets and lower overall expenditure, but not of lower participation and frequency of play, and shorter duration of gambling sessions. Further, regular female gaming machine players appear more likely than non-regular female players to be migrants, either young or old, and from lower socio-economic groups. Regular female gaming machine players also appear to forgo the social side of playing machines, to spend more overall, and to be more at risk of problem gambling than non-regular female players. Finally, the distinguishing socio-demographic characteristics and machine playing behaviours of the regular male gaming machine players are very similar to those for the regular female gaming machine players.

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Introduction

This paper focuses on various aspects of gaming machine play by female members of registered clubs in Sydney, Australia. It draws on data collected from 1 257 female and 1 743 male respondents in a telephone survey of 3 000 members of six large clubs which collectively operated 2 509 gaming machines at the time of the survey. Three research questions are addressed to illuminate certain socio-demographic characteristics and types of machine playing behaviour that characterise female gaming machine players, that distinguish regular (weekly) female gaming machine players from non-regular female players, and that distinguish regular female and regular male gaming machine players. In this way, a profile of female gaming machine play amongst those surveyed is sketched, and differences between males and females illuminated. First however, relevant literature is briefly reviewed and the methodology for the study explained.

Prior Research into Female Gamblers

Traditionally, gambling has been viewed as a predominantly male leisure activity. Not all types of gambling have been equally accessible or culturally acceptable for women (Ohtsuka, Bruton, Borg, DeLuca and Imms 1995). The broad range of gambling activities that are socially acceptable for men, from the stock exchange to wagering on horse races, usually coexists with a depiction of males as individualistic risk-takers, innovators and speculators. Conversely, the depiction of women is different, one of a more feminine, caring, nurturing and less publicly speculative role (Syme 1996; Brown and Coventry 1997; Delfabbro 1998). These social 'norms' may have contributed to different patterns of gambling behaviour by men and women in terms of preferences, scope, frequency, expenditure, motivations and problem gambling, as discussed below.

Gambling Preferences, Participation and Scope

Accounting for a variety of research methods and contexts, investigations of gender differences indicate that the scope of gambling activities undertaken by women appears to be narrower than for men (Volberg and Banks 1994; Hraba and Lee 1996). In the United States (US) for example, Lesieur and Blume (1991) contend that women prefer legal forms of gambling such as gaming machines and casinos, and are less likely to use off or on-course betting. This contention is partly supported by other US research (Lindgren, Young, McDonald, Klenow and Schriener 1987; Mark and Lesieur 1992) which found that, while women are attracted to bingo, men participate in lotteries, casino games, sports betting and stock/commodity speculation. Also in the US, Hraba and Lee (1996) found similar gender patterns to those of Lindgren et al. (1987) for sports betting, stock/commodity speculation and bingo. However they also identified a higher percentage of women than men who gamble at casinos.

In the Australian context, preference patterns have been inconsistent. Using a variety of methods and non-random samples, Brown and Coventry (1997) reported that female gamblers in Victoria tend to prefer gaming machines and, to a lesser extent, casinos. A random survey of South Australian community gambling patterns (Delfabbro and Winefield 1996) found that women prefer bingo, and that men are more likely than women to have gambled on racing, sports, keno, lotto games, cards, dice, roulette and video card machines. Using a random door knock survey of Sydney metropolitan and NSW country populations, the Australian Institute for Gambling Research (1996) noted that an equal proportion of men and women nominated gaming machines as their favourite form of gambling. A replicated follow-up study (Australian Institute for Gambling Research 1998) found that women prefer lotto/lotteries, pools/bingo and gaming machines, but do not favour keno, cards, racing, casino and sports betting as much as men do. In the only national survey of gambling patterns in Australia, the Productivity Commission (1999:3.17) reported little gender bias in participation in machine gaming. Of the respondents who had gambled on gaming machines in Australian clubs in the previous twelve months, 48 % were female, slightly below their representation of 51 % in the adult population (Productivity Commission 1999: Appendix B).

While most studies cited above reported a preference amongst females for bingo and, to a lesser extent, gaming machines, results for most other types of gambling were variable. This may imply that gambling preferences are culturally based, being shaped by the context, availability and social acceptance of different types of gambling for males and females. Wide availability and cultural acceptance of machine gaming in NSW clubs suggests that gaming machines may feature highly amongst gambling preferences for female club members, as investigated in this paper.

