

# 2015 NORTHERN TERRITORY GAMBLING PREVALENCE AND WELLBEING SURVEY REPORT

April 2017



# **2015 Northern Territory Gambling Prevalence and Wellbeing Survey**

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**Menzies School of Health Research**

Northern Territory Gambling Prevalence and Wellbeing Survey 2015

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## **PREFACE**

This report presents the first release of findings from the second population level gambling prevalence survey done in the Northern Territory (NT), some 10 years after the first. The information contained in this report will be useful to a range of stakeholders including government, policy-makers, counselling services, researchers, the community and industry. The survey methodology and questions included in the 2015 survey differ slightly to that used in 2005 survey, due to refinements in how gambling surveys are carried out, a move towards public health approaches to reducing gambling-related harm, and the declining number of households with a working landline telephone. However, the report does include comparisons between the 2005 and 2015 surveys, where data item definitions are the same or similar. The inclusion of a mobile sample in this survey has enabled improved coverage across different demographic groups in the Northern Territory. This, along with improvements to the population weighting in the 2015 survey means estimates for problem gambling will be more accurate for the Northern Territory, and problem gambling risk estimates (with margins of error) can now be produced separately for the Indigenous and non-Indigenous populations.

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## EXECUTIVE SUMMARY

### Background

This report presents findings from the 2015 Northern Territory Gambling Prevalence and Wellbeing Survey, carried out from October to December in 2015. The results will be of interest to regulators, government policy makers in the areas of gambling licencing and regulation, public health and other related social and public policy researchers, non-government organisations, industry, and the broader community.

### Methods

As with the 2005 Gambling Prevalence Survey, a telephone sampling approach was used, though the 2015 survey used dual frame sampling, which included, in addition to the landline telephone frame, three mobile phone lists, from which numbers were randomly selected. The consent rate was for 28% for landlines and 44% for mobile phones, with an overall consent rate of 31%.

The survey data was weighted to the Australian Bureau of Statistics 2015 estimated adult resident population for the Northern Territory, with separate population weights developed for the non-Indigenous and Indigenous samples. This separate weighting approach means estimates from this survey will be more representative of the total NT population, compared with the previous survey, where population weights did not reflect the Indigenous population separately.

All data in the report, except that in Chapter 10, comes from either the 2005 Gambling Prevalence Survey or the 2015 Gambling Prevalence and Wellbeing Survey. Data used in Chapter 10 was obtained from the Northern Territory Government Department of Business and included data on electronic gaming machine (EGM) player losses, percentage return to player, and number of EGMs.

The survey contained over 80 questions covering the following domains:

- *Gambling participation* (11 activities, frequency of play, mode/venue, expenditure for highest spend activity)
- *Problem gambling* (assessed using the Problem Gambling Severity Index)
  - ATM access and whether staff spoke to at-risk gamblers about their gambling
  - Types of negative consequences because of their own gambling and help-seeking behaviour for at-risk gamblers
- *Negative consequences because of own gambling* for at-risk gamblers (types of negative consequences, and help-seeking behaviour)
- *EGM specific questions* (regular venue, distance to regular venue, whether smoking ban or moving ATMs out of sight changed EGM spending)
- *Gambling Motivations* (18 item module measuring five types of gambler motivations – ego, escape, excitement, social, and money)
- *Negative consequences because of another person's gambling* (types of negative consequences, relationship to person whose gambling affecting them, and help-seeking behaviour)
- *Community opinions on EGM numbers* in hotels, clubs and the casino
- *Self-assessed health and health risk behaviours* (self-assessed health, problematic alcohol consumption, smoking status and smoke-free home status, exposure to personal stressors, and financial stress)

- *Socio-demographic and socioeconomic factors* (age, gender, region (Darwin/Palmerston, Alice Springs, Regional Towns (includes Katherine, Tennant Creek, and Nhulunbuy) and the Rest of NT), Indigenous status, main language spoken at home, household type, labour force status (including fly-in fly-out worker), personal income, student status and highest education)

Analyses contained in this report included comparisons with the 2005 survey, cross-tabulations of socio-demographic, socioeconomic and health risk factors with primary outcomes including the PGSI, gambling participation, community opinions on EGM numbers and negative consequences from another person's gambling. Statistical tests were carried out for comparisons with the previous survey and cross-tabulations within the 2015 survey. Time trends (2003/4 to 2014/15) for number of EGMs, EGM player losses, player loss per machine and percentage player returns were plotted and visually examined for casinos and community venues (clubs and hotels) separately. EGM trends are reported for unadjusted and adjusted player loss data, with the adjusted data also known as 'real', with all dollar values pegged to the 2014/15 dollar value.

## **Results**

### ***Gambling participation***

Annual gambling participation declined significantly between 2005 and 2015 in the NT adult population for:

- Any gambling (including raffles) from 85% to 76%
- Any gambling (excluding raffles) from 73% to 68%
- Lotteries from 53% to 46%
- Raffles from 65% to 43%
- Electronic gaming machines (EGMs or pokies) from 27% to 23%
- Instant scratch tickets from 29% to 18%.

Annual gambling participation increased significantly between 2005 and 2015 in the NT adult population for:

- Racetrack betting from 19% to 23%
- Sports betting from 5% to 8%.

There was no statistically significant change in annual gambling participation between 2005 and 2015 in the NT adult population for:

- Keno (increased from 23% to 25%)
- Casino table games (increased from 11% to 13%)
- Informal games such as cards or pool (decreased from 4% to 3%)
- Bingo (steady at 2%)
- Other gambling (decreased from 1% to 0.5%).

Participation in non-sports betting was not asked in the 2005 survey, and just 0.3% of the NT adult population participated in this type of gambling in 2015.

Compared with other jurisdictions in Australia, participation in keno, casino table games, sports betting and any gambling was higher in the Northern Territory.

Including raffle only gamblers, annual participation in any gambling decreased significantly between 2005 and 2015 in the regions of: Darwin/Palmerston (88% to 79%), Alice Springs (84% to 70%), and Regional Towns (87% to 77%). Annual participation any gambling (including raffles) decreased in the Rest of the NT (80% to 69%), but this decline was not statistically significant.

There was significant variation in annual participation across regions for lotteries, raffles, keno, instant scratch tickets, and sports betting, with participation generally lower in the Rest of the NT and highest in Darwin/Palmerston. Racetrack betting was significantly higher in Regional Towns (29%, compared with all other regions less than 24%).

In 2015, there was no significant difference in annual participation in 'any gambling' between men (76%) and women (76.1%), but men had significantly higher participation than women in keno (28% cf. 22%), casino table games (17% cf. 9%), sports betting (12% cf. 3%) and informal games (4% cf. 1%).

Generally, the lower levels of participation observed across most gambling activities in 2015 compared with 2005 occurred similarly for both men and women. However, for racetrack betting, women significantly increased their participation (17% to 22%), while men had a marginally non-significant increase (21% to 24%), and similarly for casino table games, women significantly increased their participation (4% to 9%), while the change was not significant for men (16% to 17%). The increase between 2005 and 2015 in sports betting was only significant for men (8% to 12%).

There were some clear and significant age-related patterns in gambling participation for casino table games (decreasing participation with age), sports betting (decreasing with age), lotteries (increasing with age), informal games (decreasing with age) and raffles (increasing with age).

Between 2005 and 2015 there was little change in gambling participation for those aged 55 years or more across all activities, though there were significant declines for raffles (64% to 45%) and instant scratch tickets (24% to 16%). Participation in lotteries and raffles declined across all age groups (18-24, 25-34, 35-44, 45-54, and 55 years or more), except for 35-44 years, where raffles participation declined significantly.

The decreases between 2005 and 2015 in annual participation across most activities were also observed for weekly (and in some instances monthly) gambling, with significant decreases in weekly gambling for any gambling (35% to 22%), lotteries (33% to 22%), sports betting (18% to 8%), EGMs (9% to 6%), instant scratch tickets (8% to 4%), casino table games (2% to 1%).

More detailed information on associations between demographic and socioeconomic factors and participation in each activity, including mode/venue where gambled, and comparisons between 2005 and 2015 in frequency of gambling for different activities can be found in Chapter 3.

### **Self-reported highest spend gambling activity**

Across the NT, 34% of gamblers nominated lotteries as their highest spend gambling activity, followed by raffles/sweeps (19%), EGMs (13%), racetrack betting (12%), keno (8%), and casino table games (7%).

Compared with men, women were significantly more likely to nominate as a highest spend activity raffles/sweeps (14% cf. 24%), EGMs (10% cf. 14%) and bingo (0.3% cf. 1%). Compared with women, men were significantly more likely to have as a highest spend activity racetrack betting (10% cf. 14%), casino table games (4% cf. 11%), and sports betting (0.6% cf. 3.5%).

There was an increasing trend by age in select lotteries as a highest spend activity, while there was a decreasing trend by age in selecting keno, casino table games, instant scratch tickets, sports betting, informal games and bingo as the highest spend activity. There was significant variation across age groups in selecting EGMs as the highest spend activity, with those greater than 55 years and less than 35 years most likely to nominate EGMs.

### **Gamblers motivations**

The most commonly endorsed gambling motivation was the social facet of motivation (23.9%), followed by excitement (17.3%), money (15.3%), escape (5.7%), and ego (2.6%). Gamblers' motivations did not differ significantly across regions. Men endorsed the gambling motivations of social, excitement, and money significantly more than women did. Only the social gambling motivation showed a significant association with age, with endorsement decreasing with age. However, the excitement motivation showed a similar, but non-significant trend.

### **Problem gambling, negative consequences and help-seeking behaviour**

The 2015 problem gambling prevalence in the NT was 0.68% with the 95% confidence interval around the estimate ranging from 0.37% to 1.27%; which was approximately 1,200 adults. Prevalence of moderate risk gambling was 2.90% (95% CI 2.05% to 4.09%) or about 5,100 adults, and low risk gambling 8.13% (95% CI 6.55% to 10.06%) or about 14,400 adults.

<b>PGSI group (score)</b>	<b>Prevalence %</b>	<b>Prevalence +/- SE<sup>1</sup></b>	<b>Prevalence +/- 95% CI<sup>2</sup></b>	<b>Population N</b>
Problem gamblers (8+)	0.68	0.46 - 0.90	0.37 - 1.27	1,206
Moderate risk gamblers (3-7)	2.90	2.39 - 3.41	2.05 - 4.09	5,128
Low risk gamblers (1-2)	8.13	7.24 - 9.02	6.55 - 10.06	14,383
No/very low risk gambler (0)	64.33	62.94 - 65.72	61.55 - 67.01	113,807
Non-gambler	23.96	22.73 - 25.19	21.64 - 26.45	42,392
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>176,916</b>

<sup>1</sup> SE = standard error, <sup>2</sup> CI = confidence interval

The 2005 Gambling Prevalence Survey only asked regular gamblers (at least weekly gamblers excluding lotteries, raffles and instant scratch tickets) the PGSI, while the 2015 survey asked all gamblers. Since the 2005 survey, research has found that excluding non-regular gamblers from problem gambling estimates leads to under-estimates across all categories of the PGSI, but more so for low and moderate risk gamblers. Therefore, to make comparisons between the two surveys, non-regular gamblers (according to the 2005 definition) were filtered out from the 2015 data. The table below shows there were no significant changes in estimates of PGSI



categories between the 2005 and 2015 surveys amongst regular gamblers. Comparing PGSI estimates for regular and all gamblers in the 2015 survey, problem gambling prevalence was 0.44% and 0.68% respectively, moderate risk gambling was 0.85% and 2.90%, and low risk gambling 1.29% and 8.13%. These are large and significant differences (under-estimation using regular gambler category), and highlight how survey methodology can severely affect estimates of problem gambling risk. The differences between PGSI estimates for regular and all gamblers equate to an additional 430 problem gamblers, 3,600 moderate risk gamblers and 12,100 low risk gamblers. The differences observed in problem gambling risk estimates between regular and all gamblers in 2015 confirm previous research that all risk categories of the PGSI are grossly under-estimated when only administering it to regular gamblers and not all gamblers.

PGSI group (score)	2005		2015	
	% (SE)	Lower-Upper 95% CI	% (SE)	Lower-Upper 95% CI
Regular gamblers				
Problem gambler (8+)	0.64 (0.12)	0.44-0.92	0.44 (0.19)	0.19-1.01
Moderate risk (MR) gambler (3-7)	1.57 (0.27)	1.12-2.18	0.84 (0.24)	0.48-1.47
Low risk gambler (1-2)	2.01 (0.26)	1.55-2.59	1.17 (0.29)	0.72-1.89
No/very low risk gambler (0)	3.28 (0.33)	2.70-3.99	2.99 (0.38)	2.33-3.82
Non-regular gambler	65.53 (1.43)	62.67-68.29	70.6 (1.29)	68.01-73.07
Non-gambler	26.97 (1.33)	24.44-29.67	23.96 (1.23)	21.64-26.45

NOTE: Only regular gamblers were administered the PGSI in the 2005 survey. A regular gambler is someone who gambled at least weekly, excluding raffles, lottery & instant scratch tickets

PGSI estimates for the NT did not differ substantially from other jurisdictions around Australia, though estimates for moderate risk gamblers were the highest in Australia at 2.9%, and similar to New South Wales.

Problem gambling prevalence estimates across regions had large standard errors, which limited the power to determine statistical differences. However, grouping all PGSI risk categories into a total at-risk group gives prevalence across the Northern Territory of 11.7%. The association between problem gambling risk and region was marginally non-significant, with the highest prevalence of at-risk gamblers in Alice Springs (14.6%), followed by Darwin/Palmerston (11.6%), Rest of the NT (10.9%), then Regional Towns (7.5%).

Informal games (5.8%), EGMs (2.7%), sports betting (2.5%), casino table games (2.3%), keno (2%) and racetrack betting (1.6%) were all significantly associated with a higher risk of problem gambling, compared with 0.9% amongst all gamblers. There was significantly higher prevalence of moderate and low risk gambling amongst gamblers who participated in EGMs (7.8% & 18.6%), sports betting (11.2% & 18.5%), casino table games (7.9% & 24.1%), keno (6.5% & 15.5%) and racetrack betting (6.7% & 14.1%), compared with 3.8% and 10.7% for moderate and low risk gambling respectively for all gamblers. All risk categories of the PGSI increased significantly as the number of different gambling activities a person participated in increased and a similar association was observed for all gambling frequency.

A large number of socio-demographic, socioeconomic, and health risk variables had a significant bivariate association with problem gambling risk, and these associations are included in Chapter 6.

A multivariable statistical model (negative binomial regression) was developed to identify which of the simple bivariate associations remained significant with PGSI score, while controlling for other explanatory variables that had a significant association with PGSI score. The following variables were all significantly associated with PGSI score in the multivariable model:

- EGM frequency of gambling
  - Weekly EGM gamblers were 13.28 times the average PGSI score as non-EGM gamblers (largest effect size in the model)
  - Monthly EGM gamblers were 6.38 times the average PGSI score as non-EGM gamblers
- Casino table games frequency of gambling
  - Less than monthly casino table games gamblers were 2.39 times the average PGSI score as non-casino table games gamblers
- Number of gambling activities
  - Three activity gamblers were 2.94 times the average PGSI score as gamblers only playing one activity
  - Four activity gamblers were 2.45 times the average PGSI score as gamblers only playing one activity
  - Five or more activity gamblers were 3.68 times the average PGSI score as gamblers only playing one activity
- Highest education level
  - Less than Year 10 educated gamblers were 2.67 times the average PGSI score as gamblers with a Bachelor degree or higher
- Main language spoken at home
  - Not speaking English at home gamblers were 5.03 times the average PGSI score as English at home speaking gamblers
- Indigenous status
  - Gamblers identifying as Indigenous were 1.94 times the average PGSI score as non-Indigenous gamblers
- Running out of money for essentials
  - Gamblers who ran out of money for essentials in the last 2 weeks were 7.56 times the average PGSI score as gamblers who did not run out of money for essentials (second largest effect size)
  - Gamblers who ran out of money for essentials in the last 12 months were 2.48 times the average PGSI score as gamblers who did not run out of money for essentials
- Personal alcohol problems (CAGE)
  - Gamblers screened as having an alcohol problem were 2.18 times the average PGSI score as gamblers with no problems
  - Gamblers with missing data for alcohol problems were 1.84 times the average PGSI score as gamblers with no problems
- Money motivation to gamble
  - High (top two quartiles) 'money' motivation gamblers were 2.88 to 2.91 times the average PGSI score as gamblers less motivated by winning money

There was a significant positive association between the number of negative consequences at-risk gamblers identified as occurring because of their own gambling and PGSI risk categories. Amongst at-risk gamblers who identified no harms because of their own gambling, 3.1% were classified as problem gamblers, going up to 5.2% for those identifying one or two harms, and amongst those identifying three or more negative consequences 23% were problem gamblers, compared with 5.8% amongst all at-risk gamblers.

The most common negative consequence for at-risk gamblers were 'raided savings accounts/funds' (12.4%), followed by 'felt stress/anxiety/depression' (11.9%), 'borrowed money from family/friends' (9.4%), 'ran out of money for bills' (8.8%), 'relationship problems with family' (6.6%), 'ran out of money for food' (6.4%), 'had a problem with work' (4.9%), and 'no money for rent/mortgage' (4.8%).

All at-risk gamblers were asked about whether they accessed an ATM while gambling and how many times. There was a significant association between problem gambling risk and accessing an ATM, with 9% of those accessing an ATM being problem gamblers, compared with 1% problem gamblers amongst those not accessing an ATM while gambling. Problem gambling risk increased amongst at-risk gamblers who accessed an ATM more often, with problem gambling prevalence less than 1% amongst those not accessing an ATM, 2% for those accessing once, 15% accessing twice, and 34% amongst those who accessed an ATM three or more times in a gambling session.

A staff member of a venue spoke to 12% (2,471 from 20,658) of at-risk gamblers about their gambling, and this did not vary significantly across PGSI categories.

### **Negative consequences because of another person's gambling**

The 2015 Gambling Prevalence and Wellbeing Survey asked whether the respondent was negatively affected by someone else's gambling in the last 12 months. Thirteen percent (N=23,000) of the NT adult population said yes, that they had been negatively affected by another person's gambling, with 4.3% (N=7,600) identifying up to three different negative consequences they had experienced.

The person whose gambling was negatively affecting the respondent was most commonly a parent (28%), followed by friend (27%), acquaintance (9%), other family member (8%), spouse (6%), brother/sister (5%), ex-partner (5%), in-law (4%), work colleague (4%) and son/daughter (3%).

Amongst the NT adult population, types of negative consequences experienced because of someone else's gambling were 'raiding savings' (6%), 'friend relationship problems' (6%), 'feeling stress/anxiety/depression' (5%), 'run out of money for bills' (5%), 'family relationship problems' (5%), 'borrowing from family/friends' (4%), 'run out of money for food' (2%), and 'run out of money for rent/mortgage' (2%).

EGM participation was the only gambling activity that had a significant association with being negatively affected by someone else's gambling, with 22% of EGM gamblers affected, compared with 10% of people who did not play EGMs.

People living in Regional Towns were more likely (though the association was marginally non-significant) to be negatively affected by someone else's gambling (30% cf. 13% or less in other regions). Age and gender did not have significant association with experiencing negative consequences because of another person's gambling.

Other socio-demographic factors significantly associated with increased risk of being negatively affected by another person's gambling were being Indigenous (28%), living in a single parent household (32%), and living in a group household (24%). Socioeconomic factors significantly associated with increased risk of being negatively affected by someone else's gambling were being a full-time student (40%), and personal annual income between \$70,000 and \$99,999 (22%).

Health risk factors significantly associated with increased risk of being negatively affected by someone else's gambling were smoking 10 or more cigarettes per day (37%), and running out of money for essentials in the last 12 months (48%).

### **Community opinions on electronic gaming machine numbers in venues**

Respondents were asked, *Thinking about pokies, should the number of pokies in hotels/clubs/casinos be increased, decreased or stay the same?* Respondents answered separately for each venue type. For clubs, 53% of people said they would like to see a decrease in EGM/pokies numbers, and a further 42% said no change, with only 5% endorsing an increase in numbers. A similar trend was observed for hotels, with 50% saying they would like to see a decrease, 49% said no change, and less than 2% saying increase. The trend for casinos was slightly different, with 41% saying they would like to see a decrease, 55% stay the same, and 4% would like an increase in numbers.

A question in the 2005 survey asked, *Do you think the number of poker machines and other gaming machines currently available in your local community should be increased, decreased or stay the same?* While not exactly comparable with the 2015 question, it had a very similar trend with 49% endorsing a decrease, 49% stay the same, and 2% an increase.

There was significant variation across regions in whether people wanted a change in pokie numbers in hotels. People living in Regional Towns were less likely to say decrease the numbers (30%), compared with Rest of NT (41%), Alice Springs (59%) and Darwin/Palmerston (52%). There was no significant difference between how men and women answered pokie numbers in hotels, but there was a significant positive association between endorsing a decrease in pokie numbers with increasing age, with 38% of people less than 35 years endorsing a decrease, compared with 56% amongst 35-54 years and 61% amongst those 55 years or more.

One of the more interesting findings concerning community opinion on pokies numbers in hotels was that 60% of EGM gamblers who gambled weekly endorsed a decrease in pokie numbers in hotels. For clubs and casinos, 52% and 34% of weekly EGM players respectively endorsed a decrease in pokie numbers.

Concerning pokie numbers in casinos, there was significant variation across regions, with 51% of people in Alice Springs endorsing a decrease, compared with less than 40% in all other regions. Women were significantly more likely to endorse decreases

in pokie numbers in the casinos (47%), compared with men (35%). There was no association with age and changes in pokie numbers in the casinos.

### ***Player losses on electronic gaming machines (EGMs)***

Chapter 8 presents data supplied by the NTG Department of Business on EGM player loss and numbers of EGMs broken down for the casinos, hotels and clubs. There were four changes to policy and regulation over the period 2003/4 to 2014/15 that may have affected player losses and the number of EGMs operating in the NT:

- Smoking ban in all venues started from 1 January 2010.
- Note acceptors allowed in hotels and clubs from 28 May 2013, bringing them into line with the two casinos, which have always had note acceptors, allowing players put in up to \$999 in \$20, \$50 or \$100 notes.
- Previous caps of 10 EGMs per hotel and 45 EGMs per club were lifted in July 2015, to allow hotels up to 20 EGMs and clubs up to 65 EGMs.
- Minimum return to player was amended on 21 September 2015 for casinos from 88% to 85%, which brought them into line with community venues.

The total number of EGMs housed in the Territory's two casinos peaked in 2010/11 at 1,074, before levelling out to 1,050 in 2014/15. A similar trend occurred for hotels and clubs, though the peak in EGM numbers occurred one year earlier in hotels. The ratio in 2014/15 EGM numbers between community venues (hotels and clubs) and the two casinos is about 52:48.

Total player losses on EGMs peaked in 2008/9 at \$170 million, before declining for two years down to \$143 million, then increasing again to \$162 million in 2014/15. The increase in total player losses from 2013/14 was solely due to increase in player losses in hotels and clubs. Between 2012/13 and 2014/15, player losses in hotels and clubs increased 18% or around 9% per annum, compared with negative growth in the previous three years since the smoking ban. The increase in hotels and clubs is likely due to the allowance of note acceptors in machines in community venues, which allows players to put up to \$999 in a machine using any note denomination. The casinos have always been able to have note acceptors on their machines.

Player loss data in Chapter 8 is reported for unadjusted and CPI adjusted dollars, pegged to 2014/15. The CPI adjustment generally does not affect overall trends a great deal, but the adjusted data clearly show the diminishing profitability of EGMs in the NT, particularly in the casinos. Player losses in 2014/15 dollar values peaked a year earlier in 2007/8 compared with the unadjusted data, and in 2014/15 values was \$113 million. From 2007/8 to 2014/15, player losses in the casinos decreased on average 4.3% per annum. Player losses still peaked in 2008/9 for hotels and clubs at \$96 million 2014/15 dollars, and then decreased at a little over 8% per annum until 2012/13 (\$61 million), before increasing dramatically to \$83 million in 2014/15, representing an 18% increase over two years. This latter increase most likely due to the installation of note acceptors in EGMs located in community venues.

Player losses per machine indicate the profitability of the machine and the venue where it is located. Player loss per machine is usually higher in venues with more EGMs. The player losses per machine in the two casinos follow a similar trend over time to casino player losses, peaking in 2008/9, before declining sharply in the two years after the smoking ban. Since 2010/11, player loss per machine in the two casinos has hovered around \$75,000 per machine per year. Hotels and clubs had a

similar trend to that observed for the casino up to 2010/11, but since this time, player loss per machine in hotels and clubs has increased, with a sharp increase occurring after 2012/13 after note acceptors were introduced.

In the past, the casinos have had a superior player loss per machine than community venues, due to the larger number of machines in the venues, and because the casinos have always had note acceptors on their EGMs. In 2003/4, community venues player loss per machine was at 56% of what the casinos were making. Community venues player losses per machine have steadily increased since 2003/4, to the point now where there is virtually no difference between casinos and community venues player losses per machine, with hotels and clubs now having average player losses of \$74,052 per machine, compared with the casinos at \$75,351 per machine.

This report publishes for the first time, data on player returns. Government regulates and imposes a minimum expected player return for EGMs, with this being at least 85% since 2013. In practice though, most EGMs in the Northern Territory and Australia operate at around 90%. Player returns for casino EGMs in the NT dropped from 91.7% in 2003/4 to 91.1% in 2006/4, before steadily increasing to 92% in 2011/12, and then levelling out to 91.9% in 2014/15. The trend in player returns in community venues differed to that observed for the casinos. Player returns in hotels and clubs were at their lowest in 2003/4, then increased every year since this time, and were at 90.5% in 2014/15.

## **1 INTRODUCTION**

### **1.1 Background**

It has been over ten years since the Northern Territory (NT) completed its first population wide gambling prevalence survey in 2005 (Young, Abu-Duhou, Barnes, Creed, Morris, Stevens & Tyler 2006). Since this time the gambling industry and its regulatory and policy framework has gone through significant changes, with a greater focus now on gambling harm minimisation and using public health frameworks to meet this end; similar to approaches used for other products such as alcohol and tobacco (Browne, Langham, Rawat, Greer, Li, Rose, Rockloff, Donaldson, Thorne, Goodwin, Bryden & Best 2016, Hare 2009, Korn, Gibbins & Azmier 2003).

Prevalence studies related to gambling are important for monitoring problem gambling and gambling consumption over time. Australian jurisdictions have conducted several prevalence studies in the last twenty years (Williams, Volberg & Stevens 2012), with results of those studies indicating Australians are highly involved in gambling, with the Productivity Commission (2010) estimating that around 70 per cent of Australians participated in some form of gambling in the past year. Gambling prevalence studies also facilitate comparisons between jurisdictions in gambling participation and behaviour, including problem gambling risk (Hare 2015, Williams et al. 2012). Changes in the prevalence of problem gambling and gambling participation can provide important information about the effectiveness of policies implemented to mitigate harms from gambling (Williams & Volberg 2012). Analysis of the 2005 NT survey provided information for policy makers, researchers and service providers, and showed that levels of problem gambling in the NT were similar to other jurisdictions across Australia.

This report comes as a result of the Northern Territory Government (NTG) approaching Menzies School of Health Research to carry out a repeat of the 2005 Northern Territory Gambling Prevalence Survey (Young et al. 2006). This report is the first of a series to be released in 2017. It has a similar structure to the previous report, but includes additional information on EGM players, health risk factors such as financial stress, smoking status, and problematic alcohol consumption, gambling motivations, and negative consequences associated with gambling (own and someone else's gambling).

### **1.2 Aims of the survey**

The primary aim of the 2015 Gambling Prevalence and Wellbeing Survey was to inform government on the latest patterns of gambling participation, problem gambling prevalence and gambling harm in the NT. The survey findings will also be of interest to service providers, industry, councils and the broader community.

### **1.3 Survey objectives**

- Produce estimates of gambling participation and patterns of gambling and compare with the 2005 estimates.
- Produce estimates of problem gambling prevalence (and moderate and low-risk gambling prevalence) for the NT and compare with the 2005 estimates.

- Determine risk factors for at-risk gamblers and for different gambling activities.
- Identify harms experienced because of a person's own gambling for at-risk gamblers.
- Determine the extent and reach of gambling harms from another person's gambling.
- Determine health-seeking behaviour among at-risk gamblers and for those affected by someone else's gambling.
- Identify motivations associated with gambling for different risk groups of gamblers.

#### **1.4 Structure of the report**

Chapter 2 provides an overview of the survey methodology including the domains of information collected, survey sampling design, population weighting, and conventions for reporting data and statistical testing of associations in tables and figures.

Chapters 3 to 9 include a range of figures and tabulations of most data collected as part of the survey. Each chapter includes a background section with a brief summary of the literature associated with the presented data, followed by a section of key findings, which lists four or five dot points; the main points of interest for that chapter. Chapter 10 also follows this same format, but includes electronic gaming machines player loss data not collected as part of the 2015 survey (see below).

Chapter 3 presents an overview of patterns of gambling participation (and frequency) by activity, and includes statistical associations between gambling participation and socio-demographic, socioeconomic, and health-related variables. Comparisons are made with the 2005 survey

Chapter 4 examines which activities respondents identified as their highest spending activity over the year, and includes information on the distribution of money spent across preferred highest spend activities by region, age, gender and frequency of gambling.

Chapter 5 presents gamblers endorsement of five types of motivations for gambling by region, age, gender.

Chapter 6 presents problem gambling prevalence estimates for the PGSI, including estimates and statistical associations with different activities, socio-demographic, socioeconomic, gambling motivations, and health-related variables. It also includes the types of negative consequences at-risk gamblers experienced. Comparisons are made with the 2005 survey.

Chapter 7 presents data on negative consequences experienced because of another person's gambling, how the person was related to them, and the types of negative consequences resulting from the other person's gambling. Negative consequences are also examined in relation to socio-demographic, socioeconomic, health risks, and gambling participation variables.



Chapter 8 presents data on community opinion regarding preferences for increases, decreases or no change in EGM numbers in hotels, clubs and the casinos. Opinions on EGM numbers are cross-tabulated by region, age and gender, and EGM frequency of play. Some similar data from the 2005 survey are also included.

Chapter 9 collates information collected in the survey pertaining to EGMs, and includes age, gender and regional estimates of EGM participation, frequency of gambling, venue preferences including whether has a regular venue, plays online and distance from home to regular venue. This chapter also includes associations between EGM participation and the PGSI, negative consequences from own gambling, and negative consequences from another person's gambling.

Chapter 10 is the only chapter using data not collected as part of the 2005 and 2015 surveys. It uses data sourced directly from the NTG Department of Business for EGMs in NT venues. It includes time series data from 2003/4 to 2014/15 on the number of EGMs, player loss, player loss per EGM and percentage returns to players. These data are presented separately for community venues (hotels and clubs) and the casinos, and for unadjusted and entertainment CPI adjusted data, with the latter adjustment putting all years dollar amounts in 2014/15 dollar values.

Chapter 11, the final chapter, makes some conclusions regarding changes in patterns of gambling and problem gambling risk over the last 10 to 15 years in the NT, and highlights further analyses to be carried out.

Appendix A includes detailed survey methodology. Appendix B presents sample characteristics (demographic and socioeconomic) for unweighted and weighted data, which will enable users of the data to better understand which segments of the population were under-sampled. Lastly, Appendix C contains a copy of the survey instrument used for the 2015 Gambling Prevalence and Wellbeing Survey.



## 2 SURVEY METHODOLOGY AND ACCURACY

An overview of the 2015 Gambling Prevalence and Wellbeing Survey methodology is contained in this chapter, with Appendix A containing detailed information on the survey methodology. A pilot study was conducted 8-12 October, while the main survey was carried out between 19 October and 23 December 2015.

### 2.1 Survey development and information collected

After being approached to do the survey, Menzies School of Health Research put together a discussion paper that outlined issues associated with conducting a prevalence surveys in the NT, along with a table listing questions used in the previous survey and a column identifying whether they are likely to be included in the 2015 survey and additional questions for inclusion. A Survey Reference Group was set up to oversee the survey, which included members from the NTG, Charles Darwin University (The Northern Institute and the School of Psychological & Clinical Sciences), Amity Community Services (primary gambling counselling service) and Menzies. Two versions of this discussion paper were produced, one for the Survey Reference Group, and the other for distribution to stakeholders such as non-government (gambling and counselling) service providers and industry. After receiving feedback from stakeholders and convening two Survey Reference Group meetings, the following information domains and data items were selected for inclusion in the 2015 survey.

Domain	Data items
<b>Socio-demographic factors</b>	Region, NT residency status (for scope), age, gender, Indigenous status, main language spoken at home, and household type.
<b>Socioeconomic factors</b>	Highest education, labour force status, personal income, Fly-in Fly-out and Drive-in Drive-out employment, student status, and SEIFA (area level socioeconomic status derived from postcode data).
<b>Gambling participation and highest spend activity</b>	Participation, frequency of play, and where/how gambled for EGMs (pokies), racetrack betting, instant scratch tickets, keno, lotteries, bingo, casino table games, sports betting, non-sports betting, raffles/sweeps/SMS competitions, informal private games, and highest spend activity and average spend per session.
<b>Problem gambling</b>	The Problem gambling Severity Index (PGSI in original format)
<b>EGM player preferences, in-venue policy, and community opinions on EGM numbers</b>	Regular venue where plays EGMs, distance to regular EGM venue, impact of smoking ban on EGM spend, impact of placing ATMs out of sight of gaming area on EGM spend, and whether should be increase in EGMs (casino, hotels, clubs separately).
<b>ATM access and in-venue approach by staff for at-risk gamblers</b>	Access to ATM in a gambling session, how often usually accesses ATM in gambling session, whether staff member of venue ever checked if okay while gambling

Domain	Data items
<b>Negative consequences from own (for at-risk) and another person's gambling and help-seeking behaviour</b>	Ran out of money for rent or mortgage, ran out of money for food, ran out of money for bills, raided savings account, borrowed money, debt collectors repossessed something, sold/hocked possessions, relationship problems with family, relationship problems with friends, physical or verbal violence towards you, kids did not attend school, kids missed out on something, felt stress/anxiety/ depression, did something outside the law, work problems, and whether sort help and where got help. For those negatively affected by another person's gambling, the relationship they had to the person who's gambling was affecting them, and the same set of negative consequences and help-seeking behaviour questions.
<b>Gambling motivations</b>	Motivations for gambling: 18 questions covering excitement, escape ego, money, and social
<b>Health and health risk factors, and social and emotional wellbeing,</b>	Self-assessed health, smoking status, smoke-free home status, Exposure to personal stressors (serious illness or disability, serious accident, death of family member or close friend, mental illness, not able to get a job, lost job, alcohol-related problem, drug-related problem, witness to violence, abuse or violent crime, trouble with police, gambling problems and racial/ethnic discrimination).

## 2.2 Survey scope and sample design

As with most gambling prevalence surveys in Australia, telephone sampling using CATI was used to collect information from NT resident adults (18 years and over). The same survey company that did interviewing for the 2005 survey, Roy Morgan Research (RMR), were the preferred provider for the 2015 survey. Originally, a sample size of 4,000 was considered large enough to produce robust estimates; however, after a month of fieldwork, we noted that the average interview length, at 10 minutes, was shorter than expected, so the sample was increased to 5,000. A stratified sampling approach using region (Darwin/Palmerston, Alice Springs, Katherine, Tennant Creek/Nhulunbuy and the Rest of NT), gender (male, female) and age (18-34, 35-49, 50-64 and 65 or more years), was used, with broad Territory wide proportional quotas set for region, age and gender.

To ensure the survey captured a representative sample of the adult population in the NT, dual frame sampling was preferred, and is now the method most widely used for gambling prevalence surveys in Australia. Mobile phone numbers were obtained from three separate lists (one owned by RMR and the other two purchased from private providers), in addition to the landline telephone frame owned by RMR. For the mobile sample, the interview was conducted with the person who answered the phone, but for the landline sample, the last birthday method for selecting one person from a household was used, though later in the fieldwork this was changed to ask for the male with the most recent birthday, as too few males were being interviewed.

The survey contained three sets of questions, with respondent's being filtered through to different questions, depending on whether they were a:

- (i) no-risk gambler verse at-risk gambler
- (ii) EGM verse non-EGM gambler, or
- (iii) no-risk gambler or non-gambler verse at-risk gambler.

The first two sets of questions filter respondents to allow specific questions to be asked of at-risk gamblers (negative consequences of their own gambling and help-seeking behaviour) and EGM gamblers (questions about regular venue attendance, and effect of EGM policy on their gambling). The third minimises the average interview length (and survey cost). Specifically, it allocates one in four no risk (screened according to the PGSI) and non-gamblers (by gender) to receive the full survey, while all at-risk gamblers received the full survey.

### **2.3 Consent rate**

Over 330,000 phone calls were made during the fieldwork period, with up to five calls made on a single number in order to establish contact, and up to five once contact had been made (unless there was an outcome such as being a fax number, business phone number or not being connected). Most completed interviews were achieved within three phone calls, with 89% of landline and 80% of mobile interviews completed in three calls. After one week of interviewing, the introduction was modified to try to improve consent rates, which were around 25% (landline only) at this stage. The changes emphasised that the survey was very important and was on behalf of the Northern Territory Government, after which, consent rates hovered at or just under 30%.

From the 330,000 plus calls made, 148,288 landline and 9,582 mobile numbers were included in the phone number frame. Just over half (50.5%) of landline numbers were unobtainable/not connected, a further 0.5% were on the Roy Morgan list of not ever to be called and another 3.8% were modem or fax numbers. From 67,124 useable landline line numbers, contact was made with 26,550 with 34,419 being no answer and 5,152 answering machines. Of the 26,550 landline numbers where some form of contact was made, 37% were unusable (31.1% business numbers, and 5.8% failed screener questions). Refusals accounted for 36.2% of contacts and completed interviews accounted for 14.2% of contacts. Of the 9,582 mobile numbers called, 8,494 turned out to be usable (9.2% not connected/obtainable and 1.1% on the Roy Morgan list not ever to be called), with contact made with 4,156, though 20.3% of these failed the screener questions, failed quotas or were otherwise out of scope. Refusals accounted for 36% of contacts and completed interviews accounted for 28.5% of contacts.

In total 4,945 participants completed the survey. Most respondents (76%, 3,760 people) who completed the survey were contacted by landline, while 24% (1,185) were contacted by mobile. Of the 1,185 people contacted by mobile, 60% (712) had mobile and landline numbers, and the remainder were mobile only (473).

The consent rate using the formula:

$$\text{consent rate} = \text{consents} / (\text{consents} + \text{refusals}) \times 100$$

for landlines was 28%, and 44% for mobile phones, with an overall consent rate of 31%. Including other in-scope contacts (i.e. language/hearing difficulty terminations, other terminations and refusals) in the denominator, the consent rates drop to 22% and 37% for landline and mobiles respectively, with an overall consent rate of 25%.

## **2.4 Population weights**

To improve the accuracy of estimates from population surveys, raw data is usually 'weighted' to the total population. Population weights most often adjust for age, gender and regional population distributions, using estimated resident population counts generated by the Australian Bureau of Statistics (Australian Bureau of Statistics 2016a). The weights ensure that survey estimates are more representative of the NT population (by age, gender and region for example).

The final weighting design for the 2015 survey was developed by RMR following discussions between Bruce Packard (RMR), Matt Stevens (Menziess), Tony Barnes (NTG and Charles Darwin University) and Sarah Hare (Schottler Consulting). The weighting approach used for the current survey is an improvement on the approach used in the 2005 survey, with two main differences. The first difference being that separate weights were developed for Indigenous and non-Indigenous samples. This is more important in the NT compared with other jurisdictions, as the Indigenous population make up nearly a quarter of the total adult population, and experience more gambling related harms and socioeconomic disadvantage relative to the non-Indigenous population (Australian Bureau of Statistics 2015, 2016b, Stevens & Paradies 2014, Stevens & Young 2009a, Stevens & Young 2009b). The second difference is that the weights take into account the differing probabilities of selection between the landline and mobile samples, in addition to age, gender, and region. A separate set of weights was also required for respondents receiving the full survey (including separate weights for Indigenous and non-Indigenous samples). This set of weights make proportional adjustments for the one in four sampling of no risk and non-gamblers that received the full survey. Appendix A contains the full technical specifications and formulas used in creating population weights for the 2015 survey.

## **2.5 Sample characteristics**

Appendix B contains a table with the distribution of unweighted and weighted survey data for key demographic and socioeconomic variables, and provides some information on the accuracy and reliability of the sample. The following points summarise the characteristics of population segments that were under-sampled:

- Living in very remote parts of the NT, which includes Regional Towns and the Rest of the NT
- Between 18 and 35 years
- Males
- Indigenous, particularly in the Rest of NT region
- Full-time students
- Year 10 or below highest education
- Annual gross income \$30,000 to \$49,000

The population weighting will correct for region, age, gender and Indigenous population sample distributions, with the assumption that the sample is broadly representative within these population segments. The assumption that the Indigenous sample of the 2015 survey is broadly representative of the NT Indigenous adult population will be further explored in a follow-up analysis and report. It is likely that Indigenous people living in remote communities across the NT were not included in the sample, due to a lack of a landline telephone in houses. While untested, it may also be that Indigenous people with a mobile phone living in communities are not on the mobile sampling lists. Follow-up analyses will include a comparison with Australian Bureau of Statistics survey data from the 2014/15 National Aboriginal and Torres Strait Islander Social Survey on phone access and other demographic and socioeconomic variables to assess reliability of the Indigenous sample.

## **2.6 Data analysis and reporting**

### *2.6.1 Data sources*

All data, except that contained in Chapter 10 is from either the 2005 Gambling Prevalence Survey or the 2015 Gambling Prevalence and Wellbeing Survey. Chapter 10 contains electronic gaming machine (EGM) data sourced from the NTG Department of Business, and includes player losses (including CPI adjusted data) and number of EGMs.

### *2.6.2 Data cleaning and management*

RMR provided the data in SPSS format, which was converted to Stata format for analyses using Stata statistical software (StataCorp 2015). Population weight variables and strata (age, gender and region) were set up within Stata using the SVY commands, which ensures estimates (and standard errors) take into account the sample design. Exploratory data analysis was carried out to determine cut-points for continuous or semi-continuous variables, and identify outliers or mistakes in the data. For example, annual/weekly gambling frequency was converted to an ordinal variable with categories (1) 1 or more times per week, (2) 1-3 times per month, and (3) Less than monthly per year.

Personal income data was imputed with the Stata 'impute' command for 16% (unweighted) of respondents with missing data (using variables that had a strong correlation with personal income). Some extreme outliers were identified in the expenditure (player loss) data associated with highest spend activity and an examination of these extreme values indicated that they were a result of mistakes in data entry, and these were consequently adjusted accordingly (e.g. extra digit in record for how much they usually spend when the gamble). Additionally, for questions identifying negative consequences of gambling for both at-risk, and for those affected by another person's gambling, 'other' responses were re-coded back into available responses where appropriate.

There was a problem with the filtering of respondents through the help-seeking behaviour questions for at-risk gamblers. Of the 408 unweighted (20,717 weighted) at-risk gamblers, only 207 (9,341 weighted) were asked whether they sought help because of their gambling, and only 6 (437 (4.7%) weighted) at-risk gamblers answered 'yes' to seeking help.

### *2.6.3 Statistical tests between 2015 variables and with the 2005 survey*

Statistical tests of association between variables (e.g. gambling participation and age) were determined using Chi Squared Tests of Independence. For comparisons between 2005 and 2015 survey estimates, comparable variables from the 2005 survey were appended to the 2015 survey data, which then enabled Chi Squared Tests of Independence to be used in determining significant differences between estimates from the two surveys.

The different approach to weighting the data in the 2015 survey does affect statistical comparisons with the previous survey. In the 2005 survey, the Indigenous sample was not weighted separately, therefore under-representing responses from Indigenous respondents. However, if we exclude the Indigenous sample from the 2005 survey, then estimates for non-Indigenous respondents will be over-represented in the population. The population weights for the Indigenous population in the 2015 survey mean that differences in characteristics (e.g. socioeconomic disadvantage) between the Indigenous and non-Indigenous populations become more pronounced, while in the 2005 survey, the converse applies. There is no right or perfect way to deal with these methodological differences, and additional analyses will be carried out at a later date that focusses on Indigenous and non-Indigenous sample comparisons in the 2015 survey, and exploring options for comparing the Indigenous sample of the 2005 survey with that of the 2015 survey.

All analyses in this report use weighted data, with standard errors adjusted for the stratified survey design using Stata's SVY commands. A note under tables where relative standard errors were large (i.e. 25% or more), advises caution in interpreting estimates. Asterisks denote the statistical significance of associations throughout the report using the following convention: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ .



## 3 GAMBLING PARTICIPATION

### 3.1 Background

How much in time and money and what type of gambling activities a person bets or wagers on will affect their risk of developing gambling problems (Davidson, Rodgers, Taylor-Rodgers, Suomi & Lucas 2016, Holtgraves 2009, Stevens & Young 2010b). The distribution of problem gambling risk can also differ for men and women, across a person's lifespan, socioeconomically, and across different population groups (Hare 2015, Hing, Russell, Tolchard & Nower 2014, Moodie & Finnigan 2006, Stevens & Golebiowska 2013, Stevens & Young 2010a, Young & Stevens 2009). For example, in a Victorian study, men were more likely to experience some level of problem gambling compared with women, over either their whole lifetime or the last year. However, EGM participation and frequency of play was at similar levels for men and women, but the level of gambling by women on EGMs increased their risk of problem gambling more so than men (Hing et al. 2014).

This chapter presents information on the eleven types of betting and wagering, and an 'other' gambling as listed below.

- Lotteries
- Raffles or sweeps
- Keno
- Electronic gaming machines (EGMs) or pokies
- Instant scratch tickets
- Bingo
- Racetrack betting
- Casino table games
- Sports betting
- Non-sports betting (e.g. Logies)
- Informal private games (e.g. cards, pool)
- Other gambling

Respondents were asked about gambling participation, frequency of play, and where/how (e.g. hotel, club, online) they gambled for each activity.

#### 3.1.1 Chapter contents

Specifically, this chapter contains:

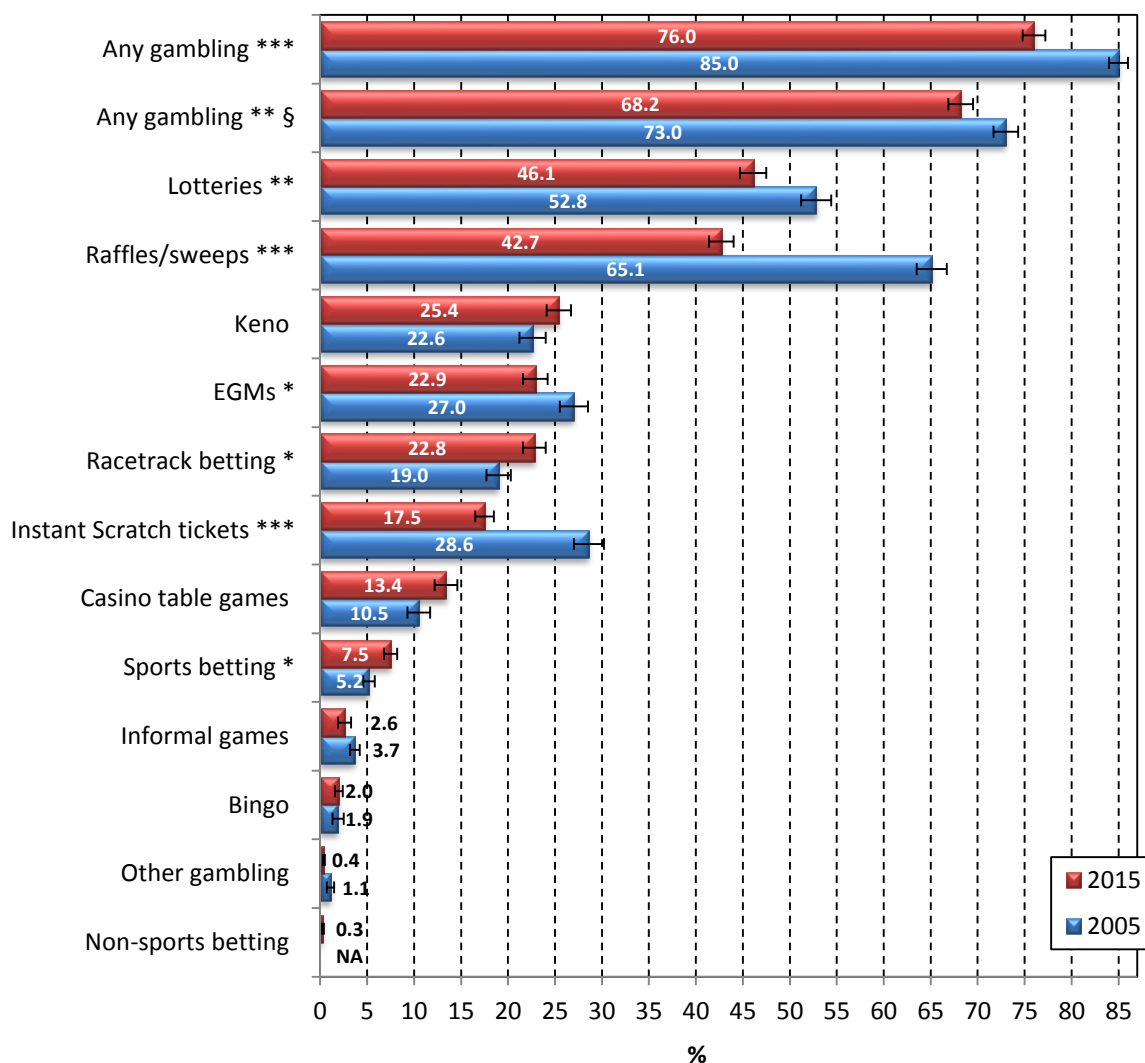
- Estimates of participation and frequency of play for the 11 gambling activities for the NT, and broken down by regional, socio-demographic, and socioeconomic factors;
  - including statistical tests of association between gambling activities and regional, socio-demographic, and socioeconomic factors.
- Comparisons with 2005 estimates for participation and frequency of play for all activities (except non-sports betting) for the NT and broken down by selected demographic variables;
  - including statistical tests of difference between the 2005 and 2015 estimates, and
- Estimates of how and where people gambled for EGMs, racetrack betting, sports betting and keno.

### 3.2 Chapter highlights

- From 2005 to 2015, annual gambling participation in the last year decreased significantly across all activities, except racetrack and sports betting, which increased significantly, and casino table games and keno, which had non-significant increases. The trend in decreasing gambling participation occurred across all regions (Darwin/Palmerston, Alice Springs, Regional Towns and the Rest of NT).
- In 2015, compared with women, men were significantly more likely to participate in keno (28% *cf.* 22%), casino table games (17% *cf.* 9%) and sports betting (12% *cf.* 3%), while women, compared with men had significantly higher participation for raffles (48% *cf.* 38%), instant scratch tickets (21% *cf.* 14%) and bingo (3% *cf.* 1%).
- Lower levels of participation between 2005 and 2015 across most activities occurred similarly for men and women, except racetrack betting with female participation increasing significantly (17% to 22%) and male participation increasing marginally non-significantly (21% to 24%).
- Decreases in annual participation between 2005 and 2015 generally occurred across all age groups, and in 2015, there was significant decreasing participation with age for casino table games, sports betting and informal games (e.g. cards, pool).
- Decreases between 2005 and 2015 were also observed for weekly (and in some instances monthly) gambling, with significant decreases in weekly gambling for any gambling (35% to 22%), lotteries (33% to 22%), sports betting (18% to 8%), EGMs (9% to 6%), instant scratch tickets (8% to 4%), and casino table games (2% to 1%).

### 3.3 Gambling participation in the Northern Territory, 2005 and 2015

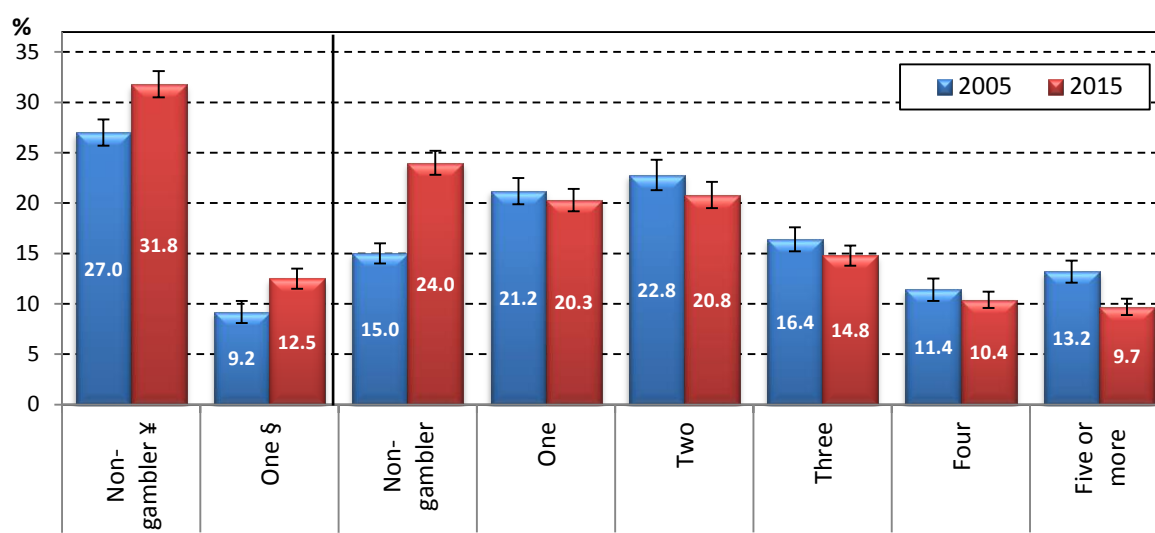
Figure 1 shows change in gambling participation for eleven activities and any gambling between 2005 and 2015. There was a significant decrease in any gambling between 2005 and 2015, regardless of whether raffle only respondents were included in the any gambling group. There were statistically significant declines in participation for lotteries (52.8% to 46.1%); raffles (65.1% to 42.7%); EGMs (27% to 22.9%); and instant scratch tickets (28.6% to 17.5%). There were significant increases in participation for racetrack betting (19% to 22.8%) and sports betting (5.2% to 7.5%). Betting on non-sporting events (e.g. elections, Logies etc) was not measured in the 2005 survey, but was estimated at 0.3% in the 2015 survey. Participation in 'other' gambling option decreased (1.1% to 0.4%) between 2005 and 2015, though this category could have contained 'non-sporting events' betting in the 2005 survey.



**Figure 1: Change in gambling participation by activity, 2005 to 2015, NT Adult population**

§Excludes people who only gambled on raffles and no other activities  
Significant difference between 2005 and 2015, \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Figure 2 shows there was significant variation between 2005 and 2015 in the number of activities people bet on. Two versions of non-gambler and played one activity are presented that enable comparison with 2005 data and highlight the effect of declining participation in raffles. Including raffle only gamblers as non-gamblers (far left bars), there was a significantly higher percentage of non-gamblers in 2015 (31.8%) compared with 2005 (27%), and there was also a higher percentage of one activity only players in 2015 (12.5%) compared with 2005 (9.2%). The latter difference was not present when raffles were included as an activity in its own right, with 20.3% playing one activity in 2015, compared with a slightly higher percentage in 2005 (21.2%). Overall, there was a higher percentage of the adult population gambling on two, three, four and five or more activities in 2005 compared with 2015, with the largest difference for the five or more activities (13.2% in 2005 compared with 9.7% in 2015).



**Figure 2:** Change in number of activities gambled on, 2005 to 2015, NT adult population

§ Excludes people who only gambled on raffles and no other activities

¥ Includes people who only gambled on raffles and no other activities

### 3.3 Gambling participation in the Northern Territory and other jurisdictions

Table 1 shows a comparison of participation by activity with seven of the eight jurisdictions in Australia (excluding Western Australia), along with an unweighted average participation. Statistical tests comparing gambling activity estimates between jurisdictions were not done for this table, though participation was higher in the NT compared with the average across jurisdictions for keno (25% *cf.* 14%), casino table games (13% *cf.* 7%), and sports betting (8% *cf.* 6%).