Gambling Frequency and Expenditure

Prior research also is inconsistent in terms of gender differences in gambling frequency. In the US, Hraba and Lee (1996) contend that gender differences in the frequency of gambling are not clear from previous research. In Australia however, a NSW study (Australian Institute for Gambling Research 1996) identified frequency as higher amongst males for gambling on instant lottery, racing, poker machines, keno, card machines and pools. A repeat study (Australian Institute for Gambling Research 1998) found that women gambled less frequently than men did, but did not report results for different types of gambling.

Such variations in research findings are at least partly due to varying accessibility to different forms of gambling amongst jurisdictions. In Australia, increased access to gambling has been expected to result in a corresponding increase in female participation (Brown and Coventry 1997). Machine gambling in particular, now more readily available in Australian clubs, hotels and casinos, has increased women's involvement in gambling (Ohtsuka et al. 1995; Johnson and McLure 1997) to the point where they reportedly now gamble more than ever before (Brown and Coventry 1997). Nevertheless, studies in various Australian jurisdictions have consistently shown gambling expenditure to be lower amongst women than men (Australian Institute for Gambling Research 1994; Australian Institute for Gambling Research 1996; Delfabbro and Winefield 1996). However whether this is due to less frequent gambling, lower bet sizes or shorter gambling sessions is unclear.

Motivations for Gambling

In its national inquiry into Australia's gambling industries, the Productivity Commission (1999) noted that two major attractions of gambling are the chance of winning and the entertainment value in playing. Thus, motivations for gambling were assumed to be entertainment including pleasure and fun, the dream of winning and the enjoyment of visiting a venue. Walker (1992) assumes that motivations differ according to gambling type. Gaming machine players appear more likely to play to escape anxiety (Blaszczynski, Walker, Sagris and Dickerson 1997). But other research on gambling motivations (Loughnan, Pierce and Sagris 1996; Pierce, Wentzel and Loughnan 1997) has been inconclusive, with results possibly confounded by being related to gambling in general, not specific gambling types. Yet Delfabbro (1998) concludes there is a consistent gender difference, that females are more likely than males to treat gambling as a means of escape, to relax and to lessen negative mood states like anxiety and depression.

Given that much Australian research on gender differences in gambling motivations is difficult to typify due to inconsistencies in methods and sampling, certain factors have been assumed to influence the reasons why women gamble. Increased female participation in gambling has been assumed to emanate from greater freedom of choice for women, changing gender roles, increased financial independence and smaller families. Brown and Coventry (1997) suggest that motivators for female gambling, particularly on gaming machines, include cheap entertainment, a social outlet, escape from home duties, and female companionship in a safe and sometimes salubrious environment when unaccompanied by males. By providing opportunities for decision-making, often denied in the home and workplace, gambling can also increase women's sense of power (Brown and Coventry 1997). Thus, gambling can be rewarding behaviour for women, associated with fun, social contact, few obligations, companionship and the promise of independence and control in a neutral,

secure environment (Thomas 1995; Ewing 1996; Legge 1996; Johnson and McLure 1997; Pierce, Wentzel and Loughnan 1997).

Thus, it appears that escape and relaxation in a familiar venue may be motivators for female gaming machine players. It could therefore be speculated that women tend to gamble in ways that maximize their playing time. With gaming machines, this could be translated into preferences for lower denomination machines, smaller bets and lower overall expenditure, although there is limited research to date to support this contention.

Problem Gambling

As social accessibility of gambling increases in Australia, more women may seek the social outlet that gambling can provide. Thomas (1995) notes that when gambling offers women more choices, an opportunity for relaxation, monetary gain and social experiences, then one possible consequence is a likely increase in the number of women who become attached to gambling. The Australian Institute for Gambling Research (1998:61) reported in two replicated studies in NSW that the margin separating the prevalence of problem gambling amongst men and women has narrowed between 1995 and 1997. Although previous research has shown that problem gamblers are more likely to be male (Australian Institute for Gambling Research 1995; Australian Institute for Gambling Research 1996; Volberg 1996; Ladouceur 1996; Abbott and Volberg 1996), many Australian counselling services suggest that females are emerging as a new group of clients (Legge 1996; Prosser, Hing, Breen and Weeks 1997b; Johnson and McLure 1997). For many of these female clients, gaming machines are the major source of their problem (Dickerson 1995).