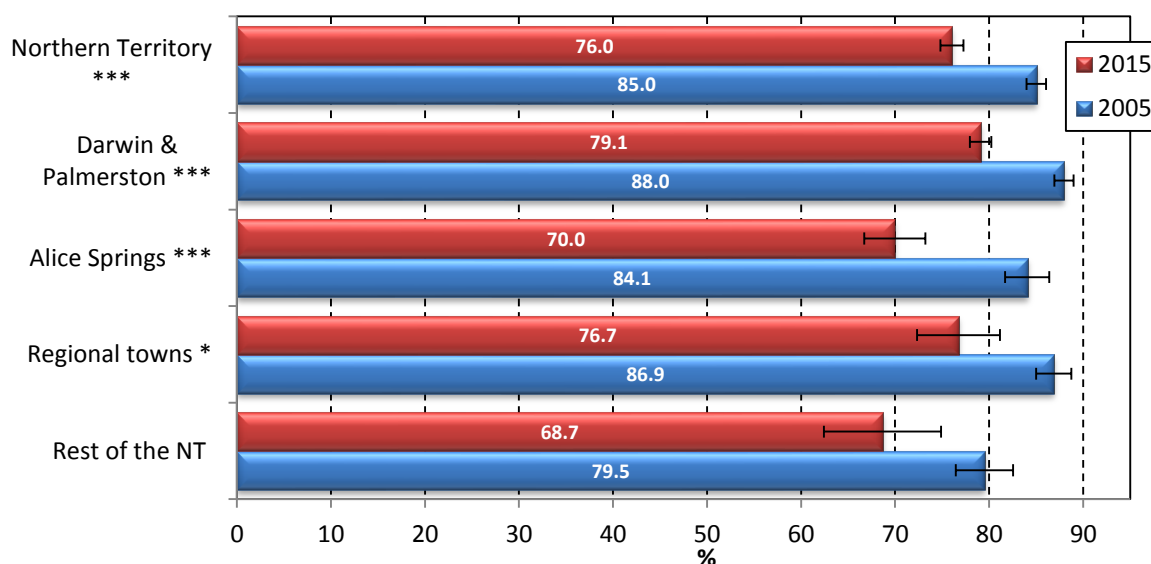
**Table 1:** Participation in gambling by selected activities for seven jurisdictions in Australia, adult population

Gambling activity	NT (2015) %	ACT <sup>1</sup> (2014) %	SA <sup>2</sup> (2012) %	NSW <sup>3</sup> (2011) %	VIC <sup>4</sup> (2014) %	QLD <sup>5</sup> (2011/12) %	TAS <sup>6</sup> (2013) %	Unweighted average %
Any gambling activity	76/68 <sup>§</sup>	55	69	65	70	74	63	67
Lotteries	46	33	56	41	47	59	43	46
Raffles/sweeps	43	-	-	-	47	-	-	45
Keno	25	3	8	14	4	16	26	14
EGMs	23	20	27	27	17	30	19	23
Racetrack betting	23	18	21	24	21	19	11	20
Instant Scratch tickets	18	15	21	28	11	-	21	19
Casino table games	13	6	6	6	4	6	6	7
Sports betting	8	7	6	7	5	5	4	6
Informal games	3	4	3	3	3	3	3	3
Bingo	2	2	3	2	3	3	2	2

Notes: <sup>1</sup> (Davidson et al. 2016), <sup>2</sup> (The Social Research Centre 2013), <sup>3</sup> (Sproston, Hing & Palankay 2012), <sup>4</sup> (Hare 2015), <sup>5</sup> (Queensland Government 2012), <sup>6</sup> (ACIL Allen Consulting, The Social Research Centre & The Problem Gambling Research and Treatment Centre 2014); <sup>§</sup> Lower prevalence excludes raffle/sweeps only gamblers

### 3.4 Gambling participation by region, age and gender

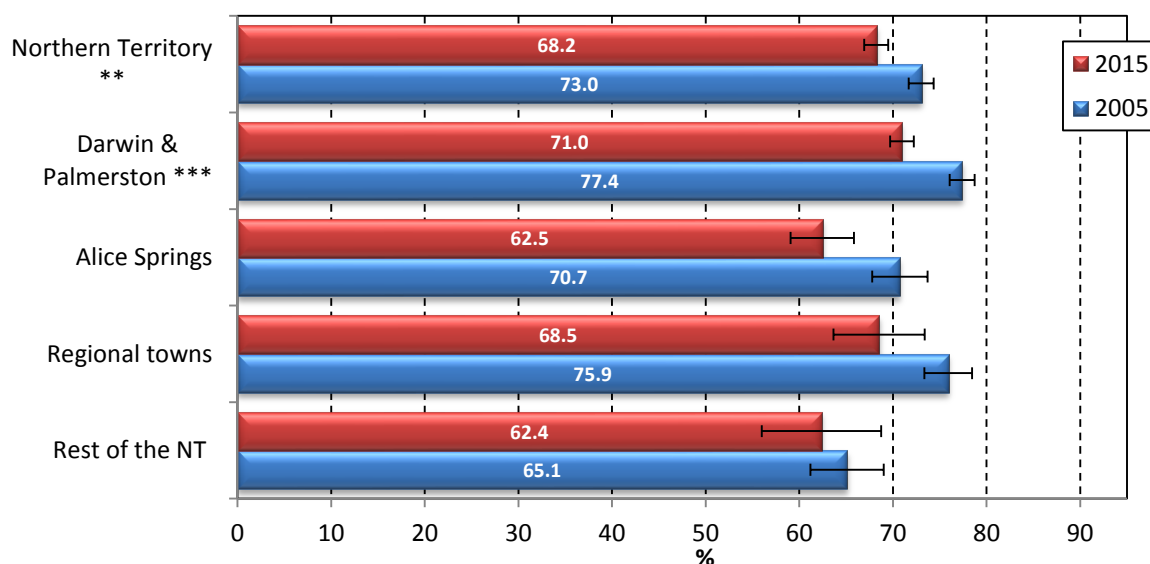
Figures 3 and 4 show change in annual gambling participation between 2005 and 2015 for regions, with and without the inclusion of raffle only gamblers. Both graphs show a similar trend, with gambling participation declining significantly in the NT and Darwin and Palmerston. When raffles only are included in gambling participation (Figure 3), there were also significant declines in Alice Springs and Regional Towns. When excluding raffles only gamblers (Figure 4), the decline in Alice Springs was marginally non-significant ( $p=0.07$ ).



**Figure 3:** Participation in any gambling activity<sup>‡</sup> by region, NT Adult population

Significant difference between 2005 and 2015, \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

‡ Includes people who only gambled on raffles and no other activities



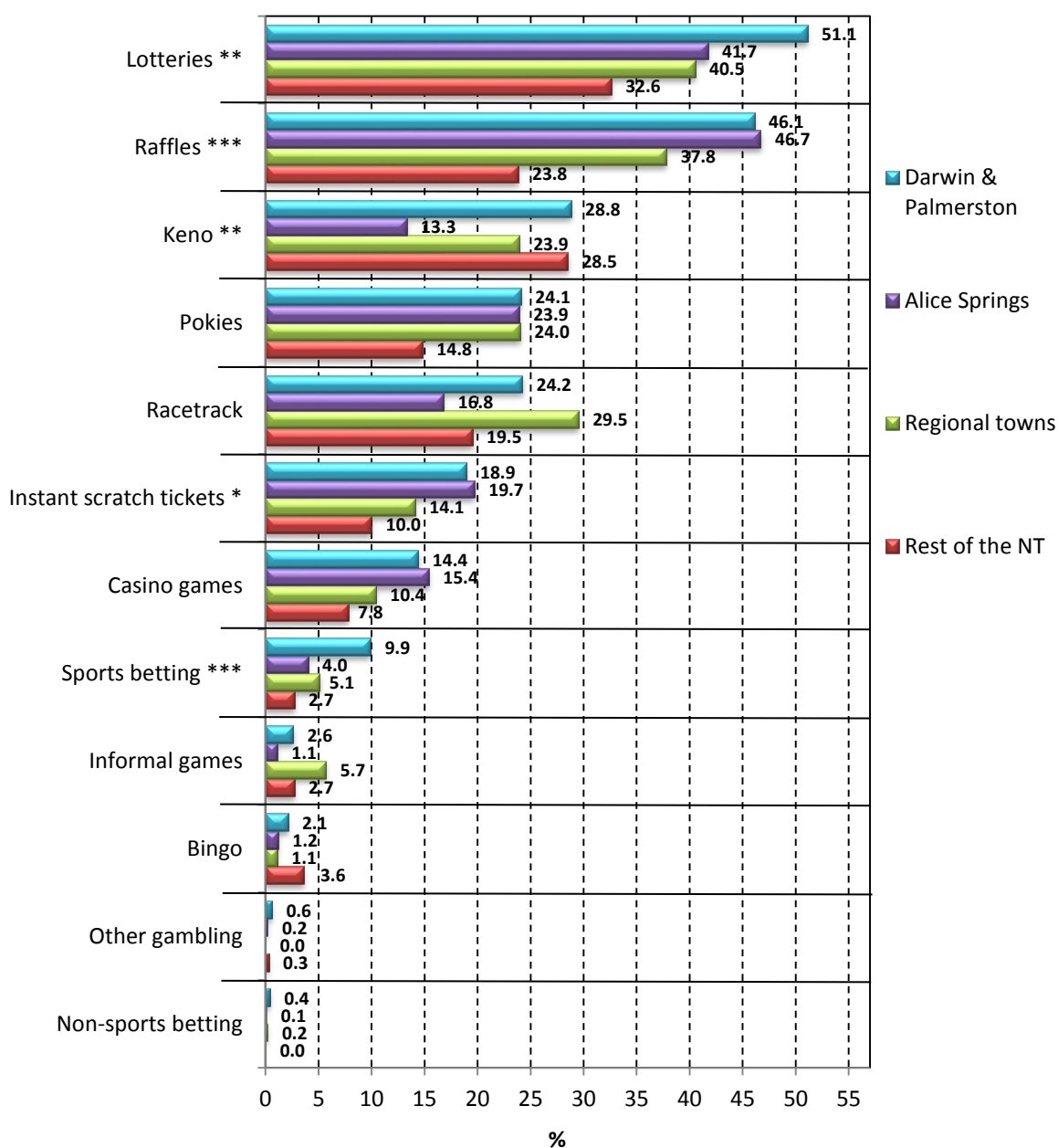
**Figure 4:** Participation in any gambling activity<sup>§</sup> by region, NT Adult population

Significant difference between 2005 and 2015, \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

§ Excludes people who only gambled on raffles and no other activities

Figure 5 shows the breakdown in participation by activity for the different regions in the NT. Standard errors have been left out for ease of interpretation; however,

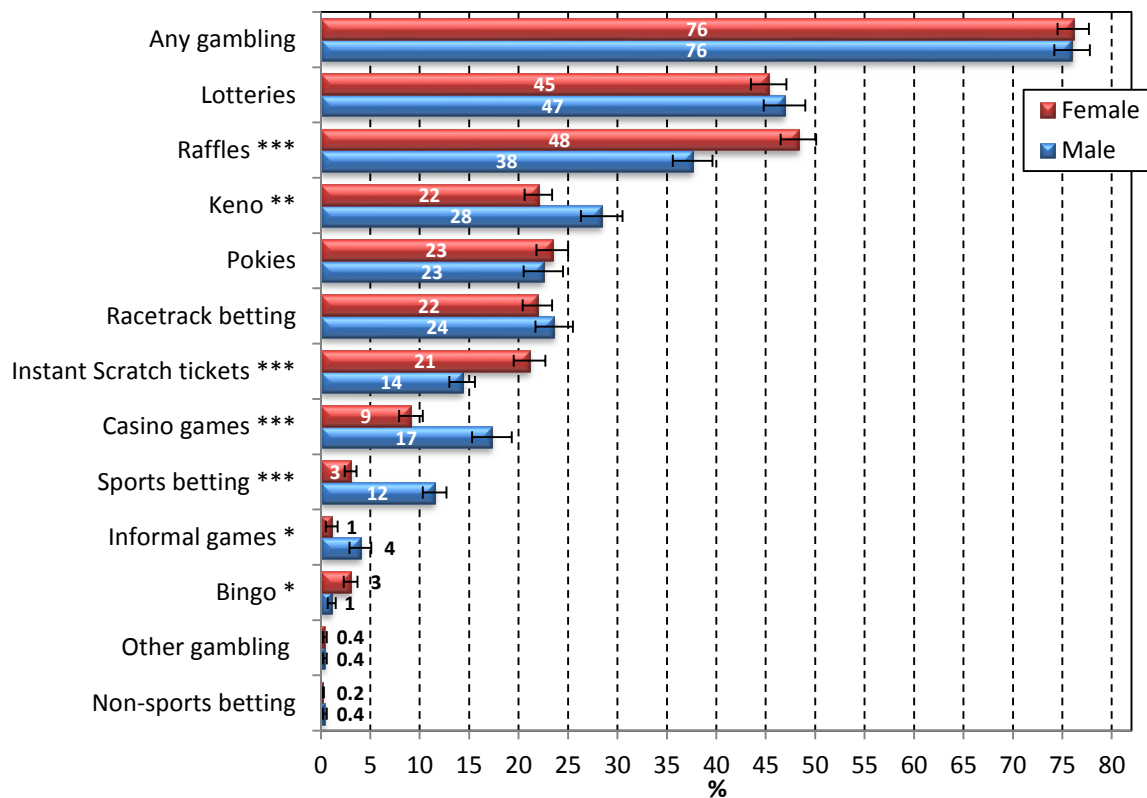
statistical tests have been carried out and stars indicate significant variation across regions for each activity. There was significant variation in participation by region for: lotteries (highest in Darwin & Palmerston and lowest in Rest of the NT); raffles (highest in Alice Springs and lowest in the Rest of the NT); keno (highest in Rest of the NT and lowest in Alice Springs); instant scratch tickets (highest in Alice Springs and lowest in Rest of the NT); and sports betting (highest in Darwin & Palmerston and lowest in Rest of the NT). Other differences in participation across regions, while not being statistically significant, but of note, was the high participation in racetrack betting and informal games in Regional Towns, the higher participation in casino games in Darwin/Palmerston and Alice Springs, and the higher participation in bingo in the Rest of the NT.



**Figure 5: Gambling participation by activity and region, NT adult population**

Significant difference between regions for activity, \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

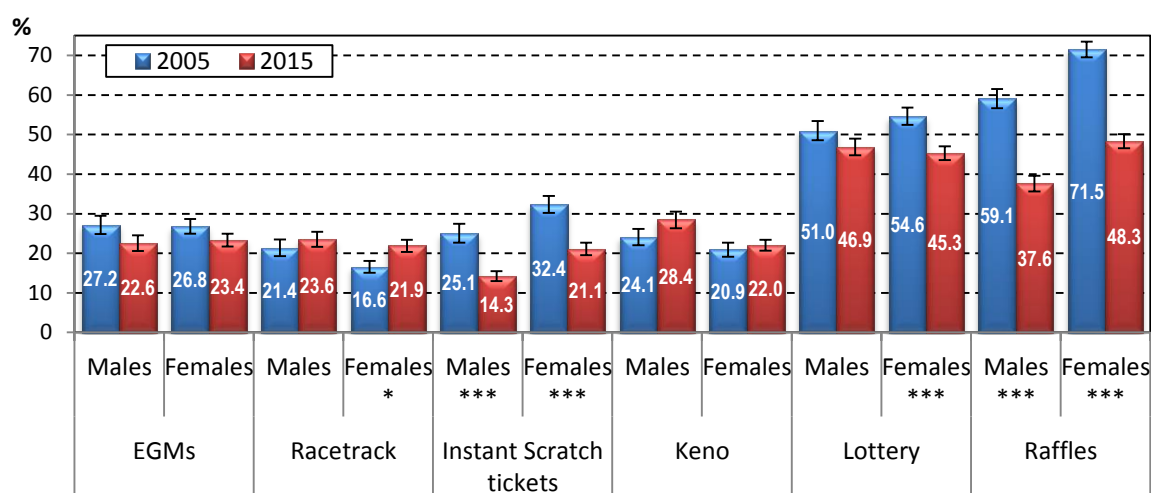
Figure 6 shows 2015 gambling participation by gender for each activity. There were significant differences between male and female participation in raffles (female higher), keno (male higher), instant scratch tickets (female higher), casino games (male higher), sports betting (male higher), informal games (male higher), and bingo (female higher).



**Figure 6: Gambling participation by activity and gender, percentage NT adult population**

Significant difference between male and female participation, \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

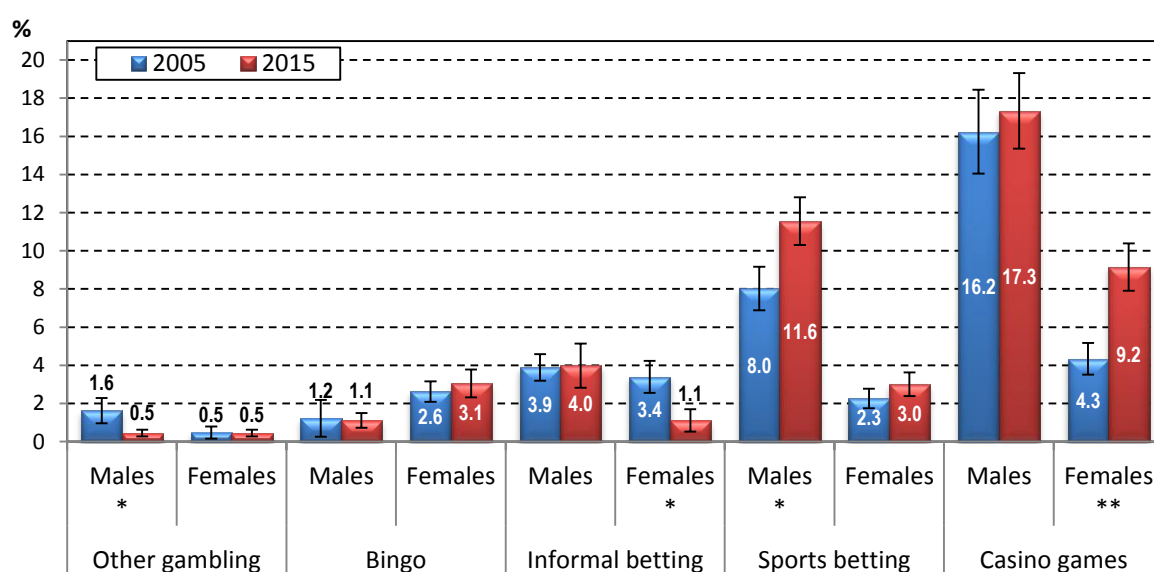
Figure 7 shows gambling participation between 2005 and 2015 for EGMs, racetrack betting, instant scratch tickets, keno, lotteries and raffles by gender (see Figure 8 for other activities). Between 2005 and 2015 there was a significant change in annual participation for racetrack betting for females (increase), instant scratch tickets for males (decrease) and females (decrease), lotteries for females (decrease), and raffles for males (decrease) and females (decrease).



**Figure 7: Gambling participation in 2005 and 2015 for selected activities by gender, NT adult population**

Significant difference between 2005 and 2015 participation, \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Figure 8 shows gambling participation between 2005 and 2015 for other gambling, bingo, informal betting, sports betting and casino table games by gender. Between 2005 and 2015 there was a significant change in annual participation for other gambling for males (decrease), informal betting for females (decrease), sports betting for males (increase) and casino table games for females (increase).

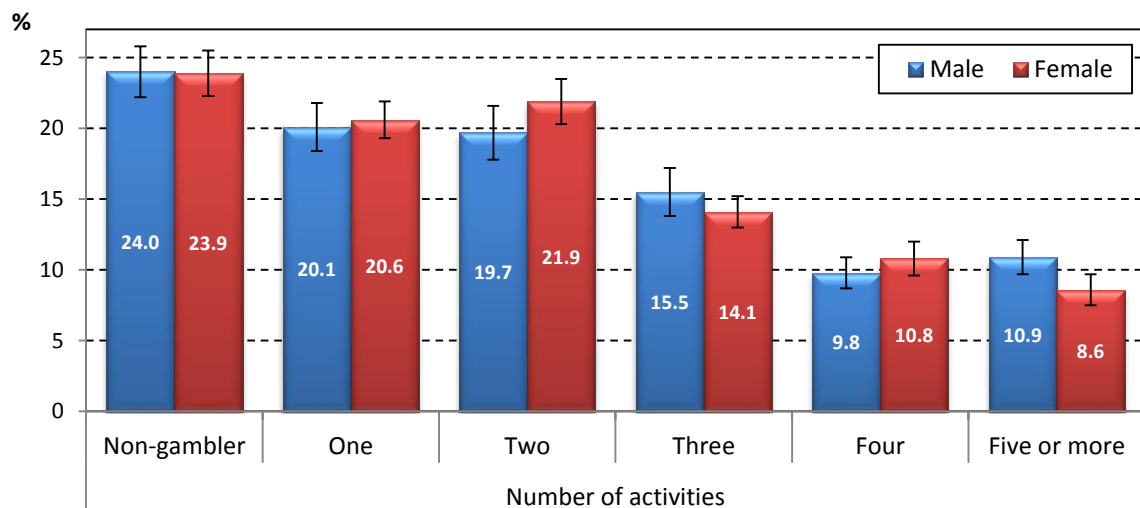


**Figure 8: Gambling participation for selected activities by gender, percentage NT adult population, 2005 and 2015**

NOTES: Significant difference between 2005 and 2015 participation, \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

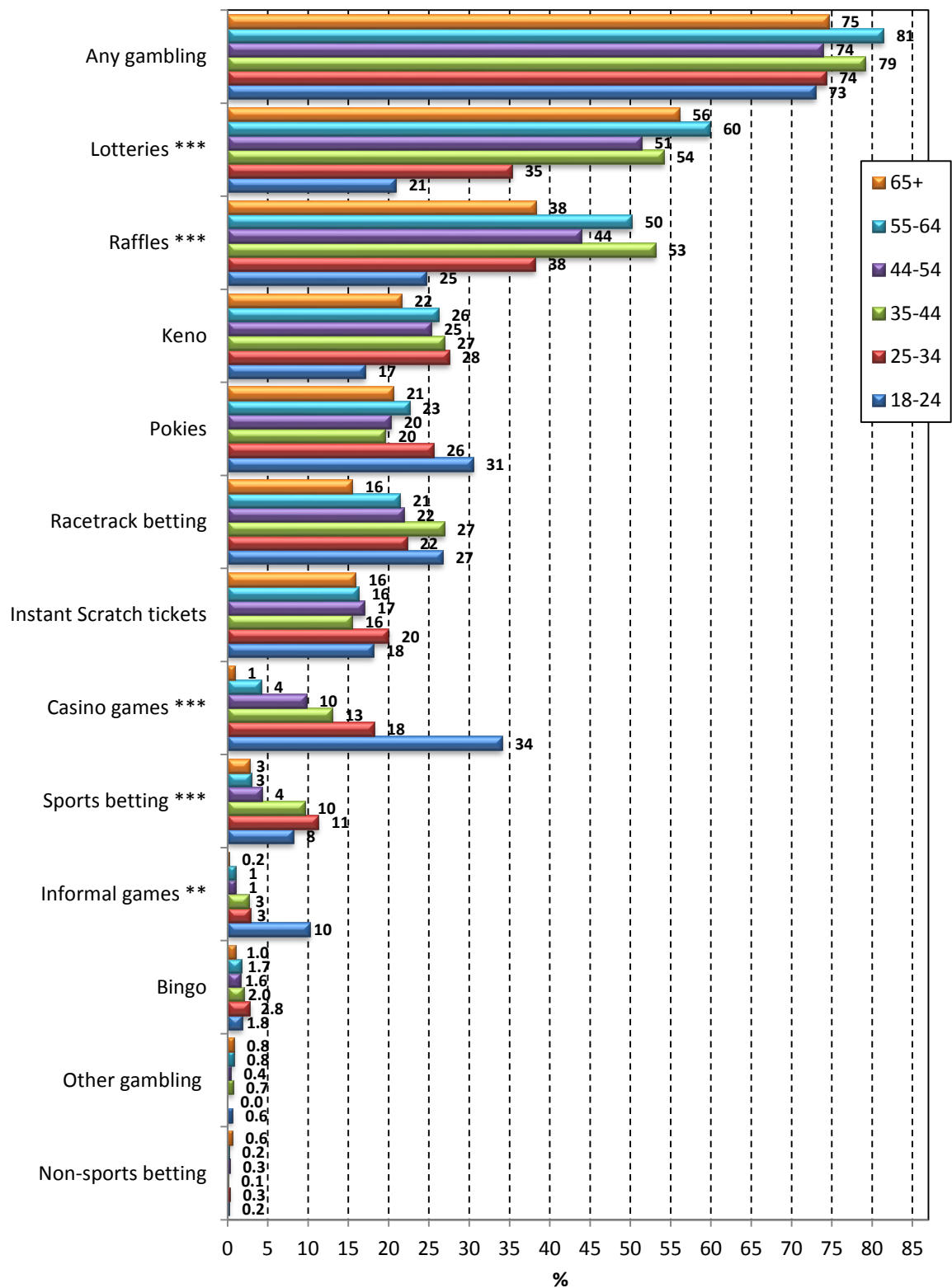
While there were differences between male and female participation in different types of gambling, there was no statistical association between the number of activities gambled on and gender (Figure 9). However, a slightly higher percentage of men (10.9%) gambled on five or more activities compared with women (8.6%).





**Figure 9:** Number of activities gambled on by gender, NT adult population

Figure 10 shows that there were statistical differences in gambling participation by age for lotteries (18-24 years less), raffles (18-24 years less), casino table games (decreasing participation with age), sports betting (over 34 years less), and informal games (18-24 years more). Standard error bars have been left out for ease of interpretation.

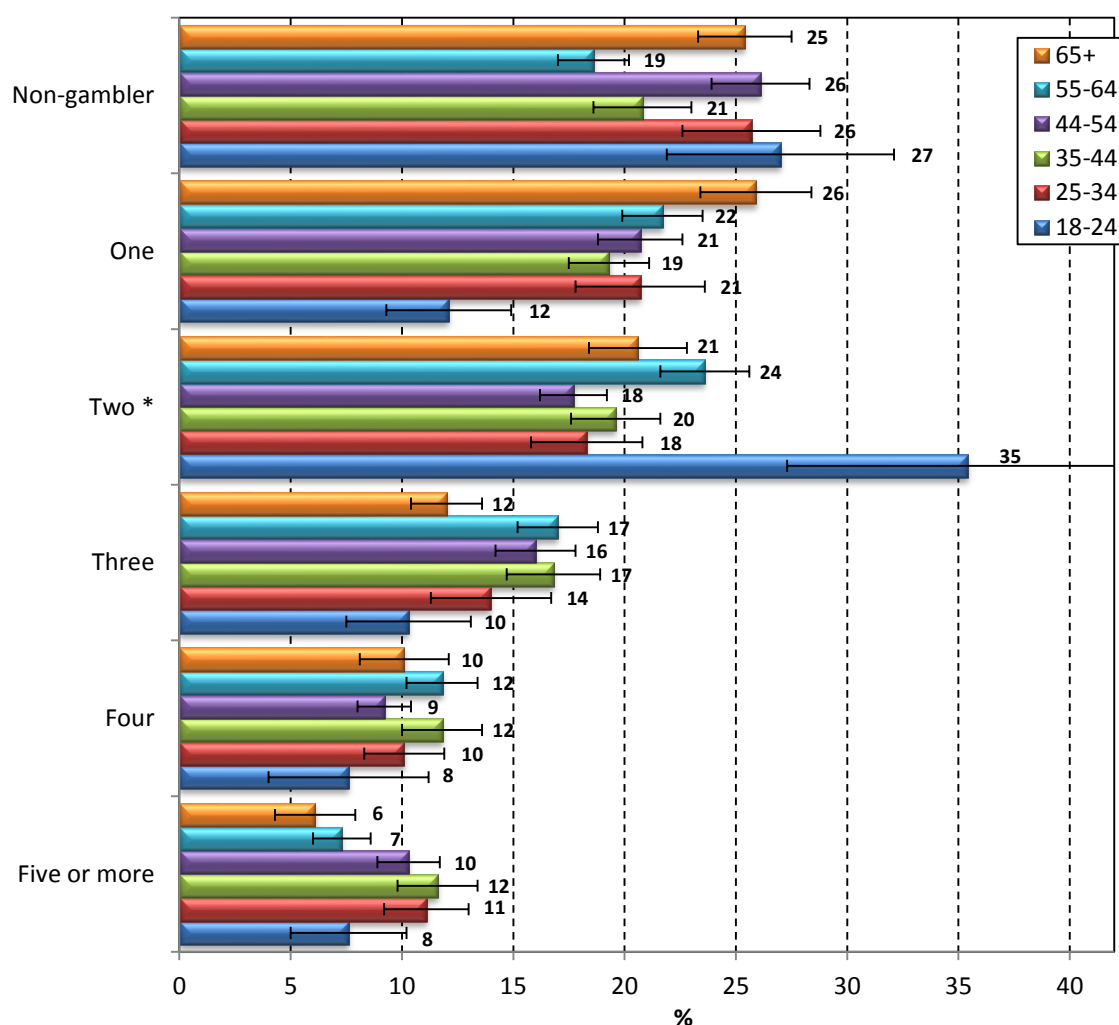


**Figure 10: Gambling participation by activity and age, NT adult population**

Significant association between age and participation, \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

There was a significant association between age and the number of activities participated in, though this relationship did not appear to follow a consistent pattern (Figure 11). Significance testing within each category of number of activities showed that the only statistical difference was for participation in two

activities (more common amongst people less than 25 years). The association between participation in one activity and age was marginally non-significant ( $p=0.09$ ), with increasing participation with age.

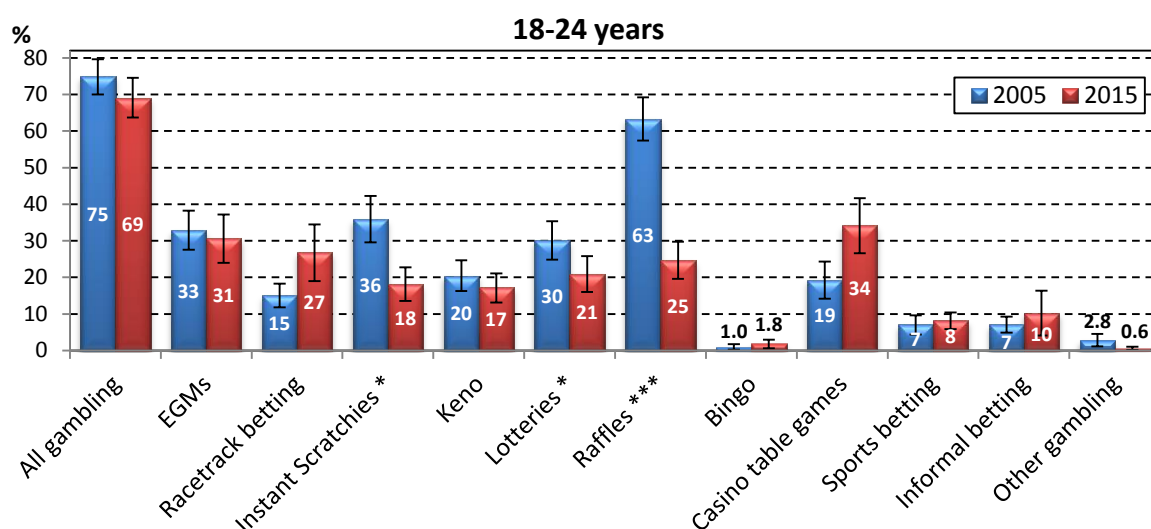


**Figure 11: Number of activities gambled on by age, NT adult population**

Significant association between age and number of activities, \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

The next five figures show age-specific 2005 and 2015 estimates for annual participation for 11 activities (excludes non-sports betting), along with statistical differences. Note, for consistency with the 2005 reporting that the 'all gambling' category excludes people who participated in raffles only, and because most raffles are mostly confined to non-commercial gambling.

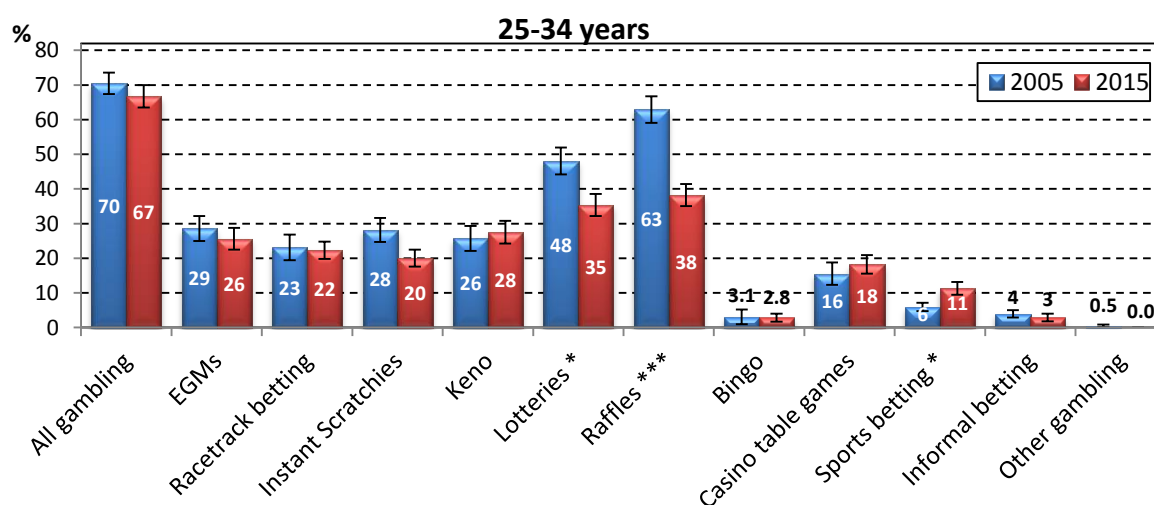
Figure 12 shows gambling participation for people aged 18-24 year. Two activities had significant decreases in participation across the two surveys for this age group. Between 2005 and 2015, purchasing instant scratch tickets halved from 36% to 18%, and raffles more than halved from 63% to 25%. There was an increase casino table games participation (19% to 34%), though this increase was marginally non-significant ( $p=0.09$ ). The decrease in participation in other gambling (2.8% to 0.6%) was marginally non-significant ( $p=0.08$ ), though this could be a result of non-sports betting being captured separately in the 2015 survey.



**Figure 12:** Gambling participation for selected activities for 18-24 years, NT adult population, 2005 and 2015

Significant difference between 2005 and 2015 participation, \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

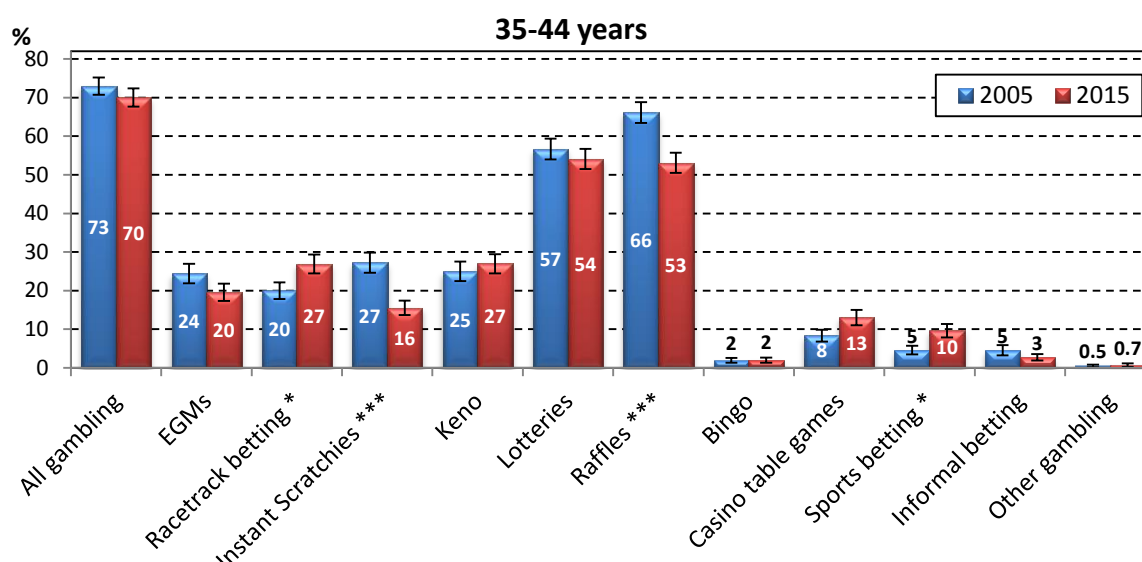
Figure 13 shows annual gambling participation for 25 to 34 year olds. Lotteries (48% to 35%) and raffles (63% to 38%) both decreased significantly between 2005 and 2015, while participation in sports betting increased significantly from 6% to 11% for this age group. The decrease in purchasing instant scratch tickets from 28% to 20% was marginally non-significant ( $p=0.06$ ).



**Figure 13:** Gambling participation for selected activities for 25-34 years, NT adult population, 2005 and 2015

Significant difference between 2005 and 2015 participation, \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

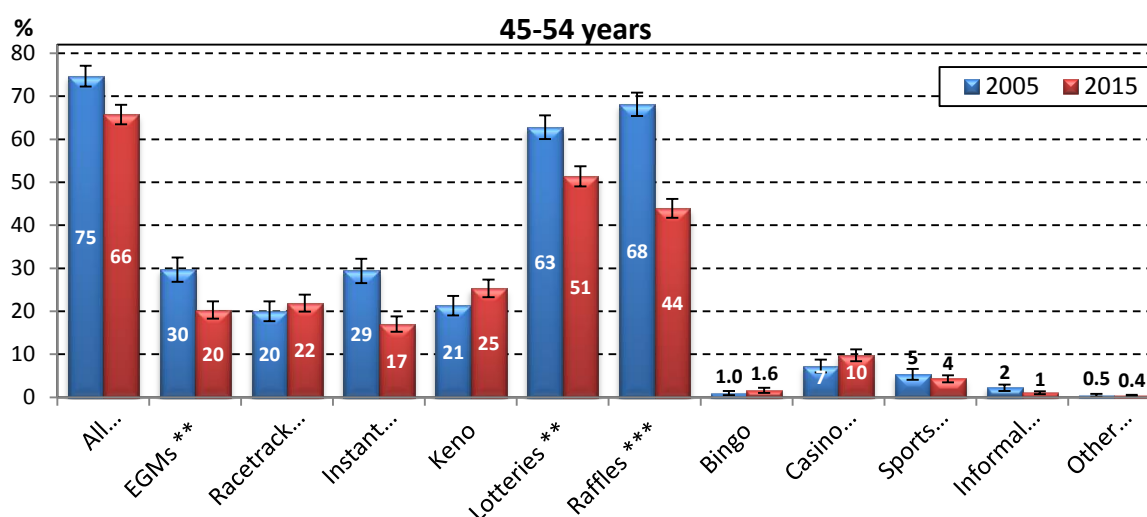
Figure 14 shows annual gambling participation for 35 to 44 year olds. There were significant decreases in participation for instant scratch tickets (27% to 16%) and raffles (66% to 53%) between 2005 and 2015. Racetrack betting increased significantly from 20% to 27%, while participation in sports betting increased significantly from 5% to 10% between the two surveys. The increase in participation in casino table games (8% to 13%) was marginally non-significant ( $p=0.06$ ).



**Figure 14:** Gambling participation for selected activities for 35-44 years, NT adult population, 2005 and 2015

Significant difference between 2005 and 2015 participation, \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

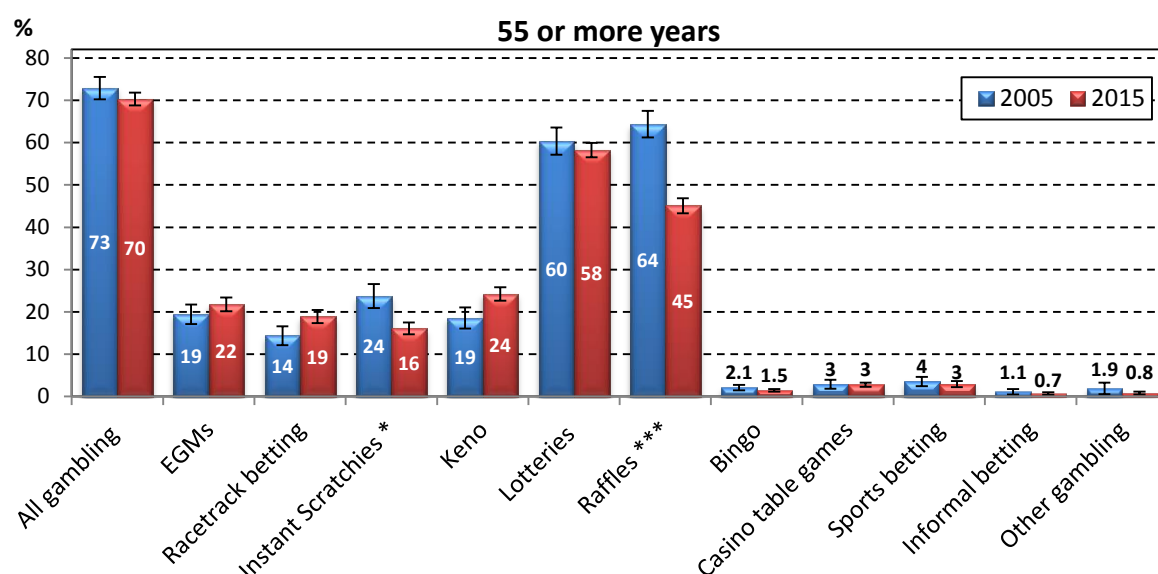
There were significant differences in participation in four activities for 45 to 54 year olds (Figure 15) and for all gambling. Gambling participation decreased significantly between 2005 and 2015 for any gambling (75% to 66%), EGMs (30% to 20%), instant scratch tickets (28% to 17%), lotteries (63% to 51%) and raffles (68% to 44%).



**Figure 15:** Gambling participation for selected activities for 45-54 years, NT adult population, 2005 and 2015

Significant difference between 2005 and 2015 participation, \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Lastly, Figure 16 shows participation for people aged 55 years or more decreased significantly between 2005 and 2015 for instant scratch tickets (24% to 16%) and raffles (64% to 45%). The increase in keno participation from 19% to 24% was marginally non-significant ( $p=0.07$ ) for this age group.



**Figure 16:** Gambling participation for selected activities for 55 or more years, NT adult population, 2005 and 2015

Significant difference between 2005 and 2015 participation, \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

### 3.4 Gambling participation by other socio-demographic characteristics

The following two tables show gambling participation for each activity by other socio-demographic variables not already presented. Reliable estimates were unable to be produced for activities with lower participation than sports betting. Table 2 shows estimates of participation for sports betting, casino games, instant scratch tickets and racetrack betting. Indigenous status (Indigenous lower participation), and household type (single parent, lower participation and group households, higher participation) all had a significant association with sports betting.

Main language spoken at home (not speaking English lower participation) and household type (group and other households higher participation) had a significant association with casino games. No socio-demographic variables were significantly associated with participation in instant scratch tickets, while not speaking English at home was significantly associated with lower participation in racetrack betting, as was living in the 'other' household type category.

**Table 2:** Socio-demographic characteristics by participation in sports, casino games, instant scratch tickets and racetrack gambling, NT adult population

	Sports betting % (SE)	Casino games % (SE)	Instant Scratch tickets % (SE)	Racetrack betting % (SE)
Northern Territory	7.5 (0.7)	13.4 (1.2)	17.5 (1.0)	22.8 (1.2)
Indigenous status	*	ns	ns	ns
Non-Indigenous	8.3 (0.8)	12.4 (0.9)	17.4 (0.9)	24.0 (1.3)
Indigenous	4.4 (1.4)	17.0 (4.4)	17.9 (3.2)	4.9 (1.6)
Main language spoken at home	ns	**	ns	***
English	7.7 (0.7)	14.1 (1.3)	18.1 (1.1)	24.0 (1.3)
Not-English	5.1 (2.7)	4.5 (1.7)	9.6 (3.3)	4.9 (1.6)
Household type	***	*	ns	*
Couple with children	8.4 (1.3)	11.4 (1.4)	16.5 (1.6)	19.4 (1.6)

	<b>Sports betting % (SE)</b>	<b>Casino games % (SE)</b>	<b>Instant Scratch tickets % (SE)</b>	<b>Racetrack betting % (SE)</b>
Couple with no children	5.8 (1.1)	10.8 (1.5)	17.3 (1.7)	24.9 (2.0)
Single parent with children	1.2 (0.5)	15.6 (6.8)	11.4 (2.8)	27.8 (7.2)
Single person	5.6 (1.8)	9.4 (2.3)	19.6 (3.2)	20.3 (3.1)
Group	15.6 (3.5)	27.8 (5.6)	22.1 (4.4)	21.9 (3.8)
Other	7.2 (2.9)	24.1 (12.4)	22.2 (6.1)	43.9 (10.4)

Significant association between socio-demographic variable and gambling activity

\*\*\* p<0.001, \*\* p< 0.01, \* p<0.05; ns = not significant

Table 3 shows estimates of participation for EGMs, keno, raffles and lotteries. Indigenous status (Indigenous higher participation), main language spoken at home (not English lower participation), and household type (single parent houses higher participation) were significantly associated with playing EGMs. Main language spoken at home (not English lower participation), and household type (single parent lower participation, single person higher participation) were significantly associated with betting on keno. Indigenous people were significantly less likely to participate in raffles, while single parent households were significantly less likely to play lotteries.

**Table 3:** Socio-demographic characteristics by participation in EGMs, keno, raffles and lottery, NT adult population

	<b>EGMs % (SE)</b>	<b>Keno % (SE)</b>	<b>Raffles % (SE)</b>	<b>Lotteries % (SE)</b>
Northern Territory	22.9 (1.3)	25.4 (1.3)	42.7 (1.3)	46.1 (1.4)
Indigenous status	**	ns	***	ns
Non-Indigenous	20.6 (1.0)	25.2 (1.1)	46.6 (1.2)	47.8 (1.2)
Indigenous	31.4 (4.6)	25.9 (4.4)	28.7 (4.0)	40.0 (4.5)
Main language spoken at home	*	*	***	ns
English	23.6 (1.4)	26.3 (1.3)	44.6 (1.4)	46.7 (1.4)
Not-English	12.7 (3.6)	12.2 (4.0)	15.4 (3.2)	37.7 (6.2)
Household type	**	*	ns	*
Couple with children	17.6 (1.5)	22.3 (1.9)	46.5 (2.0)	47.3 (2.0)
Couple with no children	21.6 (1.9)	29.9 (2.5)	44.2 (2.3)	47.8 (2.3)
Single parent with children	36.9 (8.0)	15.6 (3.3)	32.2 (6.6)	33.9 (5.9)
Single person	28.0 (4.4)	30.9 (4.4)	38.5 (3.9)	54.6 (4.1)
Group	27.9 (4.4)	26.0 (4.2)	42.0 (5.0)	37.6 (4.7)
Other	28.0 (7.1)	25.3 (6.7)	30.4 (7.1)	41.2 (8.6)

Significant association between socio-demographic variable and gambling activity

\*\*\* p<0.001, \*\* p< 0.01, \* p<0.05; ns = not significant

### 3.5 Gambling participation by socioeconomic characteristics

Tables 4 (sports betting, casino games, instant scratch tickets and racetrack betting) and 5 (EGMs, keno, raffles, and lotteries) show estimates for participation in different gambling activities by socioeconomic variables. Labour force status was significantly associated with casino games (not in labour force and part-time employed lower participation), instant scratch tickets (unemployed and part-time employed lower participation), racetrack betting (unemployed lower participation), raffles (unemployed lower participation), and lotteries (unemployed and part-time employed lower participation). Personal income was significantly associated with sports betting, with people on gross annual income less than \$30,000 having lower participation, and those earning \$120,000 or more per annum

having higher participation. Fly-in Fly-out/Drive-in Drive-out worker status variable was significantly associated with casino games (not in labour force lower participation), and EGMs play with FIFO/DIDO workers having higher participation). Student status was significantly associated with raffles and lotteries (full-time student lower participation in both). Highest education was significantly associated with participation in casino games (less than year 10 lower participation), EGMs (Bachelor or higher and less than year 10 lower participation, and year 10 or 12 higher participation), keno (Bachelor or higher and less than year 10 lower participation), raffles (less education lower participation) and lotteries (Bachelor or higher lower participation).

It can be seen in Table 5 that personal income was significantly associated with sports betting (less than \$30,000 lower participation, and \$120,000 or more higher participation); casino games (less than \$50,000 lower participation, and \$120,000 or more higher participation); racetrack betting (less than \$30,000 lower participation, and \$120,000 or more higher participation); keno (less than \$30,000 lower participation, and \$120,000 or more higher participation); raffles (lower incomes lower participation) and lotteries (higher participation with increasing incomes). All four SEIFA indexes were significantly associated with sports betting, with people living in more advantaged areas generally having higher participation. SIEFA indexes also showed significant association with participation in keno, raffles and lotteries, with higher participation associated with increased advantage.



**Table 4:** Socioeconomic characteristics by participation in sports, casino games, instant scratch tickets and racetrack gambling, NT Adult population

	<b>Sports betting % (SE)</b>	<b>Casino games % (SE)</b>	<b>Instant Scratch tickets % (SE)</b>	<b>Racetrack betting % (SE)</b>
Northern Territory	7.5 (0.7)	13.4 (1.2)	17.5 (1.0)	22.8 (1.2)
Labour force status	ns	***	*	*
Full-time employed	8.8 (0.9)	17.3 (1.7)	17.9 (1.3)	24.9 (1.6)
Part-time employed	3.5 (1.3)	5.6 (1.4)	12.0 (1.7)	19.0 (2.9)
Unemployed	9.4 (5.3)	10.0 (4.5)	11.8 (3.9)	10.2 (4.5)
Not in the labour force	5.2 (1.7)	5.3 (2.2)	20.3 (2.8)	20.3 (2.7)
Other	1.1 (1.2)	0.0 (0.0)	42.2 (14.4)	11.8 (8.5)
Fly-in Fly-out/Drive-in Drive-out	ns	*	ns	ns
FIFO/DIDO	9.4 (2.2)	17.7 (4.2)	18.7 (3.4)	22.9 (4.4)
Not FIFO/DIDO	7.6 (0.9)	14.9 (1.5)	16.6 (1.2)	24.1 (1.5)
Not in labour force	5.8 (1.7)	5.9 (1.9)	19.8 (2.5)	17.8 (2.3)
Whether studying	ns	ns	ns	ns
Full-time student	6.4 (2.9)	17.0 (6.3)	10.3 (4.1)	26.1 (9.5)
Part-time student	10.1 (2.6)	15.4 (3.1)	21.7 (3.8)	27.5 (3.6)
Not studying	7.3 (0.8)	13.0 (1.3)	17.5 (1.1)	22.1 (1.3)
Highest education	ns	*	ns	ns
Bachelor degree or higher	5.8 (1.0)	10.4 (1.4)	15.2 (1.6)	18.4 (1.6)
Certificate III, IV, or Diploma	9.8 (1.6)	16.0 (2.4)	19.6 (2.0)	26.1 (2.2)
Finished Year 12	9.0 (1.7)	16.5 (2.3)	18.0 (2.3)	24.9 (2.6)
Finished Year 10	7.4 (2.0)	16.7 (5.0)	21.5 (3.6)	25.6 (5.0)
Less than Year 10	2.5 (1.3)	3.0 (1.9)	9.5 (3.0)	18.6 (5.6)
Personal gross income	***	**	ns	**
Less than \$30,000	3.4 (1.4)	6.3 (2.0)	15.2 (2.2)	14.5 (2.5)
\$30,000-\$49,999	5.8 (1.7)	7.5 (2.1)	16.1 (2.9)	20.9 (3.5)
\$50,000-\$69,999	6.9 (1.6)	16.9 (3.5)	21.5 (2.8)	19.9 (3.2)
\$70,000-\$99,999	7.1 (1.4)	13.5 (2.8)	18.5 (2.1)	25.5 (2.7)
\$100,000-\$119,999	6.9 (1.8)	12.6 (2.1)	16.8 (2.3)	26.8 (3.0)
\$120,000 or more	15.4 (0.7)	22.7 (3.0)	15.1 (2.4)	29.8 (3.0)
SEIFA Advantage & Disadvantage	**	ns	ns	ns
590-979	4.5 (0.9)	13.4 (2.7)	16.0 (1.9)	22.2 (2.6)
980-1021	6.4 (1.6)	8.7 (2.3)	17.2 (2.5)	22.0 (2.8)
1023-107	9.2 (1.6)	11.0 (1.5)	18.5 (1.8)	21.2 (1.7)
1073-112 (more advantaged)	11.1 (1.8)	19.3 (2.1)	19.1 (2.0)	25.9 (2.2)
SEIFA Disadvantage	**	ns	ns	ns
460-971	4.7 (1.1)	10.5 (3.1)	14.1 (1.9)	24.6 (3.5)
972-1015	5.7 (1.3)	12.5 (2.5)	17.6 (2.2)	19.8 (2.0)
1017-105	8.9 (1.6)	12.3 (1.9)	19.6 (2.0)	21.4 (1.9)
1060-111 (less disadvantage)	10.8 (1.7)	18.6 (2.0)	18.8 (1.9)	25.5 (2.1)
SEIFA Economic Resources	***	ns	ns	*
520-951	5.0 (1.0)	11.9 (2.8)	14.5 (1.9)	24.8 (3.2)
972-991	4.9 (1.3)	14.4 (2.9)	17.7 (2.5)	17.6 (2.0)
992-1039	13.5 (2.0)	14.0 (2.0)	20.6 (2.1)	27.4 (2.3)
1047-109 (more resources)	6.9 (1.4)	13.7 (1.7)	17.8 (1.6)	20.8 (1.8)
SEIFA Education & Occupation	*	**	ns	ns
833-974	5.5 (1.2)	7.3 (2.1)	15.8 (1.7)	25.1 (3.0)
975-1001	5.1 (1.3)	17.3 (3.5)	18.7 (2.6)	17.0 (2.0)
1015-104	8.8 (1.5)	13.2 (1.8)	16.8 (1.8)	22.8 (2.1)
1048-110 (more educated/white collar)	10.9 (1.7)	17.8 (2.0)	19.3 (2.1)	25.2 (2.1)

Significant association between socio-demographic characteristic and gambling activity

\*\*\* p<0.001, \*\* p< 0.01, \* p<0.05; ns = not significant

**Table 5: Socioeconomic characteristics by participation in EGMs, keno, raffles and lottery, NT Adult population**

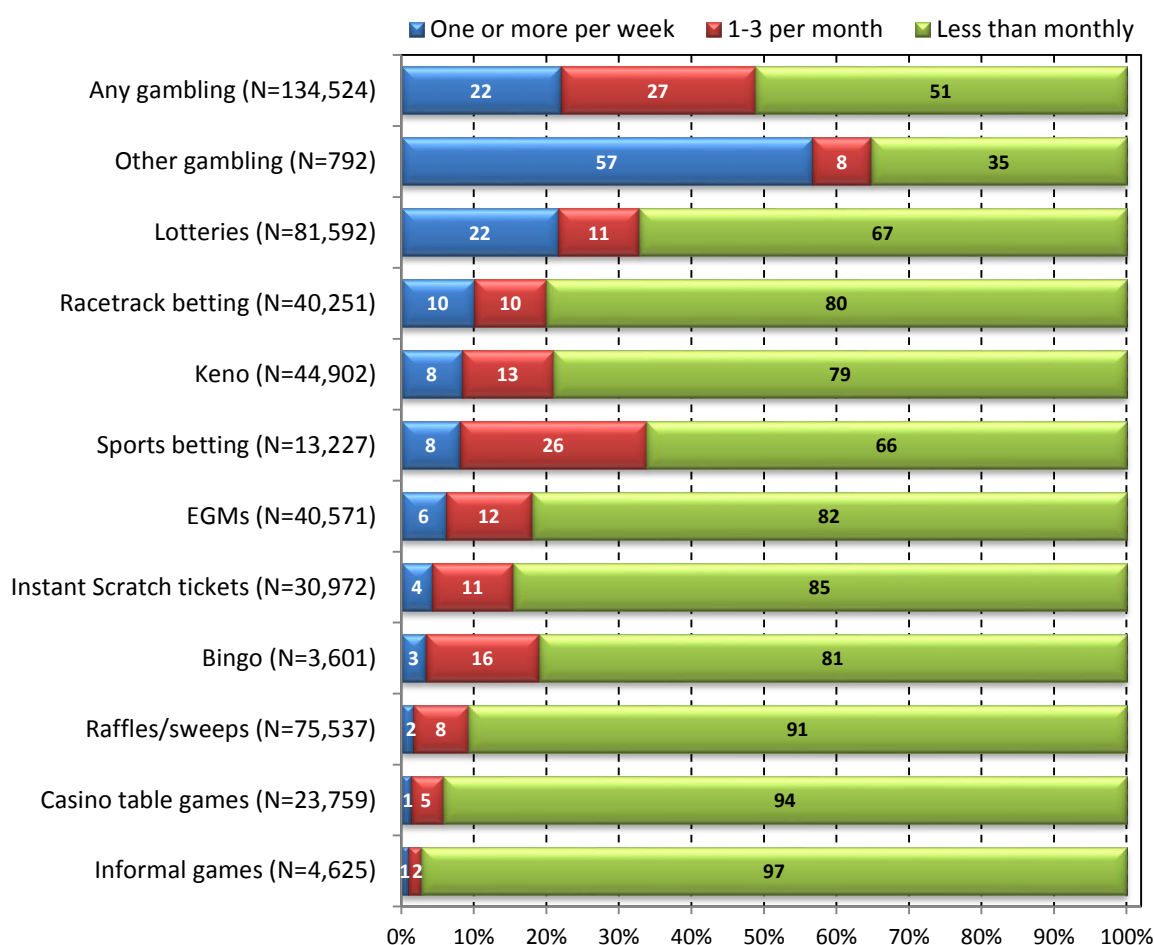
	<b>EGMs % (SE)</b>	<b>Keno % (SE)</b>	<b>Raffles % (SE)</b>	<b>Lotteries % (SE)</b>
Northern Territory	22.9 (1.3)	25.4 (1.3)	42.7 (1.3)	46.1 (1.4)
Labour force status	ns	ns	**	**
Full-time employed	24.3 (1.7)	27.4 (1.6)	45.1 (1.7)	48.1 (1.8)
Part-time employed	16.4 (2.7)	17.3 (2.9)	34.8 (3.1)	32.8 (3.1)
Unemployed	23.2 (6.3)	33.6 (10.6)	23.1 (6.4)	38.7 (8.3)
Not in the labour force	22.5 (2.8)	21.9 (2.2)	43.2 (3.0)	51.8 (3.0)
Other	27.5 (14.9)	15.8 (9.6)	61.4 (11.8)	43.5 (13.0)
Fly-in Fly-out/Drive-in Drive-out	**	ns	ns	ns
FIFO/DIDO	34.4 (5.4)	30.7 (4.6)	40.4 (4.7)	40.9 (4.8)
Not FIFO/DIDO	20.7 (1.3)	24.8 (1.5)	43.9 (1.6)	46.7 (1.6)
Not in the labour force	22.9 (2.6)	23.9 (2.9)	40.2 (2.9)	48.7 (3.0)
Student status	ns	ns	***	***
Full-time student	30.1 (9.8)	13.9 (4.6)	21.2 (4.8)	17.3 (4.4)
Part-time student	24.9 (3.6)	22.6 (3.4)	52.0 (4.2)	47.8 (4.2)
Not studying	22.3 (1.3)	26.3 (1.4)	42.9 (1.4)	47.6 (1.5)
Highest education	***	***	***	**
Bachelor degree or higher	14.6 (1.6)	16.4 (1.5)	47.8 (2.0)	38.4 (1.9)
Certificate III, IV, or Diploma	27.7 (2.5)	30.0 (2.5)	48.5 (2.6)	51.9 (2.6)
Finished Year 12	30.2 (3.5)	31.5 (3.5)	38.4 (3.0)	51.6 (3.2)
Finished Year 10	29.2 (4.5)	33.4 (4.6)	35.5 (4.1)	47.0 (4.8)
Less than Year 10	12.2 (3.3)	17.0 (4.1)	17.0 (4.0)	45.2 (6.3)
Personal gross income	ns	**	***	***
Less than \$30,000	19.1 (2.6)	16.7 (2.3)	30.5 (2.8)	39.4 (3.2)
\$30,000-\$49,999	23.6 (3.5)	25.3 (4.3)	36.2 (3.6)	39.0 (3.8)
\$50,000-\$69,999	23.6 (2.9)	24.0 (3.2)	39.9 (3.3)	41.0 (3.3)
\$70,000-\$99,999	25.0 (3.0)	24.9 (2.3)	47.6 (3.0)	47.7 (2.9)
\$100,000-\$119,999	19.0 (2.4)	30.1 (3.2)	52.6 (3.4)	54.7 (3.3)
\$120,000 or more	25.4 (3.7)	34.5 (3.8)	50.3 (3.5)	57.4 (3.3)
SEIFA Advantage & Disadvantage	ns	ns	***	*
590-979	22.7 (2.8)	23.2 (2.8)	34.5 (2.6)	39.7 (2.8)
980-1021	21.4 (2.6)	25.3 (2.8)	44.7 (3.0)	47.5 (3.0)
1023-107	21.9 (1.9)	25.9 (1.9)	49.4 (2.1)	51.5 (2.1)
1073-112 (more advantaged)	25.5 (2.1)	28.3 (2.2)	47.2 (2.4)	49.6 (2.4)
SEIFA Disadvantage	ns	ns	***	*
460-971	20.3 (3.2)	27.5 (3.7)	30.4 (2.8)	39.8 (3.5)
972-1015	24.2 (2.8)	21.2 (2.1)	44.4 (2.8)	44.7 (2.6)
1017-105	22.8 (2.1)	25.4 (2.0)	48.5 (2.3)	51.3 (2.3)
1060-111 (less disadvantage)	24.5 (2.0)	27.6 (2.1)	47.6 (2.3)	48.8 (2.3)
SEIFA Economic Resources	ns	*	***	*
520-951	21.2 (2.9)	27.7 (3.4)	30.6 (2.6)	41.4 (3.2)
972-991	23.6 (3.0)	18.9 (2.2)	42.5 (3.0)	42.4 (2.8)
992-1039	24.7 (2.2)	24.7 (2.1)	53.4 (2.3)	50.8 (2.3)
1047-109 (more resources)	22.7 (1.8)	29.5 (2.0)	46.8 (2.1)	50.6 (2.1)
SEIFA Education & Occupation	ns	*	**	ns
833-974	21.1 (2.8)	29.2 (3.1)	35.1 (2.5)	43.8 (3.0)
975-1001	24.0 (3.2)	19.4 (2.2)	44.5 (3.2)	42.3 (3.0)
1015-104	22.7 (2.0)	26.0 (2.0)	46.6 (2.2)	50.0 (2.2)
1048-110 (more educated/white collar)	24.4 (2.2)	25.5 (2.2)	46.8 (2.4)	48.8 (2.4)