More recently, the Productivity Commission (1999) found males and females are equally represented as problem gamblers. Apart from the tendency of problem gambling to be associated with younger age groups, no other clear indicators, except for continuous modes of gambling, appear significantly associated with problem gambling. Yet the report commented on a new phenomenon, the feminisation of problem gambling, which has become apparent since the widespread introduction of gaming machines in most Australian jurisdictions during the 1990s (Productivity Commission 1999). During this time period, the prevalence of female problem gambling has reportedly increased threefold in Australia (Dickerson 1996), with 14 % of problem gamblers being female in 1991, increasing to 40 % in 1999, with most gambling problems associated with gaming machines. The Productivity Commission (1999) made explicit the powerful connection between problem gambling and availability of gambling, particularly continuous forms. This would explain why problem gambling is lowest amongst both males and females in the only Australian jurisdiction, Western Australia, where gaming machines are restricted to the state's one casino.

As noted earlier, escape has been proposed as a motivator for female gambling. According to Lesieur (1993), escape seekers find gambling a means of temporarily forgetting overwhelming problems, with gambling acting as a kind of anaesthetic. Once children start school, women have the time and opportunity to gamble, allowing them to take time out from family responsibilities and to enjoy psychological and emotional relaxation (Brown and Coventry 1997). Thomas (1995) comments that some women view their gambling as a reward for years spent parenting, supporting Lesieur's (1993) finding that gambling problems tend to emerge at an older age for women than men. In many studies, escape from personal anxiety, depression and relaxation are often given as reasons for gambling amongst female problem gamblers (Lesieur 1993; Thomas 1995; Quirk 1996; Pierce Wentzel and Loughnan 1997; Coman, Evans and Burrows 1996; Legge, 1996).

An unhappy home life can also enhance the need to escape, which in turn can precipitate gambling problems (Thomas 1995). In a US study, Lesieur (1987 in Lesieur 1993) found that female problem gamblers often had troubled childhoods (including physical and sexual abuse), marriages and adult lives. Their parents were more likely to be alcoholics, and several mentioned they had

married to escape the family. However, 62 % married men who were pathological gamblers, alcoholics, drug abusers or had other similar serious problems, while 29 % had physically abusive husbands. Chronic loneliness, resulting from the husband's frequent absence from home, was commonly reported. Also in the US, Hraba and Lee (1996) noted that alienation from a standard lifestyle, emanating from frequent marriages and residential moves, armed forces service and lack of religious affiliation, were predictors of female problem gambling. These factors might also lead to boredom, depression and frustration, factors that Ohtsuka et al. (1995) found to be more strongly associated with problem gambling than gender alone. Integration into a social world of gambling might help to relieve this boredom and loneliness (Hraba and Lee 1996).

Not only do the backgrounds and motivations of women with gambling problems appear to differ from those of their male counterparts, but the consequences may also vary. Women's responsibility for nurturing relationships can lead to feelings of shame if relationships falter or disintegrate. When combined with a gambling problem, the social stigma of failure tends to exacerbate their distress, sometimes leading to a destructive cycle of escape behaviours to cope with adverse events in their lives (Thomas 1995). In addition, not all women have independent incomes. Those with a low disposable income may feel stressed even about small debts, particularly on non-essential spending like gambling (Thomas, 1995). Further, a prison study of female pathological gamblers (Lesieur 1987 in Lesieur 1993) found that, to finance their gambling, females were more likely to be involved in forgery, fraud and prostitution, while males turned to burglary, hustling, con games and swindles.

Women with gambling problems may also differ in their propensity to seek help. Feelings of guilt at failing to live up to modern ideals and perceived social costs resulting from treatment entry, such as removal of children by child protection agencies or physical injury from abusive husbands, can sometimes deter women from seeking assistance (Thomas 1995). Some women however enter treatment earlier than men due to their greater stress over lower levels of debt which are often owed to family and friends rather than lending institutions, accompanied by the greater emotional attachment women tend to have with family and friends (Thomas 1995).

In summary, while the research is sparse, women appear to experience gambling and problem gambling differently from men, with early indications suggesting that women tend to associate gambling with escape from boredom, depression and stress (Brown and Coventry 1997). However, while some patterns of gambling behaviour, motivations, consequences and treatment-seeking can be identified for female gamblers and female problem gamblers, much is unresolved. A gender-based theory of gambling and problem gambling has yet to be developed.