Significant association between socioeconomic characteristic and gambling activity

\*\*\* p<0.001, \*\* p< 0.01, \* p<0.05; ns = not significant

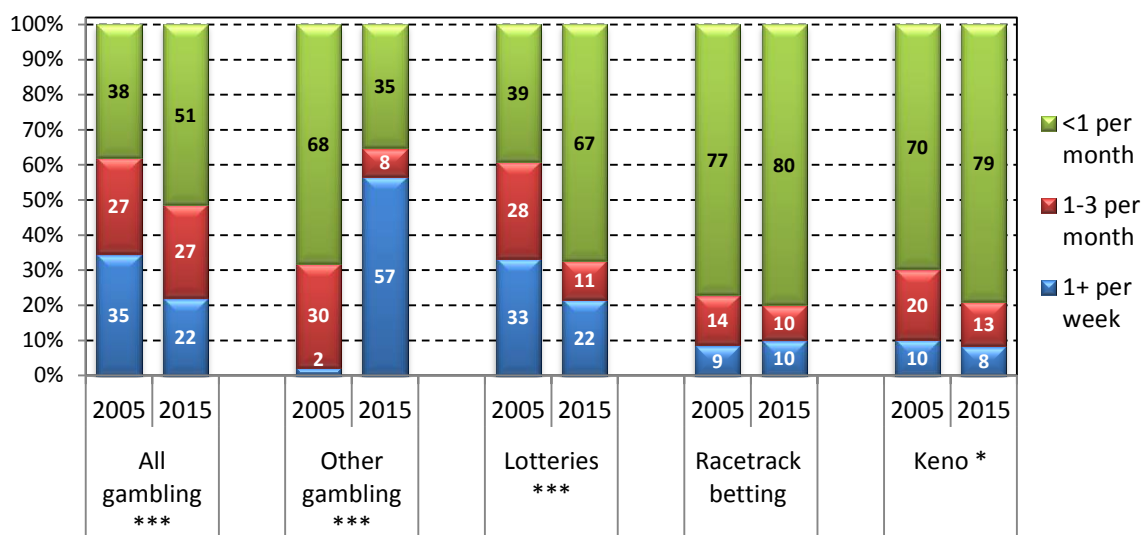
### 3.6 Frequency of gambling participation in the Northern Territory

Of those people who gamble, 51% gamble less than monthly, 27% gamble 1 to 3 times per month, and 22% gamble at least once per week (Figure 17). In the other gambling, 56% gambled weekly, though this was from only 28 unweighted) respondents (792 weighted). Lottery (22%) had the next highest weekly participation, followed by racetrack betting (10%), keno (8%), sports betting (8%), EGMs (6%), instant scratch tickets (4%), bingo (3%), raffles (2%), and casino games (1%). The pattern of frequency of play for sports betting is distinct from other gambling activities, by having over a quarter (26%) of those participating betting monthly, compared with the next closest activity of bingo with 16% betting monthly.



**Figure 17:** Frequency of participation in gambling by activity, NT population who gambled on activity

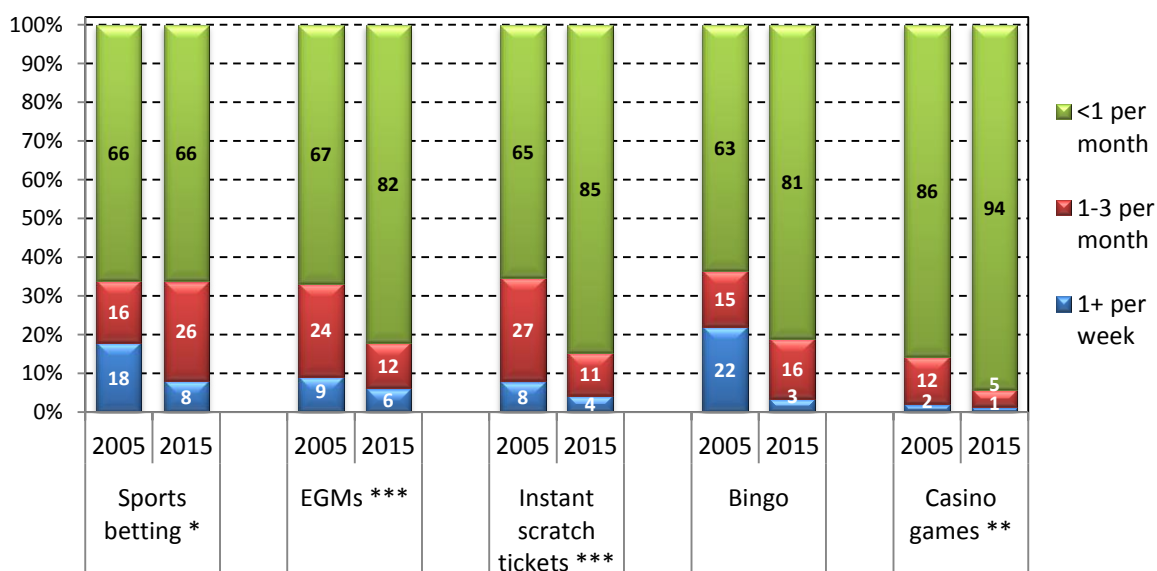
Figure 18 shows change in frequency of gambling between 2005 and 2015 for all gambling, other gambling, lotteries, racetrack betting and casino games, and Figure 19 shows the same for sports betting, EGMs, instant scratch tickets, bingo and casino table games. First, looking at Figure 18, there were significant differences between 2005 and 2015 in frequency of play for all gambling (less weekly), other gambling (more weekly and less monthly), lotteries (less weekly and less monthly), and keno (less monthly). Racetrack betting had a non-significant decline from 14% to 10% for monthly betting.



**Figure 18:** Change in frequency of participation for all gambling, other gambling, lotteries, racetrack betting and keno from 2005 to 2015, NT population who gambled on activity

Significant difference between 2005 and 2015 frequency of play  
 \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

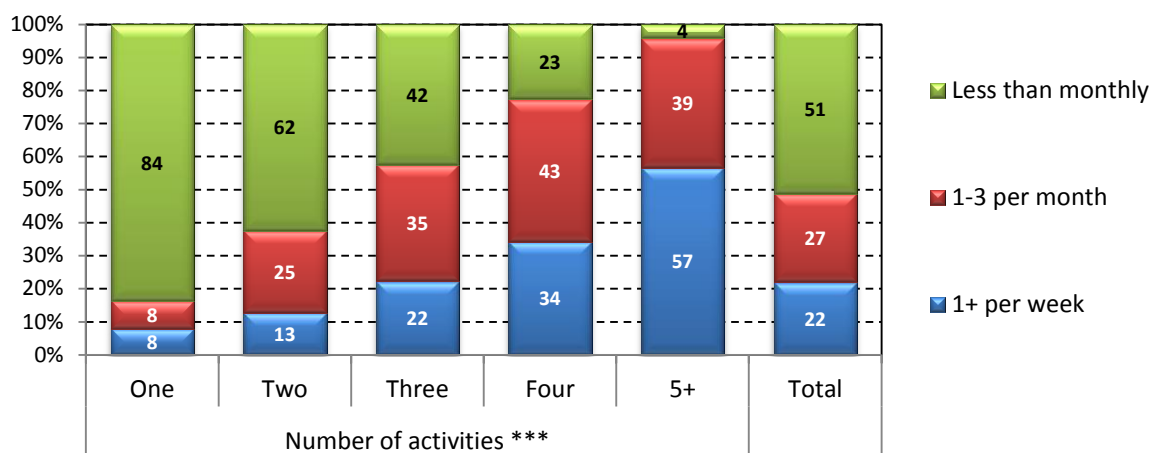
Now looking at Figure 19, there were significant differences between 2005 and 2015 for sports betting (less weekly and more monthly gambling), EGMs (less weekly and less monthly gambling), instant scratch tickets (less weekly and less monthly gambling), and casino games (less monthly gambling). There was a non-significant but large decline in weekly bingo from 22% in 2005 to 3% in 2015.



**Figure 19:** Change in frequency of participation in sports betting, EGMs, instant scratch tickets, bingo and casino games from 2005 to 2015, NT adult population who gambled on activity

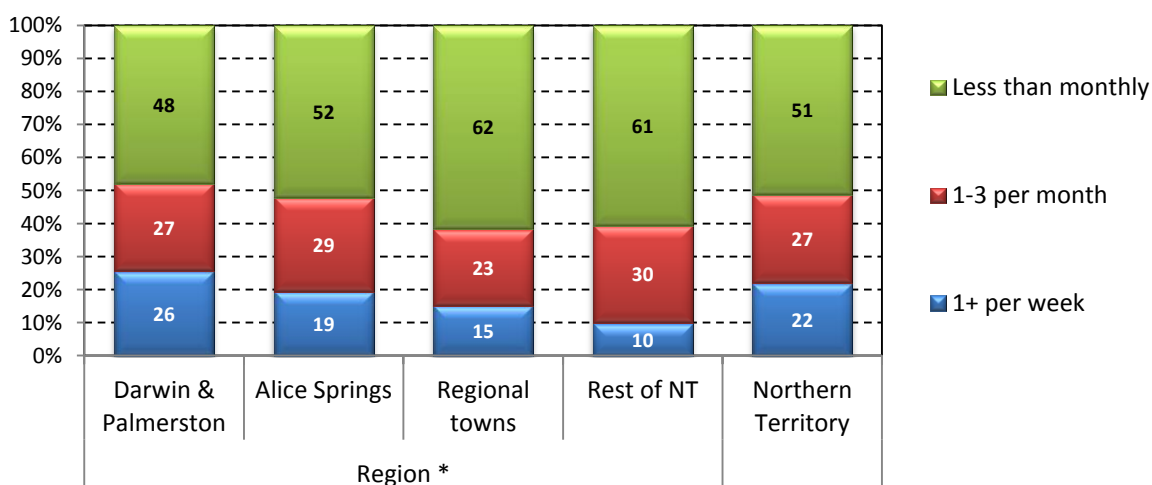
Significant difference between 2005 and 2015 frequency of play  
 \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Figure 20 shows frequency of any gambling by the number of activities that someone gambled on. As the number of different activities gambled on increases, so too does the percentage of people gambling weekly or more, with this association highly significant ( $p < 0.001$ ). Also of note, the largest group of people who played four different gambling activities were monthly gamblers (43%), and around a quarter of this same four-activity group gambled less than monthly.



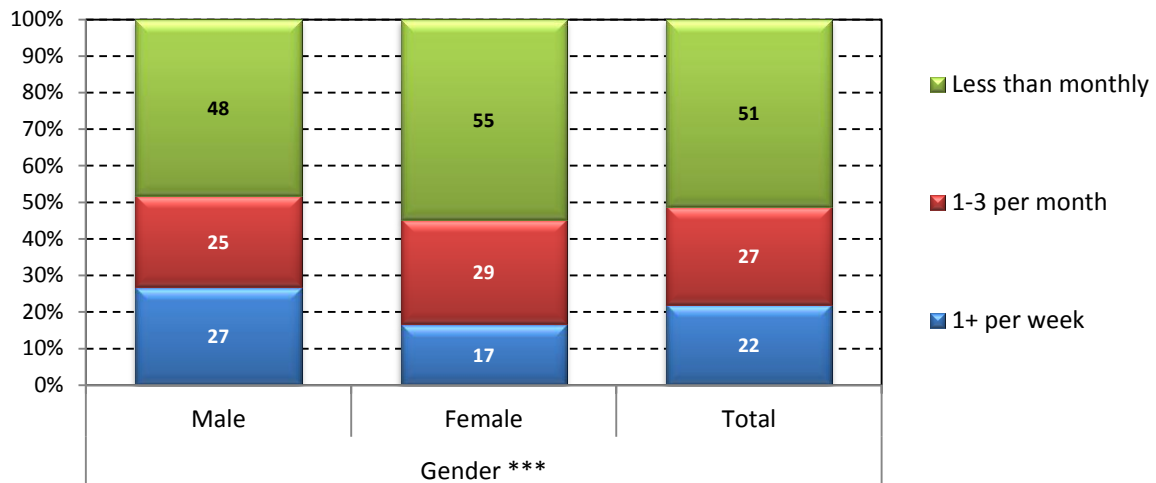
**Figure 20:** Frequency of gambling by number of activities, NT adult gambling population

Figure 21 shows frequency of any gambling for regions and the NT. There were significant differences ( $p = 0.04$ ) across regions, with the highest percentage of weekly gamblers in Darwin/Palmerston (26%), followed by Alice Springs (19%), Regional Towns (15%) and the Rest of the NT (10%). This association largely reflects access to commercial gambling, which is more accessible in Darwin/Palmerston and Alice Springs.



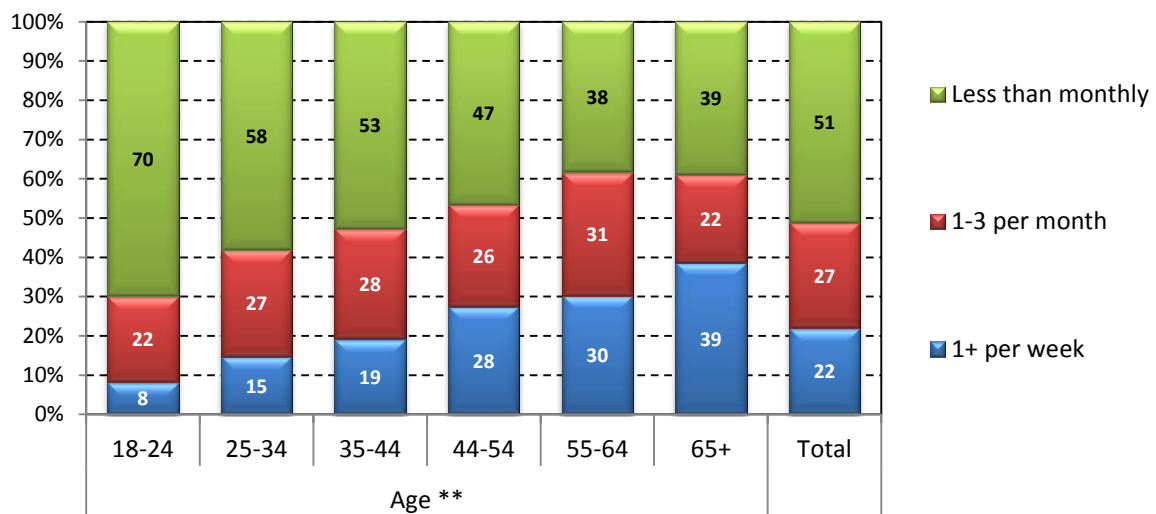
**Figure 21:** Frequency of gambling by region, NT adult gambling population

Figure 22 shows frequency of any gambling by gender. There was a significant ( $p < 0.001$ ) difference between male and female frequency of gambling, with males more likely to be weekly gamblers compared with females (27% cf. 17%).



**Figure 22:** Frequency of gambling by gender, NT adult gambling population

There was a significant association between age and frequency of gambling with an increasing percentage of weekly gamblers from younger to older people (Figure 23). For example, only 8% of 18-24 years people gambled weekly, and this increased to 19% for 35-44 years people and increased again to 39% for people 65 years or older.



**Figure 23:** Frequency of gambling by age, NT adult gambling population

Table 6 presents associations between frequency of gambling and other socio-demographic variables not presented previously. None of these variables had a statistically significant association with frequency of gambling, though there were some notable differences. Indigenous gamblers were less likely to gamble weekly (15.5%) compared with non-Indigenous gamblers (23.7%), as were those that did not speak English at home (12.8%), compared with those that spoke English at home (22.3%). Around 27% of couples with no children gambled weekly, compared with only 11.3% of single parent households.

**Table 6:** Frequency of gambling by socio-demographic variables, NT adult gambling population

	1+ per week % (SE)	1-3 per month % (SE)	Less than monthly % (SE)
Northern Territory	22.0 (1.1)	26.8 (1.5)	51.2 (1.6)
Indigenous status			
Non-Indigenous	23.7 (1.2)	25.7 (1.2)	50.5 (1.4)
Indigenous	15.5 (2.8)	30.7 (5.2)	53.8 (5.7)
Main language spoken at home			
English	22.3 (1.2)	26.9 (1.5)	50.8 (1.7)
Not English	12.8 (5.3)	25.4 (8.4)	61.7 (8.4)
Number of adults in house			
One	19.3 (2.6)	28.9 (4.0)	51.8 (4.5)
Two	22.1 (1.5)	26.5 (1.9)	51.4 (2.2)
Three	26.3 (3.3)	24.5 (3.2)	49.2 (4.0)
Four or more	19.1 (3.0)	28.4 (4.4)	52.5 (4.5)
Household type			
Couple: children living at home	21.0 (1.8)	23.9 (1.9)	55.1 (2.3)
Couple: no children/not living at home	27.3 (2.2)	29.3 (2.9)	43.4 (2.6)
Single: children living at home	11.3 (2.9)	31.8 (7.5)	57.0 (8.1)
Single person	21.1 (3.0)	28.3 (4.1)	50.6 (4.8)
Group or share house	19.9 (4.4)	24.0 (4.8)	56.1 (5.9)
Other	21.7 (7.3)	31.0 (9.0)	47.3 (12.6)

Table 7 shows the association between gambling frequency and socioeconomic variables. Fly in-fly out (and drive in-drive out) workers were significantly less likely to gamble weekly, as were those that had a Bachelor degree or higher, while those with education of Year 10 or below had the highest percentage gambling weekly. People living in most disadvantaged areas tended to gamble less (largely reflecting that most of these disadvantaged areas are in very remote NT).

**Table 7:** Frequency of gambling by socioeconomic variables, NT adult gambling population

	1+ per week % (SE)	1-3 per month % (SE)	Less than monthly % (SE)
Northern Territory	22.0 (1.1)	26.8 (1.5)	51.2 (1.6)
Labour force status			
Full-time employed	20.6 (1.4)	27.5 (1.8)	51.9 (2.0)
Part-time employed	18.3 (2.7)	25.3 (3.8)	56.4 (4.0)
Unemployed (looking for work)	17.2 (7.1)	21.3 (7.7)	61.5 (10.6)
Not in the labour force	31.8 (3.0)	25.7 (3.2)	42.5 (3.3)
Other	26.8 (13.0)	36.1 (17.7)	37.2 (13.5)
Fly-in Fly-out/Drive-in Drive-out worker *			
Yes, FIFO/DIDO worker	16.6 (3.2)	21.5 (3.7)	62.0 (4.9)
Other occupation/work	21.0 (1.3)	28.4 (1.8)	50.5 (1.9)
Not in the labour force	28.7 (2.8)	25.5 (3.1)	45.8 (3.6)
Student status			
Full-time student	11.3 (4.9)	23.3 (9.6)	65.4 (10.6)
Part-time student	14.9 (2.9)	31.8 (4.3)	53.3 (4.5)
Not studying	23.2 (1.3)	26.4 (1.6)	50.4 (1.7)
Highest education *			
Bachelor degree or higher	15.8 (1.6)	24.0 (2.1)	60.2 (2.3)
Diploma, technical Certificate III-IV	23.3 (2.2)	30.3 (2.8)	46.4 (2.9)
Finished Year 12 (Senior)	24.9 (2.8)	25.2 (3.0)	49.9 (3.8)
Finished Year 10 (Junior)	25.4 (3.7)	27.3 (4.5)	47.2 (5.9)
Less than Year 10	30.1 (6.5)	25.6 (8.1)	44.3 (7.7)

	1+ per week % (SE)	1-3 per month % (SE)	Less than monthly % (SE)
<b>Personal income</b>			
Less than \$30,000	24.9 (3.0)	25.2 (3.4)	49.9 (3.6)
\$30,000 - \$49,999	22.5 (3.4)	23.8 (4.5)	53.7 (4.9)
\$50,000 - \$69,999	15.7 (2.2)	31.2 (4.4)	53.1 (4.3)
\$70,000 - \$99,999	19.2 (2.1)	28.6 (2.8)	52.2 (3.3)
\$100,000 - \$119,999	25.0 (3.3)	28.1 (3.4)	47.0 (3.5)
\$120,000 or more	28.5 (3.3)	21.8 (2.7)	49.7 (3.9)
<b>SEIFA Advantage &amp; Disadvantage *</b>			
2-4 quartile	23.9 (1.3)	27.1 (1.5)	49.0 (1.6)
1 <sup>st</sup> quartile (least advantaged)	15.7 (2.3)	25.9 (3.9)	58.4 (4.4)
<b>SEIFA Disadvantage *</b>			
2-4 quartile	23.9 (1.3)	27.2 (1.5)	48.9 (1.6)
1 <sup>st</sup> quartile (most disadvantaged)	15.8 (2.3)	25.8 (3.8)	58.4 (4.3)
<b>SEIFA Economic Resources</b>			
2-4 quartile	23.8 (1.3)	27.1 (1.5)	49.1 (1.6)
1 <sup>st</sup> quartile (least resources)	17.3 (2.1)	26.2 (3.5)	56.6 (3.9)
<b>SEIFA Education &amp; Occupation</b>			
2-4 quartile	23.6 (1.4)	26.3 (1.6)	50.0 (1.8)
1 <sup>st</sup> quartile (least educated/white collar)	18.1 (2.0)	27.9 (3.2)	54.0 (3.5)

Significant association between socioeconomic variable and gambling frequency

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

### 3.7 Mode of gambling for selected activities

This section focuses on four activities and people's preferences for how and where they gamble on them. Table 8 shows mode of gambling for EGMs, keno, sports and racetrack betting. A higher percentage of EGM (27%) and racetrack (24%) gamblers used more than one mode to gamble compared with keno (16%) and sports betting (8%). Of those that played EGMs in the last year, the casino was the most common venue (57%), followed by pub, club, and online. For keno players, the most common venue was hotel (51%), followed by club, casino, other and online. Racetrack betting was most commonly done at a TAB (39%), followed by on-track, online, hotel and club. Sports bets were most commonly placed online, followed by hotel, TAB, phone, club and casino.

**Table 8: Mode of gambling by activity, NT population gambling on activity**

Where/how gambled	EGMs % (SE)	Keno % (SE)	Racetrack betting % (SE)	Sports betting % (SE)
Hotel	40.3 (3.3)	50.7 (2.8)	20.6 (2.2)	17.9 (4.4)
Club	36.0 (3.2)	42.3 (2.8)	19.7 (3.1)	5.0 (1.9)
Casino	56.6 (3.2)	26.2 (2.3)	9.9 (2.7)	3.0 (3.0)
Online	7.8 (2.1)	0.7 (0.3)	26.2 (2.5)	58.9 (5.1)
TAB	NA	NA	38.9 (2.8)	14.8 (3.8)
Racetrack (on-track)	NA	NA	27.7 (2.5)	NA
Phone	NA	NA	10.7 (2.2)	7.2 (2.7)
Other	0.3 (0.1)	0.8 (0.4)	0.9 (0.3)	1.9 (1.1)
<b>Number of betting modes</b>				
One	73.2 (2.7)	83.6 (1.7)	75.7 (2.4)	91.8 (3.2)
Two	16.8 (2.1)	12.5 (1.5)	13.4 (1.7)	8.1 (3.2)
Three or more	10.0 (2.1)	3.9 (0.8)	10.9 (1.8)	0.1 (0.1)
Population playing (N)	40,571	44,902	40,251	13,227



### 3.8 Mode of gambling for selected activities by region, age and gender

Table 9 shows the mode of EGM play by regions. Unsurprisingly, casino EGM play differed significantly across regions, with Alice Springs recording the highest EGM participation in the casino (74%) and regional towns the lowest (27%). There was also large variation across regions for hotels and clubs, though this association was marginally non-significant.

**Table 9: Mode of EGM play by region, NT EGM gamblers**

Where/how gambled on EGMs	Darwin/ Palmerston	Alice Springs	Regional towns	Rest of NT	Northern Territory
Hotel	54.0 (3.0)	19.3 (6.9)	53.1 (18.8)	36.3 (12.5)	40.3 (3.3)
Club	66.1 (2.7)	27.1 (8.0)	65.5 (18.6)	37.2 (10.7)	36.0 (3.2)
Casino *	43.3 (3.0)	74.3 (7.9)	27.3 (12.3)	47.7 (13.1)	56.6 (3.2)
Online	4.9 (1.6)	12.1 (7.1)	14.2 (10.4)	14.1 (8.9)	7.8 (2.1)
Other	0.3 (0.2)	0.2 (0.2)	0.0 (0.0)	1.1 (0.8)	0.3 (0.1)
Number of betting modes					
One	71.8 (2.8)	76.2 (7.8)	72.3 (12.4)	79.4 (8.1)	73.2 (2.7)
Two	17.9 (2.3)	15.8 (5.8)	14.6 (7.0)	12.2 (5.4)	16.8 (2.1)
Three or more	10.3 (2.0)	8.0 (5.9)	13.1 (10.3)	8.4 (6.3)	10.0 (2.1)
Population playing(N)	26,153	7,879	4,143	2,396	40,571

Notes: Caution advised interpreting some estimates in this table due to high (>25%) relative standard errors

Significant association between mode of playing EGMs and region

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

Table 10 shows mode of keno gambling by regions. There was significant variation across regions for playing keno in hotels with the highest participation in Darwin/Palmerston (60%), followed by Alice Springs, Rest of the NT and Regional Towns. There was also significant variation across regions for playing keno in clubs with the highest participation in Regional Towns (83%), followed by Rest of the NT, Alice Springs and Darwin/Palmerston. Keno players in Darwin/Palmerston were more likely to play keno using more than one mode, compared with other regions.