Rationale and Research Questions for the Study

The analysis described in this paper attempts to fill four gaps or limitations in prior research. First, while there is growing recognition that gender differences may exist for participation in different types of gambling activities, frequency, preferences, expenditure and motivations (Delfabbro 1998), the literature has acknowledged a lack of gender specific research into gambling (Lesieur and Blume 1991; Thomas 1995; Brown and Coventry 1997; Johnson and McLure 1997). Non-gender specific research into gambling risks focusing only on issues particularly relevant to men (Johnson and McLure 1997), and of ignoring how, why, when and where women gamble and the impacts this has (Delfabbro 1998). Thus, this paper helps to address a general deficiency of gender specific research into gambling.

Second, certain stereotypes of female gambling patterns exist, such as participation in a narrower scope of gambling activities, less frequent gambling, lower expenditure, different motivations and lower prevalence of problem gambling. While research results have been inconclusive, these stereotypes are often assumed to apply to all types of gambling and in all contexts. Thus, the analysis in this paper tests whether such stereotypes apply to one type of gambling in one context –

gaming machine play by female members of registered clubs in Sydney. It does so via the first research question addressed via empirical research in relation to the sample under study:

1. Do gender stereotypes apply to females for gaming machine play?

Third, stereotypes of female gambling appear to have emanated from research comparing females to males and so rest on the assumption that female gamblers are a homogeneous group. This paper explores this assumption by comparing regular (weekly) to non-regular female gaming machine players to investigate whether such homogeneity does exist in terms of certain socio-demographic characteristics and types of machine playing behaviour. Thus, the second research question addressed via empirical research in relation to the study sample is:

2. How do regular female gaming machine players differ from non-regular female gaming machine players in terms of certain socio-demographic characteristics and types of machine playing behaviour?

Finally, previous research into male and female gambling patterns has tended to compare entire samples of male gamblers to female gamblers, which may mask similarities and differences between regular and non-regular gamblers within these two groups. This paper addresses this limitation by comparing regular female gaming machine players to regular male gaming machine players to investigate both whether gender stereotypes apply to females who play gaming machines regularly and how male and female regular gaming machine players may differ in terms of certain socio-demographic characteristics and types of machine playing behaviour. It does so via the third research question investigated empirically for this study:

3. How do regular female gaming machine players differ from regular male gaming machine players in terms of certain socio-demographic characteristics and types of machine playing behaviour?

Research Methodology

This research focused on New South Wales (NSW) registered clubs because of their central role as providers of machine gambling. At the time of the study in 1996-97, registered clubs were the only venues in NSW legally allowed to operate a particular type of gaming machine, known as poker machines, outside the then temporary Sydney Harbour Casino. At that time, over 1 400 NSW clubs collectively operated over 62 000 machines, generating about \$2 billion in gross profits and over \$400 million in state taxes (NSW Department of Gaming and Racing 1996:23). Their only direct competitor at the time, the temporary casino, operated just 500 machines.

Of the top 30 clubs in NSW by gaming machine profits (NSW Department of Gaming and Racing 1996), 25 are located in Sydney. The researchers gained the cooperation of six of these 25 clubs and the authority to survey a sample of their members, selected randomly by the researchers from a total of about 190 000 members contained in their membership lists. The sample was restricted to members residing in Sydney. A marketing research company was commissioned to conduct a telephone survey of the sample. While this method had some limitations, such as excluding people with no telephones and non-English speakers, on a sensitive topic like gaming habits it was pragmatic and less intrusive than a household interview.

A total of 16 642 households in the sample were contacted to achieve 3 000 interviews. The non-respondents comprised:

- 4 955 refusals;
- 4 206 who said they were not club members;

- 469 business numbers with the individual respondent not located;
- 610 who were not suitable for reasons such as hearing impairments, language difficulties and the like;
- 233 who were not available for the duration of the survey;
- 134 who terminated the interview before completion;
- 3 035 answering machines.

Each telephone interview took about 20 minutes and addressed four main areas relevant to this paper:

- gaming machine playing behaviours of the respondents, including usual venue, usual company, reasons for play, preferred types of machines, and time and money spent playing (net expenditure);
- the South Oaks Gambling Screen (Lesieur and Blume 1987) to measure the prevalence of problem gambling;
- an adapted South Oaks Gambling Screen (Lesieur and Blume 1987) to measure problem gambling related specifically to machine gambling. For example, the original question ‘did you ever gamble more than you intended to in the last 6 months?’ was changed to ‘did you ever gamble on poker machines more than you intended to in the last 6 months?’ Remaining SOGS items were adapted in similar fashion;
- socio-demographic characteristics of the respondent based on categories used in the Australian Bureau of Statistics (ABS) Census.

This survey was conducted as part of a larger project for the NSW Casino Community Benefit Fund to examine various aspects of gaming machine play in NSW clubs, with other results reported elsewhere (Prosser, Hing, Breen and Weeks 1996, 1997a, 1997b). So, while the original purpose of the survey was not to focus on female gambling, the large databank collected allowed subsequent analysis of gaming machine play amongst the female respondents.

Data were analyzed using non-parametric tests, principally cross-tabulation and chi-square. This was essential as most variables were categorical. In the few cases where variables were continuous, like net session expenditure and net weekly expenditure on gaming machines, T-tests were used to investigate the differences between males and females.

Addressing the three research questions posed earlier in this paper entailed four main steps in data analysis:

- comparing patterns of gaming machine play between male and female gaming machine players to ascertain if female stereotypes apply;
- comparing socio-demographic characteristics and machine playing behaviours between regular (at least weekly) female and non-regular (less than weekly) female gaming machine players;
- comparing socio-demographic characteristics between regular (at least weekly) male and non-regular (less than weekly) male gaming machine players;
- comparing socio-demographic characteristics and machine playing behaviours between regular female gaming machine players and regular and male gaming machine players.

Results

In this section, the results for each of the three research questions are presented. First however, Table 1 shows the gender breakdown of the study sample and the respondents' participation in machine gaming. While it is not known whether these statistics are representative of all NSW club members, the proportion of respondents reporting participation in machine gaming is much higher for the club sample than the general population, with the Productivity Commission finding that only 38.6 % of the population it surveyed had played gaming machines in the previous 12 months (1999:3.16).

INSERT TABLE 1 ABOUT HERE

Research Question 1: Do gender stereotypes apply to females for gaming machine play?

As noted in the previous literature review, stereotypes of female gambling include lower participation in gambling, less frequent gambling, lower bets and overall expenditure, and shorter gambling sessions. The focus of this first stage of investigation was to explore whether these stereotypes are sustained for machine gambling amongst the female survey respondents.

In terms of participation in and frequency of gambling on gaming machines, Table 1 indicates that, amongst the 3 000 respondents, the females are just as likely as the males to play gaming machines, and that there is little difference in the proportions of males and females who are regular or weekly gaming machine players. Thus, the stereotype of females having lower participation rates and gambling less frequently than males (at least on a weekly basis) is debatable, at least as it applies to machine gambling amongst the respondents.

To examine different aspects of machine playing behaviour, the 787 females in the sample who play gaming machines were compared with 1 092 males who play gaming machines. The outcomes show that the females had somewhat different playing behaviours than the males. The females were more likely than the males to:

- play machines alone or with other family members, rather than with their spouse, friends or work colleagues ($\chi^2 = 40.614$; $df = 5$; $p \leq 0.000$);
- play 2c & 5c gaming machines, rather than higher denomination machines ($\chi^2 = 37.868$; $df = 5$; $p \leq 0.000$);
- play gaming machines for more than one hour per session, rather than a lesser amount of time ($\chi^2 = 25.651$; $df = 11$; $p \leq 0.007$);
- have lower net gaming machine session expenditure ($F = 8.016$; $p \leq 0.005$; see Table 2 for descriptive statistics);
- have lower net weekly gaming machine expenditure ($F = 23.305$; $p \leq 0.000$; see Table 2 for descriptive statistics).

However, the females were less likely than the males to:

- always/often bet on more than one credit at a time ($\chi^2 = 17.662$; $df = 5$; $p \leq 0.003$).

INSERT TABLE 2 ABOUT HERE

The results indicate that these female club members are more likely to exhibit gaming machine playing behaviour that maximises playing time, than are the male club members. Playing lower denomination machines, wagering lesser amounts per session and spending less overall on gaming

machines, are tactics evidently used to lengthen playing time. However, the reason for this behaviour is unclear, with no significant differences between the females and males in their reported motivations for playing gaming machines.

In summary, the survey results support female stereotypes of lower individual bets and lower overall net expenditure, but not of lower participation, lower frequency of play (at least on a weekly basis) and shorter gambling sessions.