**Table 10: Mode of playing keno by region, NT keno gamblers**

Where/how gambled on keno	Darwin/ Palmerston	Alice Springs	Regional Towns	Rest of NT	Northern Territory
Hotel ***	59.9 (2.5)	39.5 (8.6)	20.7 (7.0)	29.9 (10.9)	50.7 (2.8)
Club **	35.9 (2.4)	36.5 (8.8)	82.5 (6.9)	52.9 (13.3)	42.3 (2.8)
Casino	28.4 (2.5)	28.8 (6.7)	11.2 (5.0)	23.0 (10.2)	26.2 (2.3)
Online	0.7 (0.4)	0.4 (0.4)	1.8 (1.9)	0.2 (0.2)	0.7 (0.3)
Other	0.9 (0.5)	2.3 (2.1)	0.0 (0.0)	0.0 (0.0)	0.8 (0.4)
Number of modes **					
One	79.6 (2.2)	93.8 (2.3)	87.9 (5.1)	95.2 (2.3)	83.6 (1.7)
Two	15.5 (2.0)	5.0 (2.1)	9.8 (4.6)	3.6 (2.1)	12.5 (1.5)
Three or more	5.0 (1.2)	1.2 (0.7)	2.3 (1.9)	1.2 (0.8)	3.9 (0.8)
Population playing(N)	30,904	4,373	4,116	5,509	44,902

Notes: Caution advised interpreting some estimates in this table due to high (>25%) relative standard errors

Significant association between mode of playing keno and region

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

Table 11 shows mode of play for EGMs and keno by gender. There were no significant differences between men and women in the modes by which gambled

on EGMs. For keno, only one mode differed for men and women, with men more likely to using an 'other' non-specified mode to gamble on keno.

**Table 11:** Mode of EGM and keno play by gender, NT population gambling on activity

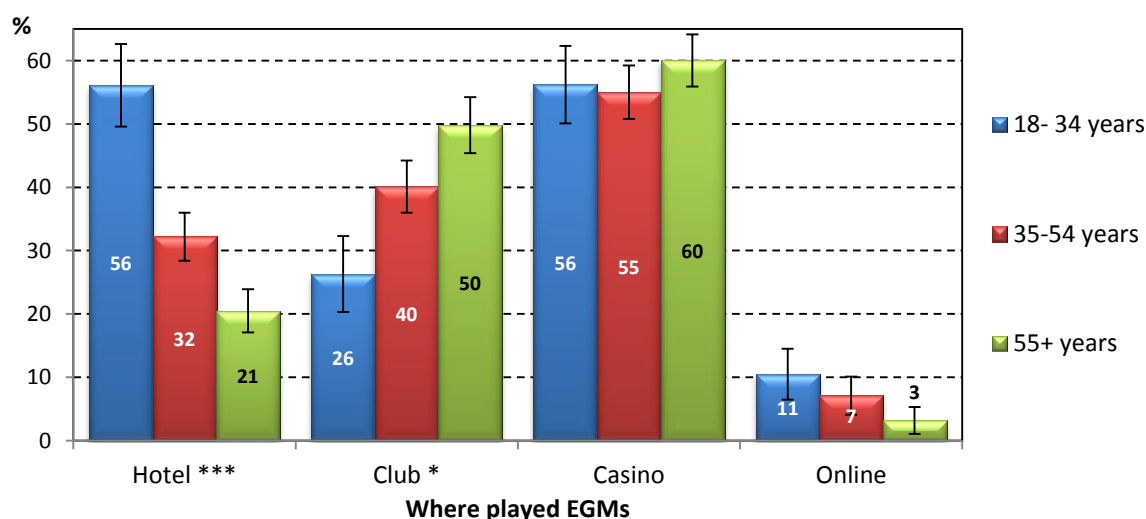
Where/how gambled on activity	EGMs			Keno		
	Males % (SE)	Female % (SE)	Sig.	Males % (SE)	Female % (SE)	Sig.
Hotel	43.0 (5.2)	37.5 (4.0)		52.8 (4.2)	47.6 (3.4)	
Club	33.0 (4.9)	39.2 (3.9)		43.4 (4.2)	40.8 (3.3)	
Casino	54.7 (5.0)	58.7 (3.9)		25.0 (3.2)	28.0 (3.2)	
Online	5.7 (2.4)	10.0 (3.5)		0.4 (0.3)	1.2 (0.6)	
Other	0.2 (0.1)	0.3 (0.2)		1.4 (0.7)	0.1 (0.1)	***
Number of betting modes						
One	75.2 (3.6)	71.0 (4.0)		82.0 (2.5)	85.9 (2.2)	
Two	16.0 (3.0)	17.7 (2.8)		13.4 (2.2)	11.2 (2.0)	
Three or more	8.8 (2.2)	11.4 (3.5)		4.6 (1.3)	2.9 (0.8)	
Population playing(N)	20,879	19,692		26,331	18,571	

Notes: Caution advised interpreting some estimates in this table due to high (>25%) relative standard errors

Significant association between mode of playing EGMs or keno and region

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

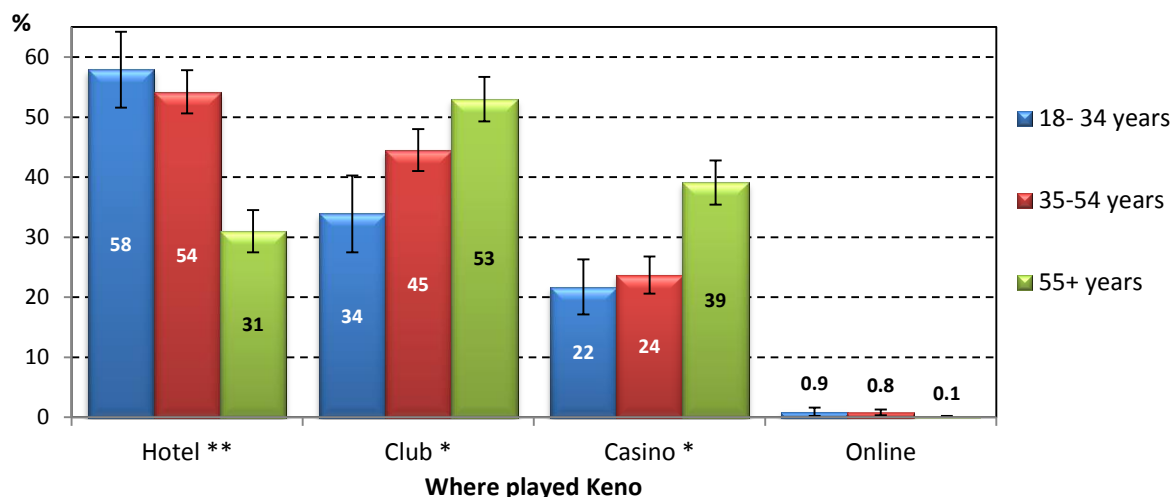
There was strong age patterning in the mode of EGM play that people chose (Figure 24). There was a highly significant association observed between age and playing EGM's in a hotel, with play in hotels decreasing with age. The opposite occurred for those playing EGMs in clubs, where this venue is preferred by older EGM players. There was a decreasing non-significant association between playing EGMs online and age.



**Figure 24:** Mode of EGM play by age, NT EGM gamblers

Significant association between mode of playing EGMs and age: \*\*\* p<0.001, \*\* p<0.01, \* p<0.05

Figure 25 shows the mode in which people played keno by age. There was a significant association between age and playing keno in a hotel and in a club, and this association was of a similar nature to that observed for playing EGMs (i.e. younger prefer hotels, and older prefer clubs). However, and different to EGMs, there was a significant association between age and playing keno at the casino, with older people more likely to play keno at the casino.



**Figure 25: Mode of keno play by age, NT EGM gamblers**

Significant association between mode of playing keno and age: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Racetrack betting in a hotel differed significantly across regions and was the most popular amongst punters in Darwin/Palmerston (25%), followed by Rest of the NT, Regional Towns, and Alice Springs (Table 12). Racetrack betting in a TAB differed significantly across regions and was most popular in Alice Springs (48% and Darwin/Palmerston (44%), followed by Regional Towns and Rest of the NT. No other modes of racetrack betting differed significantly across regions.

**Table 12: Mode of racetrack betting by region, NT EGM gamblers**

Where/how did racetrack betting	Darwin/ Palmerston	Alice Springs	Regional towns	Rest of NT	Northern Territory
Hotel *	25.4 (2.8)	10.7 (4.7)	11.0 (3.9)	15.5 (7.1)	20.6 (2.2)
Club	15.0 (2.5)	21.8 (8.9)	42.2 (14.7)	18.5 (8.0)	19.7 (3.1)
Casino	7.8 (2.0)	14.4 (6.7)	4.5 (2.5)	25.1 (19.0)	9.9 (2.7)
TAB *	43.5 (3.0)	48.4 (8.0)	26.3 (7.9)	10.4 (5.5)	38.9 (2.8)
Racetrack	31.7 (2.8)	26.5 (7.1)	19.3 (6.7)	13.7 (9.3)	27.7 (2.5)
Phone	8.5 (1.9)	12.2 (6.9)	19.6 (10.9)	11.8 (9.3)	10.7 (2.2)
Online	29.8 (2.9)	27.9 (7.6)	15.9 (6.3)	13.9 (6.6)	26.2 (2.5)
Other	0.9 (0.3)	0.4 (0.3)	0.0 (0.0)	3.1 (2.9)	0.9 (0.3)
Number of modes					
One	72.6 (2.8)	71.3 (7.7)	84.6 (5.5)	91.1 (4.3)	75.7 (2.4)
Two	15.1 (2.2)	17.1 (5.4)	4.8 (2.5)	8.2 (4.2)	13.4 (1.7)
Three or more	12.3 (2.2)	11.7 (6.7)	10.6 (4.8)	0.7 (0.7)	10.9 (1.8)
Population playing(N)	25,790	5,547	5,087	3,827	40,251

Notes: Caution advised interpreting some estimates in this table due to high (>25%) relative standard errors

Significant association between mode of racetrack betting and region

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Table 13 shows mode of sports betting by regions. Only making phone sports bets differed significantly across regions, with phone sports betting most popular in Regional Towns (28%), compared with less than 9% in all other regions, and only 2% in Alice Springs. Sports betting in hotels and clubs did vary across regions, though this association was marginally non-significant. Sample sizes for those sports betting were small outside of the Darwin/Palmerston region.

**Table 13: Mode of sports betting by region, NT sports gamblers**

Where/how made sports bets	Darwin/ Palmerston	Alice Springs	Regional towns	Rest of NT	Northern Territory
Hotel	17.5 (5.1)	2.3 (2.4)	27.6 (17.1)	49.9 (18.2)	17.9 (4.4)
Club	4.8 (2.2)	3.4 (2.8)	1.5 (1.6)	18.6 (16.6)	5.0 (1.9)
TAB	14.9 (4.6)	25.6 (12.5)	4.6 (3.8)	1.9 (2.0)	14.8 (3.8)
Casino	2.7 (2.5)	8.3 (6.9)	0.0 (0.0)	0.0 (0.0)	3.0 (2.1)
Phone *	6.1 (2.9)	1.6 (1.7)	27.8 (16.4)	8.8 (9.2)	7.2 (2.7)
Online	61.3 (5.9)	61.3 (14.3)	38.6 (15.6)	39.3 (17)	58.9 (5.1)
Other	2.2 (1.4)	2.0 (1.1)	0.0 (0.0)	0.0 (0.0)	1.9 (1.1)
Number of modes					
One	91.2 (3.9)	95.4 (3.2)	100.0 (0.0)	81.4 (16.6)	91.8 (3.2)
Two	8.7 (3.9)	4.6 (3.2)	0.0 (0.0)	18.6 (16.6)	8.1 (3.2)
Three or more	0.2 (0.1)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.1 (0.1)
Population playing(N)	10,494	1,329	880	524	13,227

Notes: Caution advised interpreting some estimates in this table due to high (>25%) relative standard errors

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05: Significant association between mode of sports betting and region

Table 14 shows the association between gender and the mode of racetrack and sports betting. There was a significant difference between men (14%) and women (5%) in placing racetrack bets at the casino and in racetrack betting online (men 33% and women 18%). There was also a significant difference between men (3.6%) and women (0.3%) in sports betting at a casino, and in the number of betting modes used for sports betting, with more men using two or more modes (10%) compared with women (0.3%).

**Table 14: Mode of racetrack and sports betting by gender, NT population gambling on activity**

Where/how gambled on activity	Racetrack betting			Sports betting		
	Males % (SE)	Female % (SE)	Sig.	Males % (SE)	Female % (SE)	Sig.
Hotel	24.0 (3.3)	16.6 (2.8)		17.2 (5)	21.2 (9.4)	
Club	23.2 (4.7)	15.6 (3.8)		4.6 (1.9)	6.7 (6.1)	
Casino	14.3 (4.5)	4.8 (1.6)	*	3.6 (2.6)	0.3 (0.3)	*
TAB	38.3 (4.1)	39.5 (3.7)		15.1 (4.5)	13.5 (6.4)	
Racetrack	24.3 (3.6)	31.7 (3.4)		NA	NA	
Phone	13.9 (3.3)	6.9 (2.9)		7.5 (3.2)	5.9 (3.7)	
Online	32.9 (4.0)	18.4 (3)	**	60.8 (5.8)	50.7 (10.5)	
Other	0.9 (0.5)	1 (0.4)		1.9 (1.4)	2.0 (0.9)	
Number of betting modes						***
One	71.3 (3.7)	80.9 (2.8)		89.9 (3.9)	99.7 (0.3)	
Two	15.1 (2.6)	11.4 (2.1)		9.9 (3.9)	0.3 (0.3)	
Three or more	13.6 (2.9)	7.7 (2.1)		0.2 (0.1)	0.0 (0.0)	
Population playing(N)	21,815	18,436		10,695	2,532	

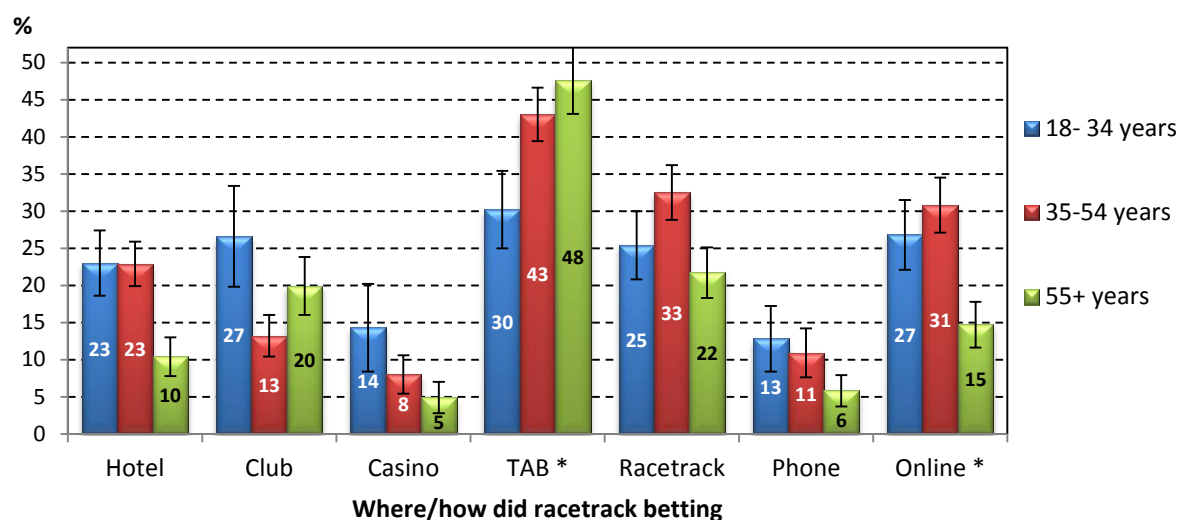
Notes: Caution advised interpreting some estimates in this table due to high (>25%) relative standard errors

Significant association between mode of racetrack or sports betting and gender

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

Figure 26 shows the association between age and mode of racetrack betting. Racetrack betting at the TAB showed significant variation across age groups, with

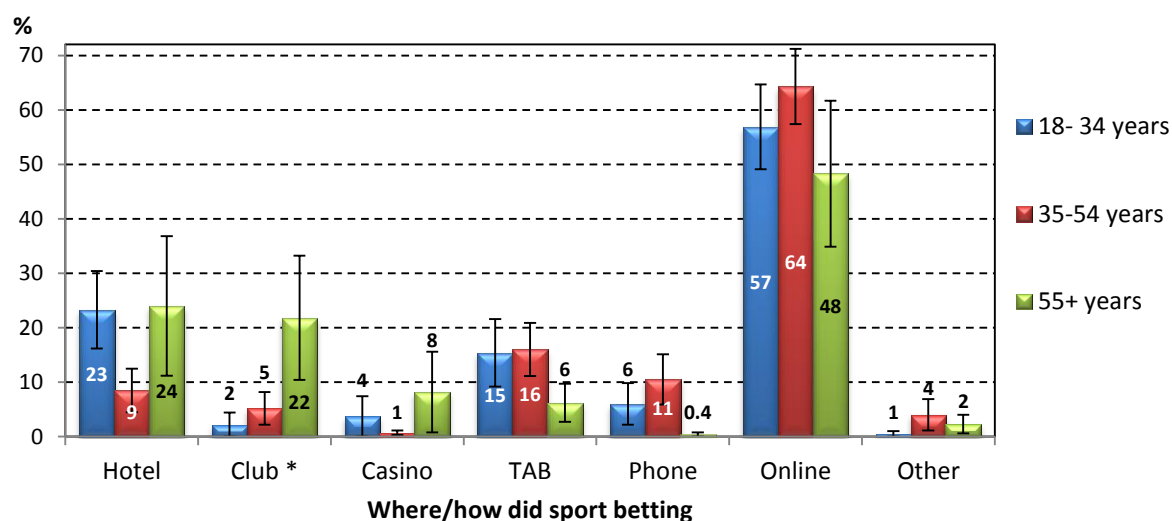
an increasing preference amongst older age groups. Online racetrack betting was also significantly associated with age, with older people less likely to bet online. The association between age and racetrack betting at a hotel or club was marginally non-significant.



**Figure 26: Mode of racetrack betting by age, NT population gambling on activity**

Significant association between mode of racetrack betting and age: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Figure 27 presents preferred mode for sport betting by age. Sport betting at a club was the only mode that differed significantly across age groups, with an increasing preference amongst older sports betters. Betting on sport online was the most popular form of betting amongst all age groups.



**Figure 27: Mode of sport betting by age, NT population gambling on activity**

Notes: Caution advised interpreting some estimates in this table due to high (>25%) relative standard errors

Significant association between mode of sports betting and age: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$



## 4 SINGLE HIGHEST SPEND GAMBLING ACTIVITY EXPENDITURE

### 4.1 Introduction

The 2015 survey asked all gamblers on which activity they spent the most money, followed by asking how much money they would usually spend per week/month/year. How much money people spend gambling will affect their risk of developing gambling problems (Markham, Young & Doran 2014), with research in Australian jurisdictions often finding that EGM density per capita is higher in lower socioeconomic areas for some capital cities. The activity a gambler plays the most will also affect their risk of developing gambling problems. For example, playing EGMs is the activity most associated with problem gambling risk (ACIL Allen Consulting et al. 2014, Dowling, Smith & Thomas 2005, Young, Stevens & Morris 2008). The current survey asked gamblers about how much they usually spent when gambling on their highest spend activity; however, this chapter does not provide information on self-reported gambling expenditure, due to concerns with data quality at the time of writing.

#### 4.1.1 Chapter contents

This chapter includes:

- Highest spend activity for the NT and for regions, age and gender, along with statistical tests of association.
- Highest spend activity by all gambling frequency, with statistical tests of association.

### 4.2 Chapter highlights

- Lotteries (34%) were the most common activity gamblers spent the most money on each week and this trend occurred across regions, except in Regional Towns (25%, but still the most common) and the Rest of NT (23%), with keno (24%), the most common in the latter.
- Women were significantly more likely than men to select raffles (24% cf. 14%), EGMs (15% cf. 10%) and bingo (1.2% cf. 0.3%) as their highest spend activity.
- There was a significant positive association between highest spend activity and age for lotteries (19% up to 50% in older), and a significant negative association with casino table games (14% down to 1% in older).
- Amongst highest spend activities, weekly gamblers compared with all gamblers were significantly over-represented for lotteries (48% cf. 34%), racetrack betting (17% cf. 12%) and other gambling (1.4% cf. 0.4%).

### 4.3 Gamblers highest spend activity

Table 15 shows gamblers highest spend activity by regions sorted from most popular to least popular activity. Over a third of all gamblers spent the most money gambling on lotteries (34%), followed by raffles/sweep (19%), EGMs (13%), racetrack betting (12%), keno (8%), casino table games (7%), instant scratch tickets (2.5%), sports betting (2.1%), and informal games, bingo, other gambling and non-sports betting all had less than 1% of gamblers choosing these activities as their highest spend. Across regions, there were significant differences for lotteries, with gamblers in Darwin/Palmerston (38%) and Alice Springs (34%) more likely than Regional Towns (25%) and the Rest of the NT (23%) to choose lotteries as their

highest spend. Keno as a highest spend activity also varied across regions, with 24% in the Rest of NT choosing keno, compared with less than 8% in the other regions. Sports betting varied significantly across regions, with it being more popular as a highest spend activity amongst gamblers in Darwin/Palmerston (3%), compared with all other regions being less than 1% of gamblers. Informal games and bingo varied significantly across regions, with both activities being more likely to be a highest spend activity in the Rest of the NT (4% for both) compared with other regions having no gamblers choosing them, except in Darwin/Palmerston (0.6% and 0.4%).

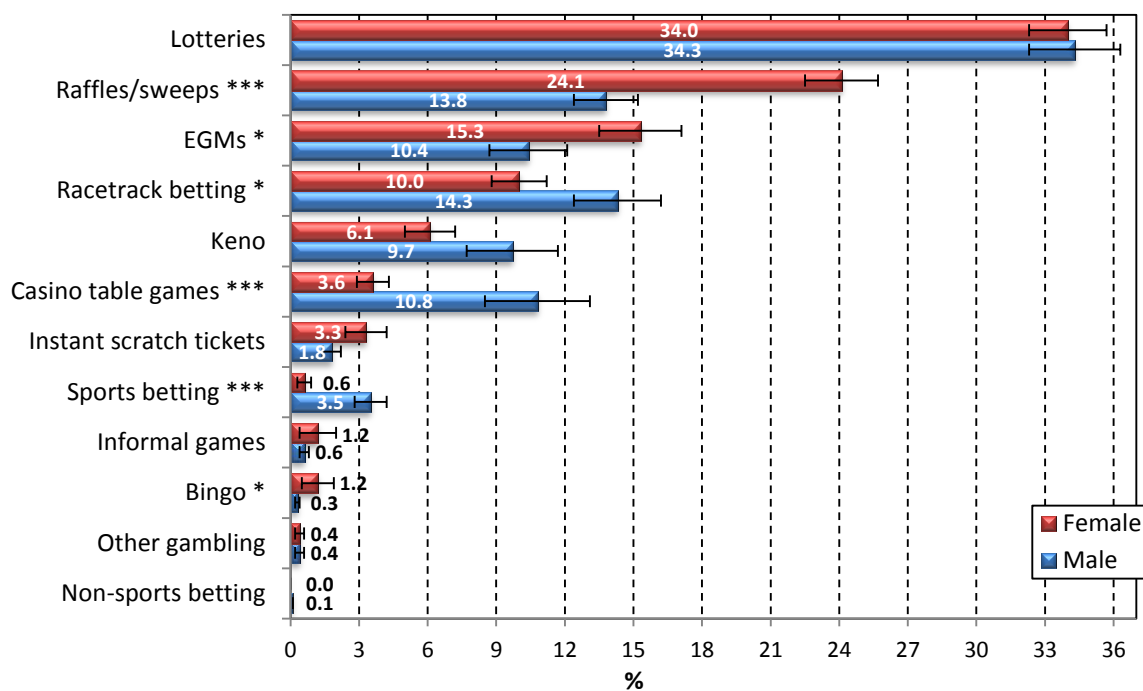
**Table 15:** Distribution of highest spend gambling activity by region, all gamblers

	Darwin & Palmerston % (SE)	Alice Springs % (SE)	Regional Towns % (SE)	Rest of NT % (SE)	Northern Territory % (SE)
Lotteries **	37.5 (1.4)	34.3 (3.4)	24.5 (4.9)	22.6 (4.5)	34.2 (1.3)
Raffles/sweeps	18.7 (1.2)	20.6 (3.1)	19.2 (3.5)	15.3 (3.9)	18.7 (1.1)
EGMs	11.8 (1.1)	16.2 (3.9)	17.5 (7.2)	8.5 (3.4)	12.8 (1.3)
Racetrack betting	12.3 (1.1)	9.1 (2.3)	17.8 (6.9)	11.8 (4.2)	12.3 (1.2)
Keno ***	6.3 (0.8)	5.3 (2.0)	7.4 (3.0)	24.2 (8.7)	8.0 (1.2)
Casino table games	6.6 (1.0)	8.6 (3.8)	9.6 (6.7)	7.9 (6.7)	7.3 (1.3)
Instant scratch tickets	2.4 (0.5)	3.6 (2.0)	3.4 (1.8)	0.4 (0.3)	2.5 (0.5)
Sports betting ***	3.0 (0.6)	0.7 (0.4)	0.4 (0.4)	0.7 (0.5)	2.1 (0.4)
Informal games *	0.6 (0.2)	0.6 (0.4)	0.0 (0.0)	4.1 (3.5)	0.9 (0.4)
Bingo *	0.4 (0.1)	0.8 (0.4)	0.0 (0.0)	4.0 (3.5)	0.8 (0.4)
Other gambling	0.5 (0.2)	0.2 (0.1)	0.0 (0.0)	0.5 (0.3)	0.4 (0.2)
Non-sports betting	0.0 (0.0)	0.1 (0.1)	0.2 (0.2)	0.0 (0.0)	0.0 (0.0)
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Population (N)	85,044	23,068	13,237	13,175	134,524

Significant association between highest spend activity and region: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Figure 28 shows highest spend activity by gender. Women were significantly more likely than men to have a highest spend for raffles/sweeps (24% *cf.* 14%), EGMs (15% *cf.* 10%) and bingo (1.2% *cf.* 0.3%). Men were significantly more likely than women to have a highest spend activity for racetrack betting (14% *cf.* 10%), casino table games (11% *cf.* 4%), and sports betting (3.5% *cf.* 0.6%).

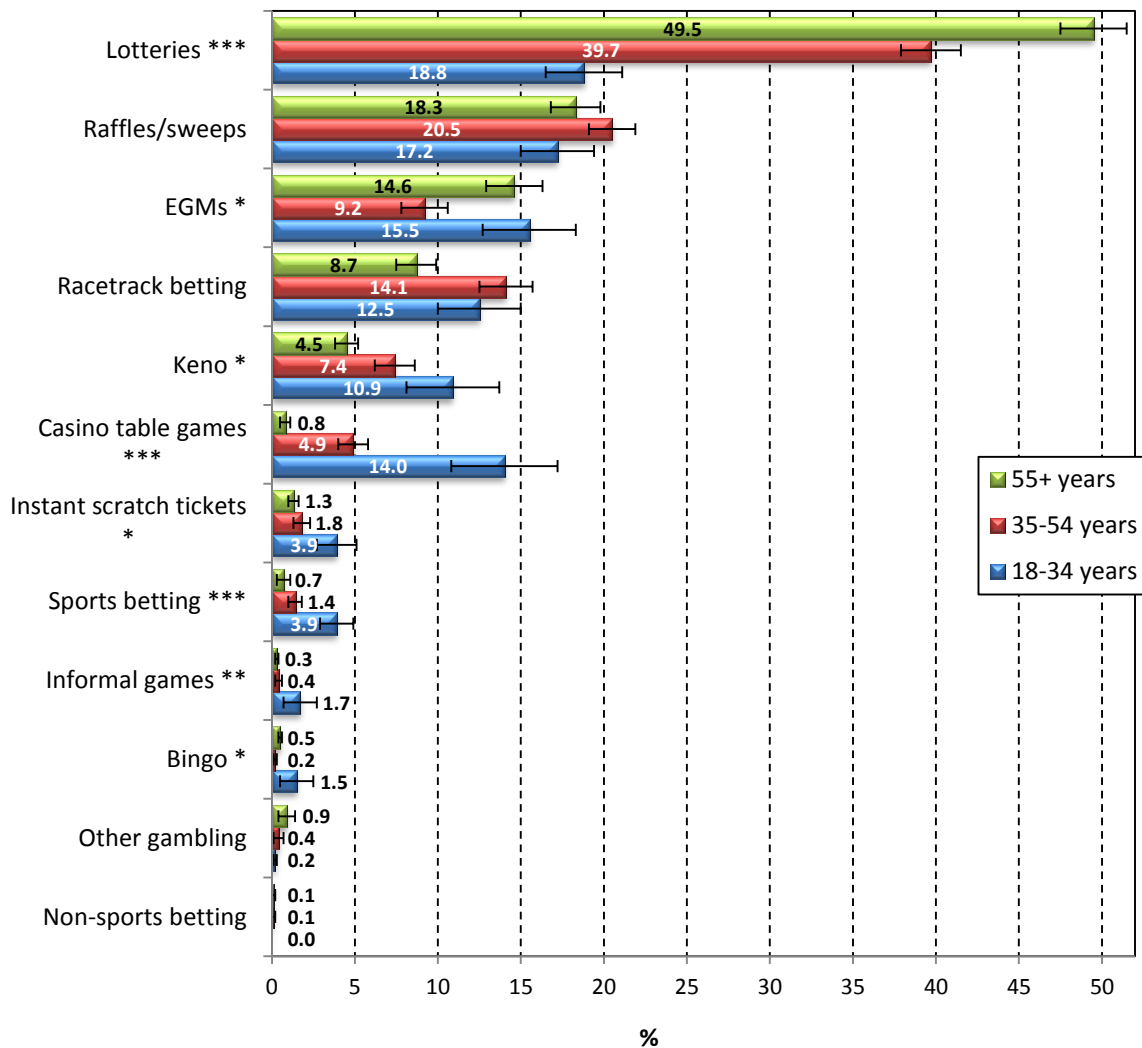




**Figure 28:** Distribution of highest spend gambling activity by gender, all gamblers

Significant association between highest spend activity and gender: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Figure 29 shows the distribution of gamblers highest spend activity by age. There was significant variation in highest spend activity by age for most gambling activities. There was a significant increasing percentage of people choosing lotteries as their highest spend activity as they got older (19% to 50%). The opposite of this was present for keno (11% to 4.5%), casino table games (14% to 0.8%), sports betting (3.9% to 0.7%), instant scratch tickets (3.9% to 1.3%), informal private games (1.7% to 0.3%) and bingo (1.5% to 0.5%) where there was a decreasing percentage of people choosing these as their highest spend activities with age. EGMs were more likely to be a gamblers highest spend activity for older (15%) and younger (16%), compared with those aged 35-54 years (9%).