Research Question 2: How do regular female GM players differ from non-regular female GM players?

The second stage of investigation explored whether female gaming machine players are a homogeneous group by examining whether regular female gaming players could be distinguished from non-regular female players in terms of socio-demographic characteristics and types of playing behaviour.

The results indicate that certain socio-demographic characteristics appear to distinguish regular from non-regular female gaming machine players. The regular female players were more likely than non-regular female players to:

- be 18-24 years old, and 60 years and over ($\chi^2 = 37.434$; $df = 15$; $p \leq 0.001$);
- have no dependent children ($\chi^2 = 18.012$; $df = 2$; $p \leq 0.000$);
- be renting from the Department of Housing or living with parents ($\chi^2 = 18.775$; $df = 8$; $p \leq 0.016$);
- have low levels of education ($\chi^2 = 23.967$; $df = 9$; $p \leq 0.004$);
- be unemployed, retired or on a pension ($\chi^2 = 31.295$; $df = 8$; $p \leq 0.001$);
- be blue collar workers ($\chi^2 = 26.559$; $df = 11$; $p \leq 0.005$);
- have low annual household incomes often sourced from government benefits ($\chi^2 = 39.745$; $df = 17$; $p \leq 0.001$);
- be born in Asia, Europe or the United Kingdom ($\chi^2 = 18.035$; $df = 7$; $p \leq 0.012$).

Thus, the female gaming machine players are not a homogeneous group, at least when divided into regular and non-regular players. Regular players appear more likely to be either young or old, to be from lower socio-economic groups, and to be migrants.

This lack of homogeneity also was apparent when differences in gaming machine playing behaviours amongst the regular and non-regular female players were examined. The regular female players were more likely than non-regular players to:

- play machines alone ($\chi^2 = 47.220$; $df = 5$; $p \leq 0.001$);
- play lower denomination machines ($\chi^2 = 79.390$; $df = 5$; $p \leq 0.000$);
- always or often bet more than one credit at a time ($\chi^2 = 16.551$; $df = 5$; $p \leq 0.005$);
- always or often bet on more than one play line at a time ($\chi^2 = 46.807$; $df = 5$; $p \leq 0.001$);
- have longer playing sessions ($\chi^2 = 87.856$; $df = 11$; $p \leq 0.000$);
- spend more per session ($F = 82.604$; $p \leq 0.000$; see Table 3 for descriptive statistics);
- spend more per week ($F = 369.977$; $p \leq 0.000$; see Table 3 for descriptive statistics);
- source playing money from a specific gambling budget or from bank savings ($\chi^2 = 21.612$; $df = 8$; $p \leq 0.006$);
- score above 5 on the SOGS ($\chi^2 = 32.534$; $df = 1$; $p \leq 0.001$; see Table 4 for frequency distribution of SOGS scores);
- score above 5 on the gaming machine SOGS ($\chi^2 = 32.271$; $df = 1$; $p \leq 0.001$; see Table 4 for frequency distribution of gaming machine SOGS scores).

INSERT TABLE 3 ABOUT HERE

INSERT TABLE 4 ABOUT HERE

The results above indicate that the regular female gaming machine players seem to not only play more frequently, but to forgo the social side of playing machines, to spend more time and money overall, and to be more at risk of problem gambling than non-regular female players. Further, the style of play differs, with the regular female players more likely than their non-regular counterparts to bet on more than one credit and playing line at a time, even though they tend to play lower denomination machines. As the Productivity Commission (1999: Appendix B) has noted, it is not the denomination chosen which is relevant but the overall intensity of play, with gamblers deciding how to allocate their budget depending on their available time. The regular female gaming machine players in this sample appear willing to spend more time on gambling, while simultaneously spreading their risk over many playing lines on low denomination machines and by playing in a way where any wins will be greater due to the extra credits wagered per line.

Research Question 3: How do regular female GM players differ from regular male GM players?

The third stage of investigation compared certain characteristics of regular female gaming machine players to those of regular male gaming machine players to examine whether the gender stereotypes apply to the females who play gaming machines regularly, compared to their male counterparts. To conduct this comparison, it was first necessary to compare regular male gaming machine players to non-regular male players.

The results indicate that certain socio-demographic characteristics differ markedly between regular male gaming machine players and non-regular male players. The regular male players were more likely than the non-regular male players to:

- be either young or old ($\chi^2 = 52.545$; $df = 15$; $p \leq 0.001$);
- be unpartnered ($\chi^2 = 30.006$; $df = 6$; $p \leq 0.000$);
- have no dependent children ($\chi^2 = 25.713$; $df = 1$; $p \leq 0.000$);
- be renting their home ($\chi^2 = 32.110$; $df = 8$; $p \leq 0.000$);
- have low levels of education ($\chi^2 = 28.674$; $df = 9$; $p \leq 0.001$);
- be unemployed, retired, a pensioner or working part-time ($\chi^2 = 14.349$; $df = 7$; $p \leq 0.045$);
- have low levels of personal income ($\chi^2 = 53.981$; $df = 17$; $p \leq 0.001$);
- have low levels of household income ($\chi^2 = 47.193$; $df = 17$; $p \leq 0.000$);
- be born in Asia or Europe ($\chi^2 = 15.587$ $df = 7$ $p \leq .029$).

Importantly, these distinguishing characteristics of the regular male gaming machine players are very similar to those for the regular female gaming machine players in the sample. Both groups were more likely than non-regular players of the same gender to:

- be either young or old;
- have no dependent children;
- be renting or living with parents;
- have low educational levels;
- be a pensioner, retired, unemployed and on government benefits;
- have low income levels;
- be born in Asia or Europe.

When further comparing the machine playing behaviours of the female regular players to the male regular players, no significant differences were found for their stated reasons for playing gaming machines, their frequency of betting on more than one credit and one play line, their net session and net weekly expenditure, and their likelihood of scoring above 5 on the SOGS and the gaming machine SOGS (see Table 5 for frequency distributions of SOGS scores).

INSERT TABLE 5 ABOUT HERE

However, the regular female players were more likely than the regular male players to:

- play machines alone ($\chi^2 = 29.087$; $df = 6$; $p \leq 0.001$);
- play lower denomination machines ($\chi^2 = 15.319$; $df = 6$; $p \leq 0.018$);
- have longer playing sessions ($\chi^2 = 24.040$; $df = 12$; $p \leq 0.020$);
- source playing money from housekeeping money ($\chi^2 = 32.603$; $df = 9$; $p \leq 0.001$).

Thus, the results presented in this section indicate more similarities than differences between regular male and female gaming machine players in terms of socio-demographic characteristics and machine playing behaviours. Thus, the gender stereotypes of lower expenditure, shorter gambling sessions, different motivations for gambling and lower prevalence of problem gambling do not hold up for the regular female players in the sample. There appear to be more differences between regular and non-regular gamblers of both sexes, than between regular male and female gaming machine players.

Conclusions and Implications

This research has provided a snapshot of certain aspects of gaming machine play amongst a sample of female club members. While subject to the usual limitations of survey research and quantitative methods, it does sketch a profile of female gambling on gaming machines and illuminate some similarities and differences between the male and female respondents and between the regular and non-regular gaming machine players. In summary, the results show marked gender differences in gaming machine play overall for the whole sample, few gender differences in socio-demographic characteristics for regular players, and few gender differences in gaming machine playing behaviours for regular players. In this way, the study contributes to addressing the four gaps or limitations of prior research identified earlier - it helps to address a general deficiency of gender-specific research into gambling, it tests certain stereotypes of female gambling patterns in the context of one type of gambling (machine gambling), it shows that female gamblers are not a homogeneous group by comparing regular to non-regular gaming machine players, and it illuminates similarities between regular female and regular male gaming machine players previously masked by studies that have compared only entire samples of female and male gamblers.

More specifically, when the whole sample of gaming machine players is examined, results tend to confirm traditional stereotypes of lower individual bets and overall net expenditure by females, but not those of lesser participation and frequency of play (at least on a weekly basis), nor shorter duration of gambling sessions. Further, the research shows that female gaming machine players are not a homogeneous group, but that regular players can be distinguished from non-regular players along a range of socio-demographic characteristics and gaming machine playing behaviours. In fact, the socio-demographic characteristics and machine playing behaviours of the regular female players are more similar to those for the regular male players than for the non-regular female players.