**Figure 29: Distribution of highest spend gambling activity by age, all gamblers**

Significant association between highest spend activity and age: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

There was significant variation in the distribution of highest spend activities by gambling frequency (Table 16). Compared with all gamblers, those who selected lotteries (48% *cf.* 34%), racetrack betting (17% *cf.* 12%), sports betting (3.9% *cf.* 2.1%) and other gambling (1.4% *cf.* 0.4%) as a highest spend activity were significantly over-represented amongst weekly gamblers. Converse to this, those who selected raffles/sweeps (3% *cf.* 19%), and instant scratch tickets (0.7% *cf.* 2.5%) as their highest spend activity were significantly under-represented amongst weekly gamblers compared with all gamblers.

**Table 16:** Distribution of highest spend activity by all gambling frequency, all gamblers

	<b>1+ per week % (SE)</b>	<b>1-3 per month % (SE)</b>	<b>Less than monthly % (SE)</b>	<b>All gamblers % (SE)</b>
Lotteries ***	48.3 (2.7)	34.7 (2.7)	27.9 (1.8)	34.2 (1.3)
Raffles/sweeps ***	3.1 (0.9)	13.3 (1.9)	28.2 (1.8)	18.7 (1.1)
EGMs *	13.7 (2.0)	18.1 (2.9)	9.6 (1.7)	12.8 (1.3)
Racetrack betting *	17.2 (2.4)	10.4 (1.6)	11.2 (1.8)	12.3 (1.2)
Keno	7.6 (1.6)	8.5 (2.7)	7.9 (1.7)	8.0 (1.2)
Casino table games	3.2 (1.0)	8.2 (1.7)	8.7 (2.3)	7.3 (1.3)
Instant scratch tickets ***	0.7 (0.2)	1.7 (0.5)	3.7 (0.9)	2.5 (0.5)
Sports betting *	3.9 (1.2)	2.7 (0.9)	1.1 (0.3)	2.1 (0.4)
Informal games	0.2 (0.1)	0.8 (0.5)	1.2 (0.7)	0.9 (0.4)
Bingo	0.8 (0.3)	1.6 (1.3)	0.3 (0.1)	0.8 (0.4)
Other gambling ***	1.4 (0.7)	0.1 (0.1)	0.2 (0.1)	0.4 (0.2)
Non-sports betting	0.0 (0.0)	0.0 (0.0)	0.1 (0.1)	0.0 (0.0)
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Population (N)	29,537	36,069	68,918	134,524

Significant association between highest spend activity and frequency of gambling across all activities:

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05



## 5 GAMBLING MOTIVATIONS

### 5.1 Background

Many gambling harm minimisation educational initiatives focus on engendering realistic beliefs about the chance of winning/losing money. Although such an approach may be helpful, it has also been recognised that a diverse range of gambling motivations may play a role in problematic gambling (Binde 2013). Findings reported from recent problem gambling prevalence studies conducted in the United Kingdom (Canale, Vieno, Griffiths, Rubaltelli & Santinello 2015), Canada (Schellenberg, McGrath & Dechant 2016), and Tasmania (Francis, Dowling, Jackson, Christensen & Wardle 2014) indicate that people take part in gambling for emotional, social, and financial reasons. Such findings provide insights into the reason for gambling in the face of successive losses and indicate how educational initiatives may be tailored to reduce the risk of problematic gambling. Nonetheless, this is still an emerging area of research and the relationship between specific types of gambling motivation and gambling behaviour is not well understood.

The 2015 Gambling Prevalence and Wellbeing Survey included a measure of gambling motivation (Gambling Outcomes Expectancies Scale; GOES; Flack & Morris 2015) to assess emotional, social, and financial gambling motivations. Unlike measures employed in other problem gambling prevalence studies, the GOES questions are framed in terms of the anticipated outcomes of gambling rather than directly asking how often a person gambles for a specific reason. This addresses concerns regarding the questions being relevant to gamblers across the spectrum of involvement and it is also possible to consider the role motivations play in relation to gambling frequency, as well as problem gambling (Sundqvist, Jonsson & Wennberg 2016). The GOES has been employed in general community surveys and demonstrated the ability to differentiate between five related but different types of gambling motivation, and predict both gambling frequency and problem gambling severity (Flack & Morris 2015, 2016). The five types of gambling outcome expectancies (a measure of gambling motivations) reflect the degree to which gambling is viewed and valued as a social occasion (social), an opportunity to win money (money), as a way to experience excitement (excitement), to relax (escape), and to increase a sense of importance (ego).

#### *5.1.1 Chapter contents*

This chapter contains information on:

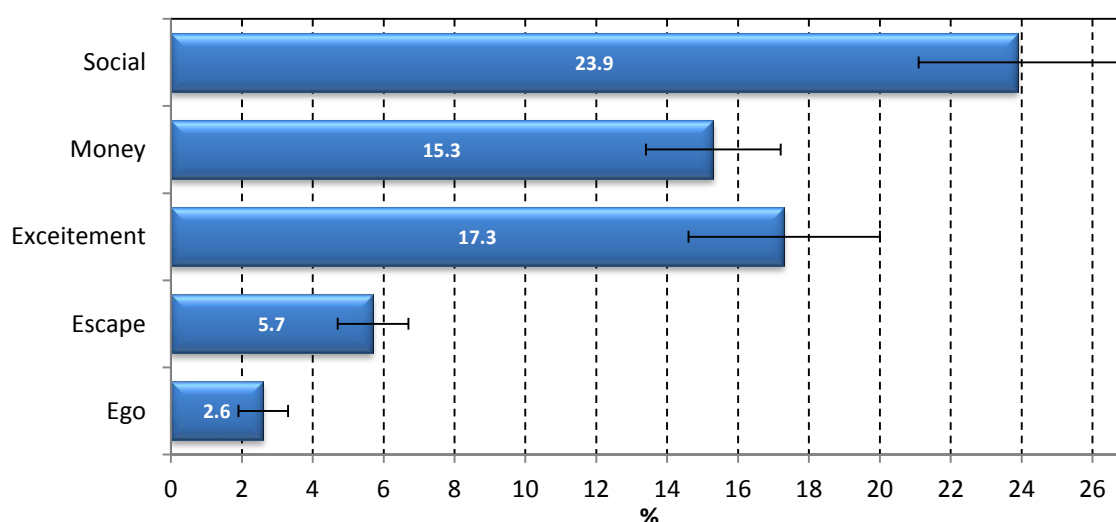
- the percentage of gamblers who scored high for each of the five types of the gambling motivations, and
- the percentage of gamblers who scored high for each of the five types of the gambling motivations by age, gender, and remoteness.

## 5.2 Chapter highlights

- The most commonly endorsed gambling motivation was the social facet of motivation (23.9%), followed by excitement (17.3%), money (15.3%), escape (5.7%), and ego (2.6%).
- Gamblers' motivations did not differ significantly across regions.
- A higher percentage of men endorsed the gambling motivations of social, excitement, and money significantly more than women did.
- Only the social gambling motivation showed a significant negative association with age, with endorsement decreasing with age. However, the excitement motivation also showed a similar, but non-significant negative association with age.

## 5.3 Gambling Motivations

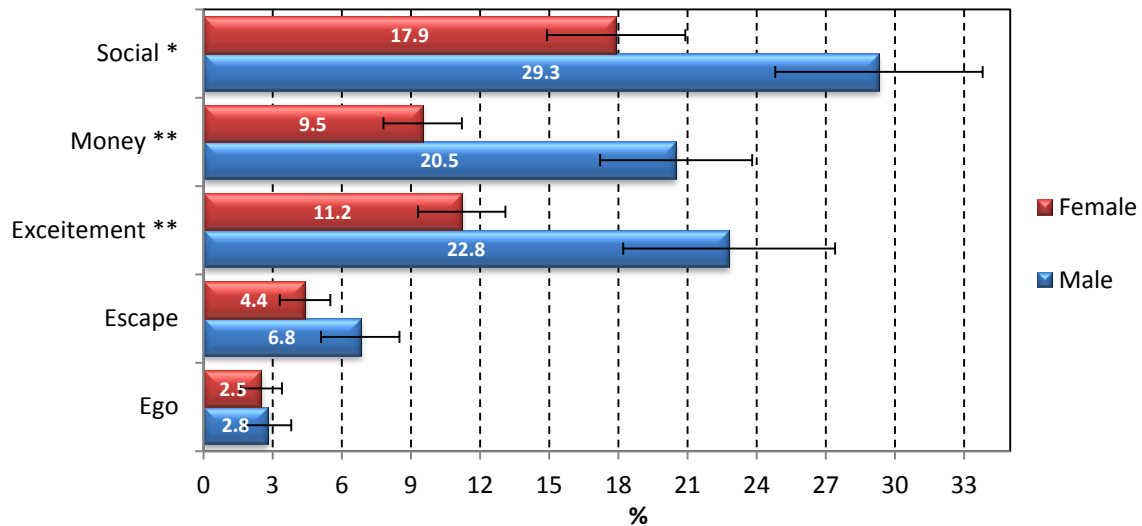
The GOES includes 18 items designed to assess five distinct, but related aspects of gambling motivations (social, money, excitement, escape, and ego enhancement). Respondents who reported gambling at least once a year on one or more activities completed the GOES. The items were endorsed on a 5-point Likert type scale from strongly disagree to strongly agree. Scores from items that relate to their respective type of motivation were averaged to create the different domains of gambling motivation. An average score of more than three on specific type of gambling motivation suggests an overall positive view towards gambling on the given motivation. Presented in Figure 30 is the proportion of gamblers who favourably endorsed each of the five different facets of gambling motivation. More participants positively rated the social aspects of gambling than the remaining gambling motivations. The excitement and money gambling motivations were the next most frequently endorsed. In contrast, the level of agreement with the statements that reflect the escape and ego enhancement dimensions of gambling motivation were endorsed by less than 6% of gamblers.



**Figure 30:** Gamblers positive endorsement of types of gambling motivations, NT adult gamblers

### 5.3.1 Gambling motivations by age, sex and region

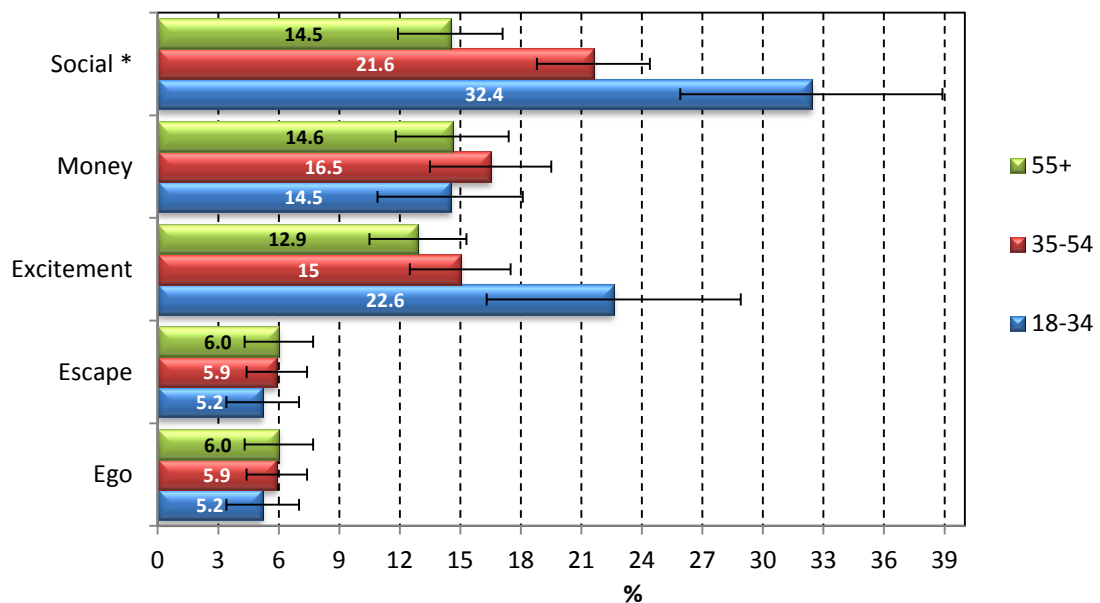
There was no significant association between any of the five gambling motivations and the region where the gambler lived. Figure 31 shows the percentage positive endorsement of the five types of motivation to gamble by gender. Men endorsed social (29.3% cf. 17.9%), money (20.5% cf. 9.5%) and excitement (22.8% cf. 11.2%) motivations significantly more than women did.



**Figure 31:** Five types of gambling motivation by gender, NT adult gamblers

Significant difference between men and women in gambling motivation: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

High endorsement of the social motivation was the only one of the five types of motivations to gamble that was significantly associated with age, with endorsement decreasing with age (Figure 32). The excitement motivation showed a similar trend, though this association was not significant.



**Figure 32:** Five types of gambling motivation by age, NT adult gamblers

Significant association between age and gambling motivation: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$





## 6 PROBLEM GAMBLING AND NEGATIVE CONSEQUENCES FROM OWN GAMBLING

### 6.1 Background

Major public health issues can arise from gambling, particularly among problem gamblers and those at-risk for problem gambling (Productivity Commission 2010). Problem gamblers and at-risk gamblers can negatively impact on themselves, other individuals, families and communities and recent research is now identifying the range of harms arising from problematic gambling (Afifi, LaPlante, Taillieu, Dowd & Shaffer 2014, Langham, Thorne, Browne, Donaldson, Rose & Rockloff 2016, Productivity Commission 2010). Identifying characteristics of those people who are experiencing problems associated with their own gambling can assist policy makers and counselling services in tailoring and targeting public health messages or treatment approaches. In 2005, the prevalence of problem gambling in the NT was not different from other jurisdictions (Young et al. 2006). However, since the 2005 survey, a better understanding of problem gambling risk has led to different approaches to screening for problem gambling risk. For example, the 2005 NT survey only asked 'regular' gamblers questions on problem gambling risk, with regular gamblers defined as people who gambled weekly, excluding lotteries, instant scratch tickets (and raffle only gamblers). This approach was found to under-estimate problem, moderate and low risk gambling categories, as measured by the PGSI (Jackson, Wynne, Dowling, Tomnay & Thomas 2010). The current survey asked all gamblers questions on problem gambling risk.

#### 6.1.1 Comparing 2005 and 2015 PGSI estimates

From the previous chapter, we know that frequency of gambling, particularly weekly gambling declined in nearly all types of gambling in the NT since 2005. We also know that only asking regular (i.e. weekly) gamblers the PGSI produces under-estimate for all PGSI risk categories. Therefore, in order to make comparison with the 2005 survey, a regular gambler variable was created within the 2015 dataset, and PGSI estimates for regular and all gamblers produced, for comparisons with 2005 data. However, the decrease in gambling frequency between the two surveys will mean that problem gambling risk estimates for 'regular' gamblers in 2015 will be lower, not necessarily because of a decline in problem gambling in the population, but due to the lower percentage of the population gambling weekly.

#### 6.1.2 Chapter contents

This chapter presents prevalence estimates for problem gambling, moderate-risk gambling, and low-risk gambling according to the PGSI. Specifically it includes:

- prevalence for each question of the PGSI
- prevalence estimates of PGSI categories by region
- comparison of prevalence estimates for PGSI categories between the 2005 and 2015 NT surveys, by age and gender
- comparison of 2015 prevalence estimates for PGSI categories with the most recent estimates from other jurisdictions
- PGSI prevalence estimates by socio-demographic, socioeconomic and health risk factors.

## 6.2 Chapter highlights

- The prevalence of problem gambling in the 2015 NT adult population was 0.68% (1,206 people), and the prevalence of moderate and low risk gambling was 2.9% (5,128 people) and 8.13% (14,383 people) respectively.
- Compared with PGSI estimates amongst 'regular' gamblers in 2015, estimates for problem gambling, moderate and low risk gambling amongst all gamblers were 1.5, 3.4, 6.3 times higher, reflecting the bias in PGSI estimates when only administered to 'regular' gamblers. Amongst women, the bias was larger due to less weekly gamblers in this group. There was no significant change in the distribution of problem gambling risk amongst 'regular' gamblers between the 2005 and 2015 surveys.
- EGM, sports betting and casino table games were the activities with the highest percentage of at-risk gamblers, with problem gambling risk significantly increasing with frequency of play for these activities.
- Socio-demographic and socioeconomic characteristics significantly associated with higher prevalence of problem gambling were: Indigenous (1.1%), unemployed (4%), full-time students (2.5%), year 10 or less highest education (1.6%) and those on gross annual income less than \$30,000 (1.1%), \$100,000 to \$119,999 (1%) and \$120,000 or more (1.1%).
- Health risk factors significantly associated with higher prevalence of problem gambling were: personal alcohol problems (low [5.6%] and moderate risk [16%] higher), smoking 10 or more cigarettes per day (3.1%), living in a house with inside smoking most or all the time (4.3%) and exposure to three or more personal stressors (1.2%).
- Problem gambling risk increased with frequency of gambling with problem, moderate and low risk gambling estimates of 2.9%, 8.7% and 18% respectively amongst weekly or more gamblers, compared with 0.9%, 3.8% and 10.7% for all gamblers.
- Problem and moderate risk gamblers were more significantly likely to nominate their highest spend activity as EGMs (16% and 19%), and sports betting (10% and 22%), compared with all gamblers problem and moderate risk gambling estimates (4.7% and 10.7%).
- Of at-risk gamblers accessing an in-venue ATM three or more times while gambling, 34% were problem gamblers, compared with 15% problem gamblers amongst those accessing an ATM twice and less than 2% for those accessing only once or not at all.
- The most endorsed negative consequences because of own gambling for at-risk gamblers were raided savings (12%), felt stress/anxiety/depression (12%), borrowed money from fiends/family (9%), running out of money for bills (9%), family relationship problems (7%) and ran out of money for food (6%).

## 6.3 Problem gambling in the NT

Table 17 shows results for individual PGSI questions for all gamblers. All questions were scored using 0=never, 1=sometimes, 2=most of the time, and 3=almost always and scores added to give a PGSI score. Respondents whose scores add to between 1 and 2 were classified as low risk gamblers, 3 to 7 as moderate risk gamblers and those with scores 8 or higher, as problem gamblers. The most endorsed item from the PGSI was about feeling guilty (Q7) about their gambling, with 7.6% of people endorsing this for sometimes. The PGSI item was about feeling guilty (Q7) and the item on self-identification of gambling problems (Q5) had the highest endorsement for 'almost always'.

**Table 17:** PGSI questions used to determine problem gambling risk categories, all gamblers

Thinking about the past 12 months, how often have...	Never % (SE)	Sometimes % (SE)	Most of the time % (SE)	Almost always % (SE)
1. you bet more than you could really afford to lose?	94.4 (0.8)	4.6 (0.7)	0.5 (0.2)	0.6 (0.2)
2. you needed to gamble with larger amounts of money to get the same feeling of excitement?	95.8 (0.7)	3.9 (0.7)	0.1 (0.0)	0.2 (0.1)
3. you gone back another day to try to win back the money you lost?	95.8 (0.7)	3.7 (0.7)	0.3 (0.2)	0.2 (0.1)
4. you borrowed money or sold anything to get money to gamble?	99.2 (0.3)	0.8 (0.3)	0.0 (0.0)	0.0 (0.0)
5. you felt that you might have a problem with gambling?	96.6 (0.6)	2.2 (0.4)	0.5 (0.3)	0.8 (0.4)
6. people criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?	96.9 (0.6)	2.2 (0.4)	0.6 (0.4)	0.3 (0.2)
7. you felt guilty about the way you gamble, or what happens when you gamble?	91.4 (1.1)	7.6 (1.0)	0.4 (0.2)	0.7 (0.2)
8. gambling caused you any health problems, including stress or anxiety?	97.9 (0.5)	1.9 (0.5)	0.2 (0.1)	0.1 (0.0)
9. your gambling caused any financial problems for you or your household?	98.9 (0.3)	0.9 (0.2)	0.1 (0.1)	0.1 (0.0)

Table 18 shows PGSI prevalence estimates for the 2015 NT adult population. PGSI risk estimates for the NT were: problem gamblers (0.68% [95% CI 0.37-1.27]); moderate-risk gamblers (2.90% [95% CI 2.05-4.09]); and low-risk gamblers (8.13% [95% CI 6.55%-10.06]). Approximately 1,200 adults were classified as problem gamblers, 5,130 as moderate risk gamblers and 14,380 as low risk gamblers. There is a 95% confidence that the estimate for problem and moderate risk gambling combined falls between 2.6% and 4.8% of the NT adult population.

**Table 18:** PGSI prevalence rates, 2015 NT adult population

PGSI group (score)	Prevalence %	Prevalence +/- SE	Prevalence +/- 95% CI	Population N
Problem gamblers (8+)	0.68	0.46 - 0.90	0.37 - 1.27	1,206
Moderate risk gamblers (3-7)	2.90	2.39 - 3.41	2.05 - 4.09	5,128
Low risk gamblers (1-2)	8.13	7.24 - 9.02	6.55 - 10.06	14,383
No/very low risk gambler (0)	64.33	62.94 - 65.72	61.55 - 67.01	113,807
Non-gambler	23.96	22.73 - 25.19	21.64 - 26.45	42,392
<b>Total</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>176,916</b>
Moderate risk & problem gamblers (3+)	3.58	3.03 - 4.13	2.64 - 4.83	6,334

Table 19 presents a comparison of PGSI categories between 2005 and 2015 for 'regular' gamblers. There were no statistically significant changes in any of PGSI categories between the two surveys, though the estimate for moderate risk gamblers approached significance ( $p=0.060$ ), and the estimate for moderate risk and problem gamblers grouped together was significantly lower in 2015 ( $p=0.045$ ).

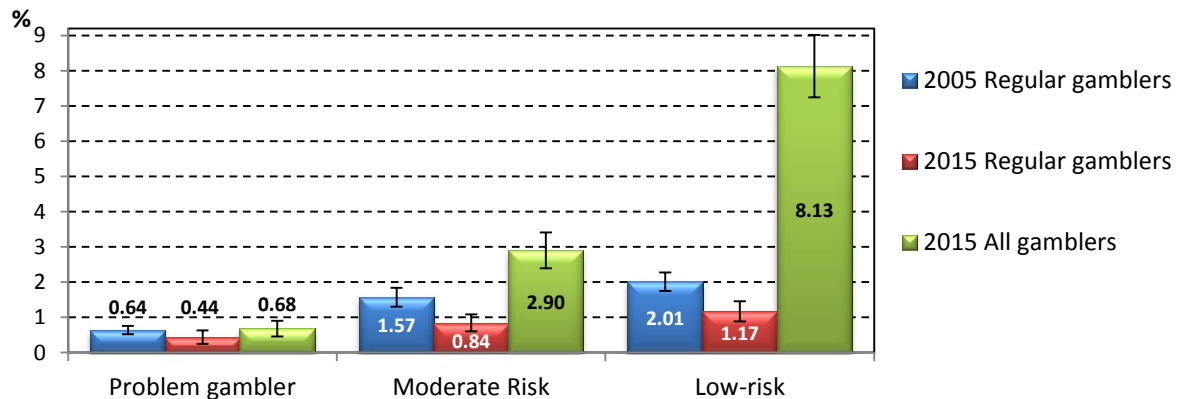
**Table 19: PGSI prevalence rates among regular gamblers, 2005 and 2015 NT adult population**

PGSI group (score)	2005		2015	
	% (SE)	Lower-Upper 95% CI	% (SE)	Lower-Upper 95% CI
Problem gambler (8+)	0.64 (0.12)	0.44-0.92	0.44 (0.19)	0.19-1.01
Moderate risk gambler (3-7)	1.57 (0.27)	1.12-2.18	0.84 (0.24)	0.48-1.47
Low risk gambler (1-2) *	2.01 (0.26)	1.55-2.59	1.17 (0.29)	0.72-1.89
No/very low risk gambler (0)	3.28 (0.33)	2.70-3.99	2.99 (0.38)	2.33-3.82
Non-regular gambler	65.53 (1.43)	62.67-68.29	70.6 (1.29)	68.01-73.07
Non-gambler	26.97 (1.33)	24.44-29.67	23.96 (1.23)	21.64-26.45
Moderate risk/problem gambler (3+) *	2.20 (0.29)	1.70-2.86	1.28 (0.30)	0.80-2.03

Notes: <sup>1</sup> A regular gambler is someone who gambled at least weekly excluding raffles, lotteries and instant scratch tickets

\* Significant difference between 2005 and 2015 estimates,  $p < 0.05$

Figure 33 shows PGSI estimates from Table 19 for regular gamblers (red and blue bars), and the PGSI estimates for all gamblers from the 2015 survey (green bars). As previously stated, there were no significant difference between PGSI estimates amongst 'regular' gamblers between 2005 and 2015. However, comparing 2015 PGSI estimates for 'regular' gamblers (red bars) and all gamblers (green bars), it becomes clear that only administering the PGSI to 'regular' gamblers biases down estimates for all PGSI risk categories. PGSI estimates on all gamblers were significantly higher than 'regular' gambler estimates for moderate risk gamblers (3.4 times higher,  $p < 0.001$ ) and low risk gamblers (6.3 times higher,  $p < 0.001$ ), but not for problem gamblers (1.5 times higher,  $p = 0.40$ ). In terms of population, this is an extra 427 problem gamblers, 3619 moderate risk gamblers, and 12,093 low risk gamblers not captured using the previous survey 'regular' gambler methodology.



**Figure 33: PGSI prevalence for regular and all gamblers, 2005 and 2015 NT adult population**

#### 6.4 Problem gambling in the NT compared with other jurisdictions

Table 20 shows comparisons between Australian jurisdictions that have carried out gambling prevalence surveys in the past 5 years that used a similar methodology to the 2015 NT Gambling Prevalence and Wellbeing Survey. That is, all gamblers and not a subset were screened for problem gambling using the PGSI. The table does not include PGSI estimates for Western Australia (WA) (which were 15 years old), though when WA last carried out a gambling prevalence survey the problem gambling prevalence was the lowest in Australia (Williams et al. 2012).

Estimates of problem gambling were quite consistent across jurisdictions ranging from 0.4% in the Australian Capital Territory to 0.8% in NSW and Victoria, compared with the NT prevalence of 0.7%. There was more variation in estimates for moderate risk gambling across jurisdictions, with the Australian Capital Territory again having the lowest rate at 1.1% and the NT and NSW having the highest at 2.9%. Similar to moderate risk gamblers, low risk gambler prevalence was lowest in the Australian Capital Territory and Tasmania (3.9%), but was highest in Victoria (8.9%), followed by NSW (8.4%) and the NT (8.1%).

**Table 20: Most recent PGSI estimates by jurisdictions across Australia**

	<b>Problem gamblers (8 or more) %</b>	<b>Moderate risk gamblers (scores 3-7) %</b>	<b>Low risk gamblers (scores 1-2) %</b>	<b>Moderate risk and problem gamblers (3 or more) %</b>
Northern Territory 2015 <sup>1</sup>	0.7	2.9	8.1	3.6
New South Wales 2011 <sup>1</sup>	0.8	2.9	8.4	3.7
Victoria 2014 <sup>2</sup>	0.8	2.8	8.9	3.6
South Australia 2012 <sup>2</sup>	0.6	2.5	7.1	3.1
Queensland 2011-12 <sup>2</sup>	0.5	1.9	5.2	2.4
Tasmania 2013 <sup>1</sup>	0.5	1.8	3.9	2.3
Australian Capital Territory 2014 <sup>1</sup>	0.4	1.1	3.9	1.5
Australia <sup>3</sup>	0.5 – 1.0	1.4 – 2.1	-	1.9 – 3.1

<sup>1</sup> New South Wales, Northern Territory, Tasmania, and Australian Capital Territory utilised the standard four response on the PGSI (Never=0, Sometimes=1, Often=2, Always=3)

<sup>2</sup> Victoria, South Australia, and Queensland utilised a modified five response on the PGSI (Never=0, Rarely=1, Sometimes=1, Often=2, Always=3)

<sup>3</sup> Productivity Commission, 2010a. Gambling: Productivity Commission Inquiry, Volume 1, Report No. 50. Canberra: Productivity Commission.