Three general implications of the findings can be drawn here. First, the two SOGS instruments found regular players are more at risk of problem gambling than are non-regular players. This is hardly a novel finding, with time and money spent on gambling well recognised as functionally associated with problem gambling. More importantly however, these regular players, both males and females, have similar and fairly distinctive socio-demographic characteristics. Thus, problem gambling treatment services, community education and responsible provision of gambling strategies can focus on populations where these characteristics predominate.

Second, it appears that female gamblers are not a homogeneous group, at least for this sample of gaming machine players. Future research into female gambling patterns needs to look beyond just overall gender comparisons to also consider sub-groups of female gamblers. While the focus in this paper was on regular and non-regular female gaming machine players, further research might, for example, examine differences between high and low spenders, those who experience problems and those who do not, or groups of females who prefer other types of gambling.

Finally, qualitative studies into female gambling patterns need to be encouraged. While some commendable studies have been conducted to date, further research is needed to gain a better understanding of the many aspects of female gambling that remain unknown.

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Table 1
Gender Breakdown and Gaming Machine Participation in the Study Sample

3 000 club members:

- 1 743 males (58 % of the 3 000 respondents)
- 1 257 females (42 % of the 3 000 respondents)

1 879 play gaming machines (63 % of the 3 000 respondents):

- 1 092 males (63 % of the male respondents)
- 787 females (63 % of the female respondents)

566 regular (weekly) gaming machine players (19 % of the 3 000 respondents):

- 347 males (20 % of the male respondents)
- 219 females (17 % of the female respondents)

Table 2
Descriptive Statistics for Net Session and Weekly Gaming Machine Expenditure of
Female and Male Gaming Machine Players

	Mean	Std Error of Mean	Median	Std Deviation	Variance	Minimum	Maximum
Female Net Session Expenditure (n=787)	\$23.05	1.3808	\$10.00	38.69	1496.79	\$0.00	\$500.00
Male Net Session Expenditure (n = 1092)	\$27.77	1.4976	\$15.00	49.44	2444.74	\$0.00	\$1000.00
Female Net Weekly Expenditure (n=787)	\$16.66	1.4345	\$5.00	40.09	1607.10	\$0.00	\$400.00
Male Net Weekly Expenditure (n = 1092)	\$25.57	1.6936	\$5.00	55.71	3103.31	\$0.00	\$600.00

Table 3
Descriptive Statistics for Net Session and Weekly Gaming Machine Expenditure of Regular and Non-Regular Female Gaming Machine Players

	Mean	Std Error of Mean	Median	Std Deviation	Variance	Minimum	Maximum
Regular Female Net Session Expenditure (n=219)	\$36.22	3.7159	\$20.00	54.10	2927.26	\$0.00	\$500.00
Non-Regular Female Net Session Expenditure (n = 1038)	\$10.06	.7425	\$5.00	23.89	570.59	\$0.00	\$500.00
Regular Female Net Weekly Expenditure (n=219)	\$47.34	4.4664	\$30.00	64.72	4189.19	\$0.00	\$400.00
Non-Regular Female Net Weekly Expenditure (n = 1038)	\$3.25	.3581	\$0.00	11.00	121.08	\$0.00	\$230.00

Table 4
**Scores on the SOGS and Gaming and Gaming Machine SOGS for Regular and Non-
 Regular Female Gaming Machine Players**

	SOGS Score 1-4	SOGS Score 5-9	SOGS Score 10+	GM SOGS Score 1-4	GM SOGS Score 5-9	GM SOGS Score 10+
Regular Female Gaming Machine Players (n = 219)	194	21	4	199	17	3
Non-Regular Female Gaming Machine Players (n = 1038)	1027	11	0	1032	6	0

Note: Differences on the SOGS and gaming machine SOGS scores were compared between regular and non-regular female gaming machine players using a cutoff of 5 only, as numbers were too small for comparisons using a cutoff of 10.

Table 5
Scores on the SOGS and Gaming and Gaming Machine SOGS for Regular Female and Regular Male Gaming Machine Players

	SOGS Score 1-4	SOGS Score 5-9	SOGS Score 10+	GM SOGS Score 1-4	GM SOGS Score 5-9	GM SOGS Score 10+
Regular Female Gaming Machine Players (n = 219)	194	21	4	199	17	3
Regular Male Gaming Machine Players (n = 347)	304	36	7	317	24	6

Note: Differences on the SOGS and gaming machine SOGS scores were compared between regular female and regular male gaming machine players using a cutoff of 5 only, as numbers were too small for comparisons using a cutoff of 10.