The next three sub-sections compare PGSI estimates between 2005 and 2015 by key demographic characteristics, and present separate PGSI estimates for all gamblers and for 'regular' gamblers. The comparison between 'regular' and 'all' gamblers provides a measure of the bias resulting from only screening 'regular' gamblers for problem gambling risk, as was done in the 2005 NT Gambling Prevalence Survey, and most surveys of that time.

## 6.5 Problem gambling by region, gender and age

Table 21 presents PGSI estimates for the five regions of the NT. Due to difficulties in obtaining a large enough sample across regions, most estimates of problem, moderate and low-risk gambling for regions have relative standard errors (RSEs) of greater than 25%, limiting our power to make inferences regarding differences. Therefore, no statistical comparisons between 2005 and 2015 estimates for problem gambling are made for regions.

**Table 21:** Region by prevalence of PGSI categories, 2015 NT adult population

	Problem gambler % (SE)	Moderate risk gambler % (SE)	Low risk gambler % (SE)	No risk gambler % (SE)	Non- gambler % (SE)	Population N
Darwin/Palmerston	0.9 (0.3)	2.6 (0.5)	8.2 (0.8)	67.5 (1.3)	20.9 (1.1)	107,512
Alice Springs	0.1 (0.1)	3.0 (1.4)	11.5 (3.3)	55.3 (3.6)	30.0 (3.3)	32,967
Regional Towns	0.3 (0.2)	1.8 (1.0)	5.5 (2.3)	69.2 (5.1)	23.3 (4.4)	17,250
Rest of NT	0.9 (0.9)	5.5 (2.8)	4.5 (2.5)	57.8 (6.5)	31.3 (6.2)	19,187
<b>Northern Territory</b>	<b>0.7 (0.2)</b>	<b>2.9 (0.5)</b>	<b>8.1 (0.9)</b>	<b>64.3 (1.4)</b>	<b>24.0 (1.2)</b>	<b>176,916</b>

NOTES: Caution advised in interpreting estimates in this table due to large (> 25%) relative standard errors

Figure 34 presents data from Table 21, but collapses the risk categories of the PGSI into a single 'at-risk' gambler category. The association between region and at-risk gamblers was marginally non-significant ( $p=0.07$ ), with the prevalence of at-risk gamblers lowest in Regional Towns (7.5%), and highest in Alice Springs (14.6%).

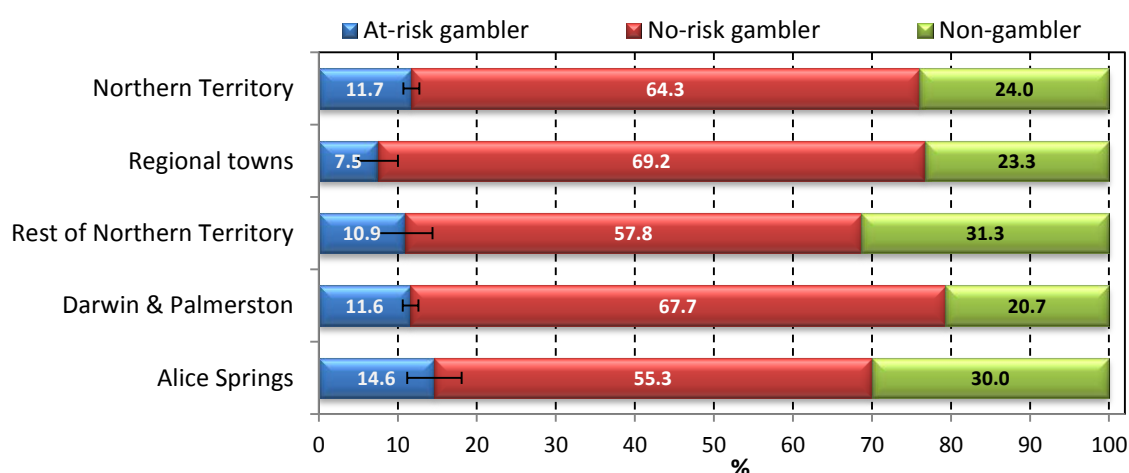
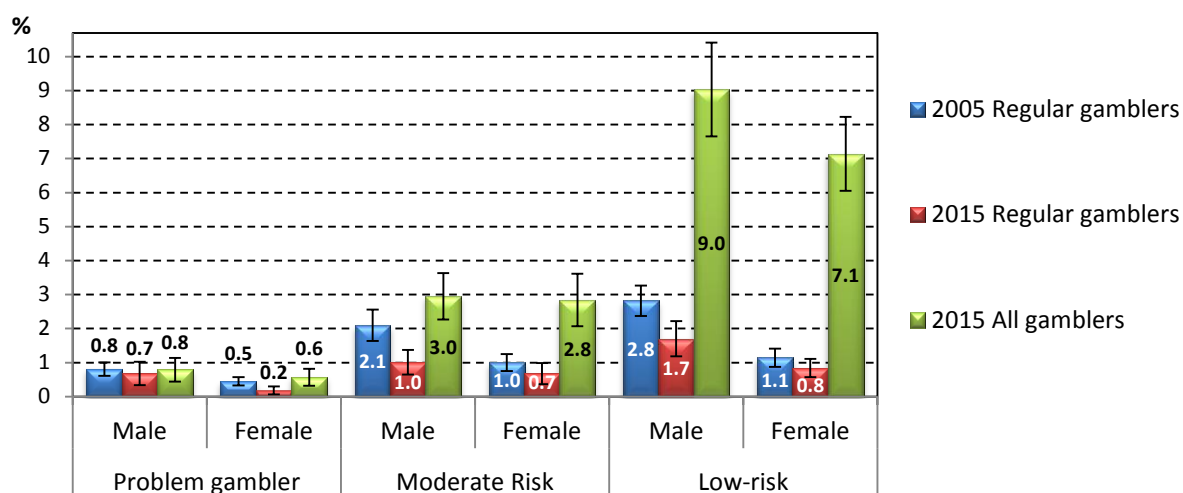
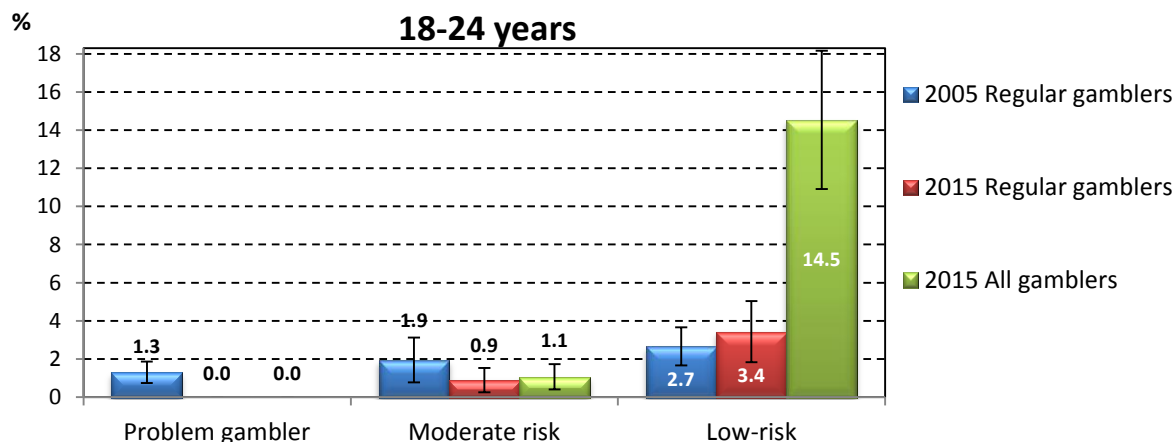
**Figure 34:** At-risk gambling prevalence by region, 2015 NT adult population

Figure 35 shows 2005 and 2015 estimates of PGSI categories by gender for 'regular' and all gamblers. The same pattern (and bias) is evident by gender as in the total population, though relative differences were larger amongst female gamblers. There were no significant changes in PGSI estimates between 2005 and 2015 using the 'regular' gambler criteria for either males or females, though the estimate for male moderate risk gamblers was lower in 2015 and only marginally non-significant ( $p=0.071$ ). There were significant differences in PGSI estimates in 2015 between all and 'regular' gamblers. Specifically, PGSI estimates were significantly higher for low and moderate risk gambler estimates for both males (low risk 5.3 times higher,  $p<0.001$ ; moderate risk 2.9 times higher,  $p=0.011$ ) and females (low risk 8.5 times higher,  $p<0.001$ ; moderate risk 4.2 times higher,  $p=0.009$ ), when all gamblers were given the PGSI.



**Figure 35:** PGSI prevalence for regular and all gamblers by gender, 2005 and 2015 NT adult population

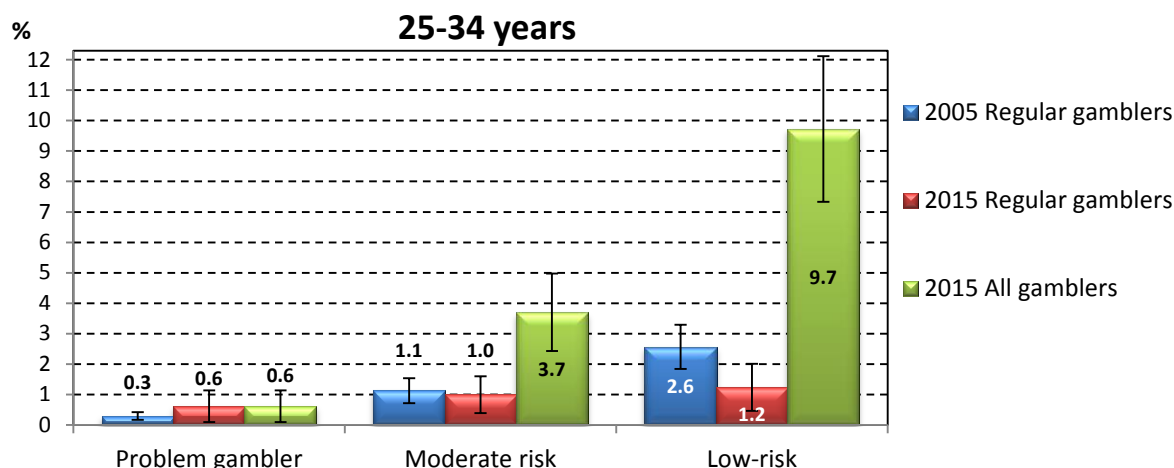
Figures 36 to 40 show estimates of PGSI categories for five age groups by 'regular' gambler status. As with the total population, estimates of PGSI categories were consistently higher for all gamblers compared with 'regular' gamblers across all age groups. There were no statistical differences in PGSI categories for 18-24 years ages between 2005 and 2015 for regular gamblers (blue and red bars), while the estimate for low-risk gamblers was significantly higher (4.2 times higher,  $p=0.005$ ) for all gamblers (14.5%), compared with regular gamblers (3.4%).



**Figure 36:** PGSI prevalence for 18-24 years regular and all gamblers, 2005 and 2015 NT adult population

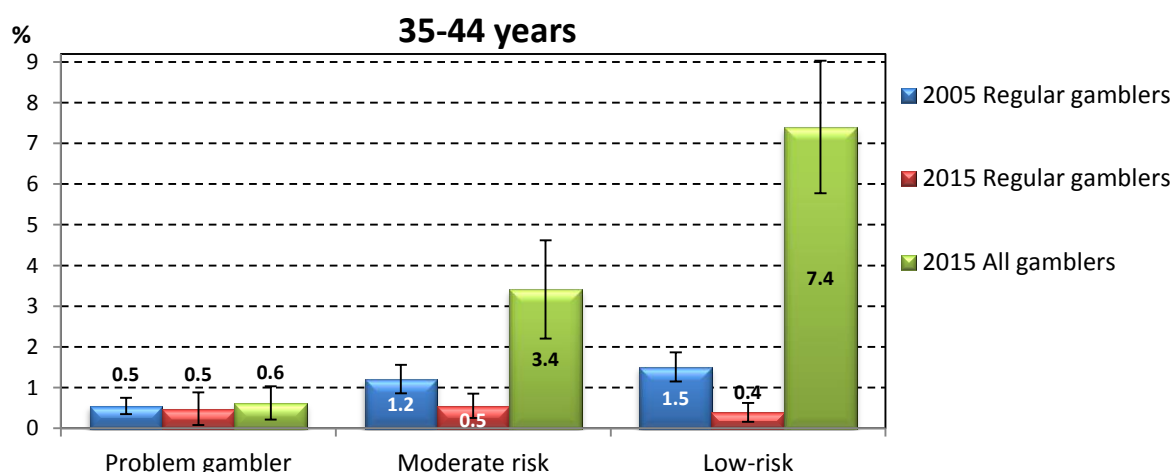
Amongst 'regular' gamblers aged 25-34 year, there was no significant changes across any PGSI categories between 2005 and 2015 (Figure 37). Comparing 2015 PGSI estimates for all gamblers (green bars) and 'regular' gamblers (red bars), there was a marginally non-significant difference for moderate risk gamblers (3.7 times higher,  $p=0.055$ ), and a significant difference for low-risk gamblers (7.9 times higher,  $p=0.001$ ).





**Figure 37:** PGSI prevalence for 25-34 years regular and all gamblers, 2005 and 2015 NT adult population

For 'regular' gamblers, there was a significant ( $p=0.027$ ) decrease in the prevalence of low risk gamblers between 2005 (1.5%) and 2015 (0.4%), while no other PGSI categories showed significant changes for regular gamblers from 2005 to 2015 (Figure 38). Estimates of moderate and low risk gamblers were significantly higher for all gamblers in 2015 compared with 'regular' gamblers. Specifically, moderate risk gambling was 6.2 times higher ( $p=0.022$ ) and low risk gambling was 19.1 times higher ( $p<0.001$ ) amongst all gamblers compared with 'regular' gamblers. There was no significant difference between problem gambler estimates for all gamblers and 'regular' gamblers.

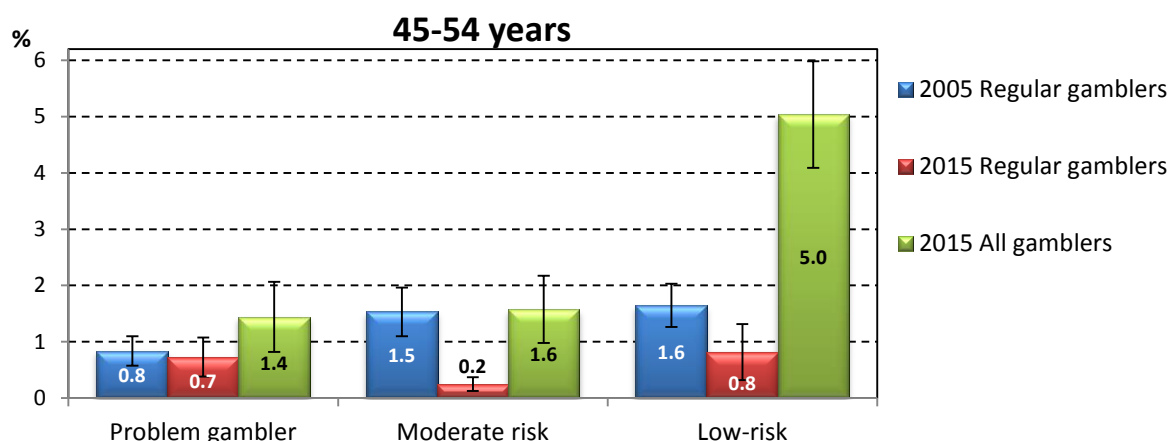


**Figure 38:** PGSI prevalence for 35-44 years regular and all gamblers, 2005 and 2015 NT adult population

There was a significant decrease in estimates of moderate risk gambling for regular gamblers between 2005 and 2015 (1.5% to 0.2%) amongst gamblers aged 45-54 years (Figure 39). No other changes for regular gamblers were significant from 2005 to 2015. Estimates of moderate risk gamblers were significantly higher for all gamblers compared with regular gamblers (6.4 time higher,  $p=0.030$ ), and low risk gamblers (6.2 times higher,  $p<0.001$ ). No significant difference was observed for

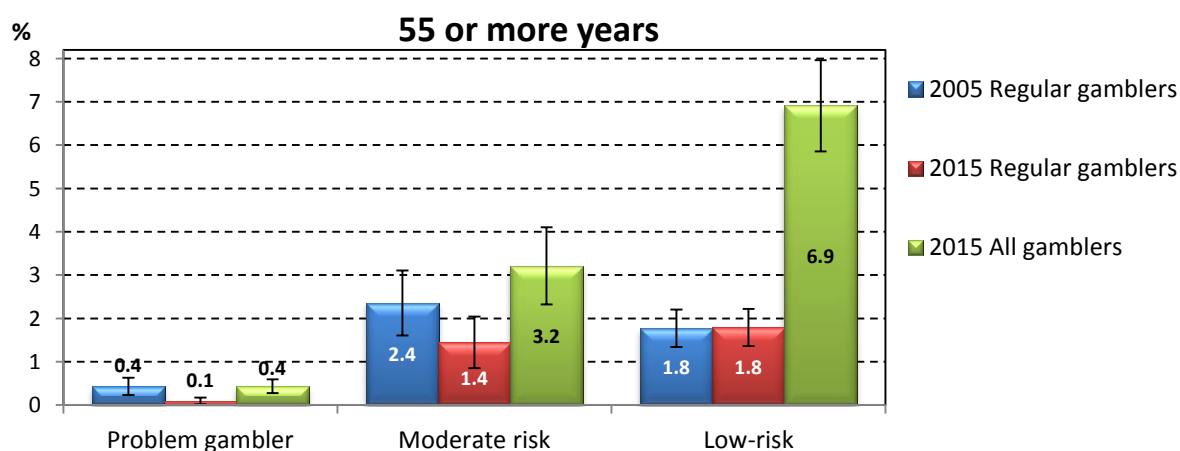


problem gambler estimates amongst all gamblers and regular gamblers in 2015 for this age group.



**Figure 39:** PGSI prevalence for 45-54 years regular and all gamblers, 2005 and 2015 NT adult population

There was a marginally non-significant ( $p=0.074$ ) decrease in problem gambling prevalence from 2005 (0.4%) to 2015 (0.1%) amongst 'regular' gamblers aged 55 years or more (Figure 40). The estimate for low risk gamblers was significantly higher for all gamblers at 6.9% compared with 1.8% amongst 'regular' gamblers (3.9 times higher,  $p<0.001$ ).



**Figure 40:** PGSI prevalence for 55 or more years regular and all gamblers, 2005 and 2015 NT adult population

## 6.6 Problem gambling by gambling activity and frequency of gambling

Table 22 shows PGSI prevalence by activity for all gamblers. There was a statistically significant association between PGSI prevalence and participation in informal games, EGMs, sports betting, casino games, keno, instant scratch tickets, bingo and number of activities played. People playing informal games had the highest problem gambling prevalence (5.8%), though the relative standard errors for all PGSI estimates were greater than 25%. In fact, none of the problem gambling prevalence estimates by activity had a relative standard error less than 25%,

indicating caution is needed in interpreting these estimates. Prevalence for all categories of the PGSI increased with the number of activities played.

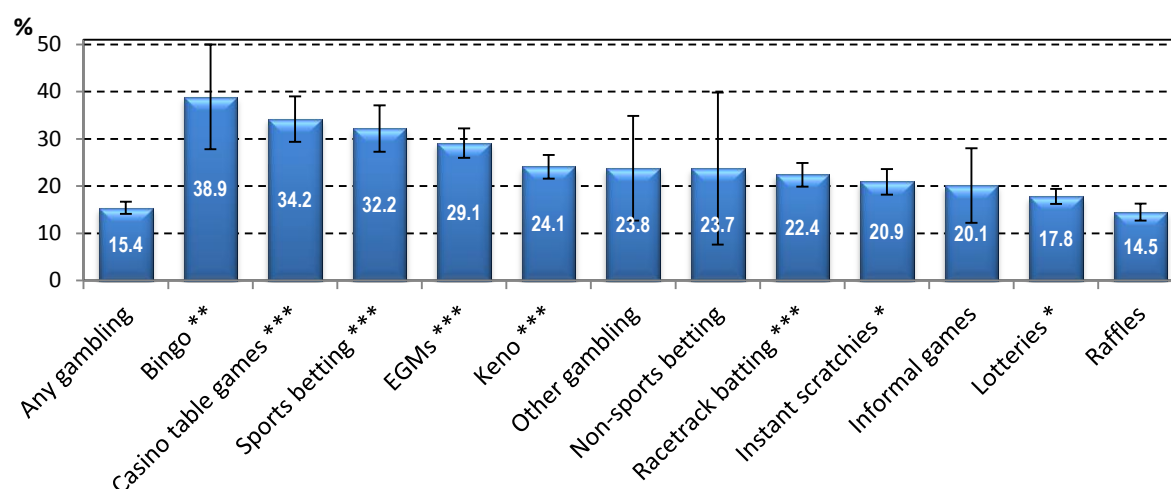
**Table 22:** PGSI prevalence by gambling activity, all gamblers

	<b>Problem gambler % (SE)</b>	<b>Moderate risk gambler % (SE)</b>	<b>Low risk gambler % (SE)</b>	<b>No or little risk gambler % (SE)</b>	<b>Population N</b>
Any gambling	0.9 (0.3)	3.8 (0.7)	10.7 (1.1)	84.6 (1.3)	134,524
Informal games *	5.8 (5.7)	2.2 (1.5)	12.1 (5.2)	79.9 (7.9)	4,625
EGMs ***	2.7 (0.9)	7.8 (1.6)	18.6 (2.8)	70.9 (3.1)	40,571
Sports betting ***	2.5 (2.0)	11.2 (3.5)	18.5 (3.9)	67.8 (4.9)	13,227
Casino table games ***	2.3 (1.2)	7.9 (2.3)	24.1 (4.6)	65.8 (4.8)	23,759
Keno ***	2.0 (0.7)	6.5 (1.3)	15.5 (2.1)	75.9 (2.5)	44,902
Racetrack betting **	1.6 (0.8)	6.7 (1.5)	14.1 (2.1)	77.6 (2.5)	40,251
Lotteries	1.0 (0.4)	4.9 (1.0)	11.9 (1.3)	82.2 (1.6)	81,592
Instant scratch tickets *	0.8 (0.3)	4.0 (1.3)	16.1 (2.6)	79.1 (2.7)	30,972
Raffles	0.3 (0.1)	3.6 (0.8)	10.7 (1.7)	85.5 (1.8)	75,537
Bingo **	0.0 (0.0)	18.4 (15.9)	5.3 (5.3)	76.3 (16.1)	3,601
Non-sports betting	0.0 (0.0)	3.5 (3.5)	20.2 (10.7)	76.2 (11.1)	467
Other betting	0.0 (0.0)	19.7 (11.5)	19.1 (8.1)	61.1 (11.1)	792
Number of activities played ***					
One	0.5 (0.5)	0.3 (0.1)	4.6 (1.5)	94.6 (1.6)	35,982
Two	0.4 (0.2)	2.3 (1.3)	6.9 (1.5)	90.4 (1.9)	36,754
Three	0.7 (0.4)	3.6 (1.2)	13.5 (3.7)	82.3 (3.7)	26,263
Four	1.1 (0.8)	6.9 (2.3)	12.2 (2.4)	79.9 (3.2)	18,201
Five or more	3.1 (1.6)	11.4 (3.0)	25.6 (4.1)	59.9 (4.3)	17,325

NOTES: Caution advised in interpreting some estimates in this table due to large (> 25%) relative standard errors

Significant association between gambling activity and PGSI: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

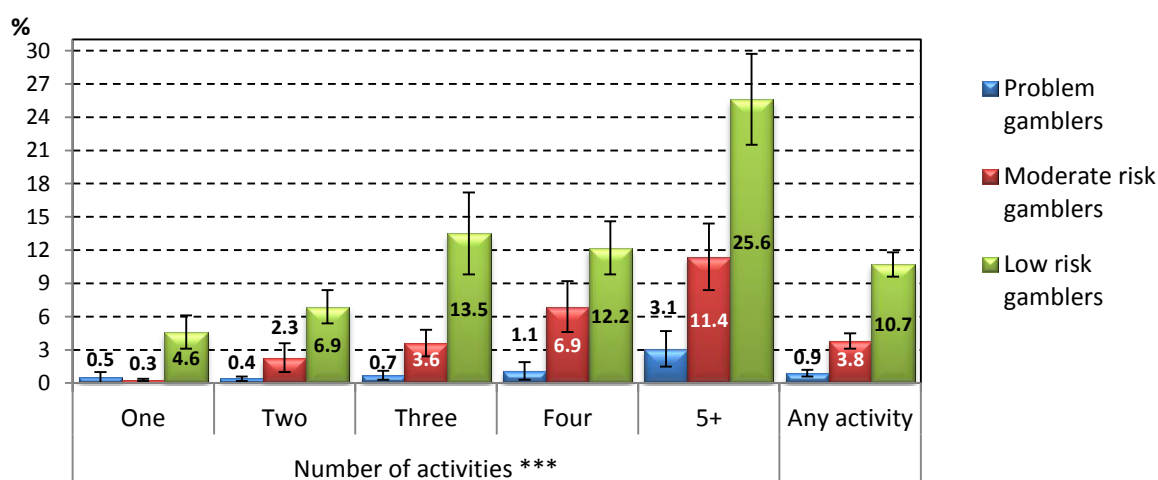
Figure 41 plots the prevalence of at-risk gamblers (i.e. problem gamblers, moderate risk and low risk gamblers grouped) by activity. After collapsing PGSI categories, only the estimates for bingo, other gambling, non-sports betting and informal games had relative standard errors greater than 25%. Compared with non-participants, there were significant differences in at-risk gambling prevalence for bingo, casino table games, sports betting, EGMs, keno, racetrack betting, instant scratch tickets, and lottery. Ignoring at-risk estimates with a greater than 25% relative standard error, the highest risk activities were casino table games, sports betting, EGMs, and keno. The lowest risk activities were raffles, lottery and instant scratch tickets.



**Figure 41: At-risk of problem gambling by gambling activity, NT gambling population**

Significant association between activity and at-risk gambling: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

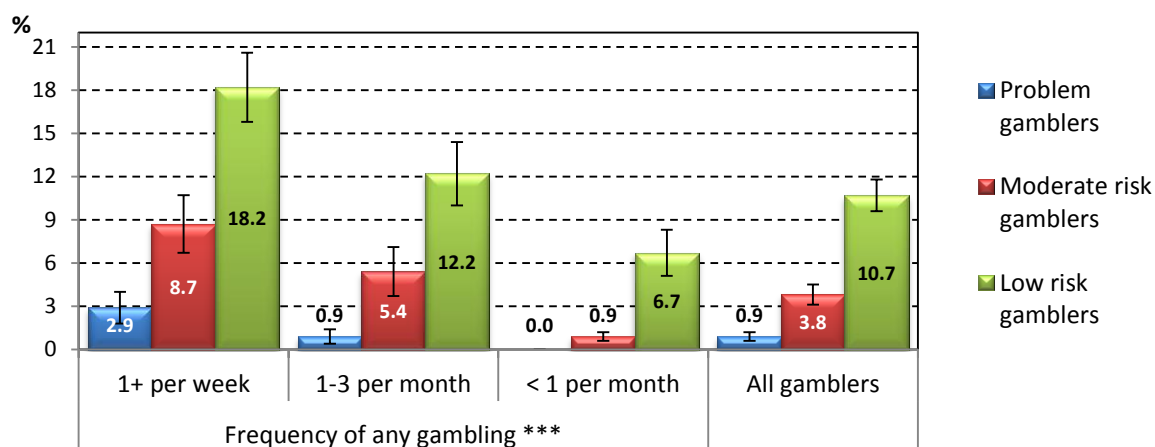
Figure 42 shows that there was a significant association between number of gambling activities participated in and problem gambling risk ( $p < 0.001$ ). Problem gambling prevalence ranges from 0.5% for people who only gamble on one activity to with 3.1% for people gambling on five or more activities. The difference in problem gambling risk between participation in four activities compared with five or more, was large with problem gambling prevalence going from 1.1% to 3.1%, moderate risk gambling from 6.9% to 11.4% and low risk from 12.2% to 25.6%.



**Figure 42: PGSI prevalence by number of gambling activities played, all gamblers**

Significant association between number of activity and PGSI: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Figure 43 shows that there was a highly significant ( $p < 0.001$ ) association between gambling frequency and problem gambling risk. Compared with a problem gambling prevalence of 0.9% across all gamblers, nearly 3% of people who gambled weekly were classified as problem gamblers, with this decreasing to 0.9% for monthly gamblers and 0% for less than monthly gamblers. Moderate risk gamblers were over-represented amongst weekly gamblers (8.7%) compared with all gamblers (3.8%). The same pattern was present for low risk gamblers, with 18.2% of weekly gamblers classified as low risk, decreasing to 12.2% for monthly gamblers.



**Figure 43:** PGSI prevalence by frequency of any gambling, all gamblers

Significant association between frequency of gambling and PGSI: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

### 6.7 Problem gambling by highest spend activity

Table 23 shows problem gambling risk by highest spend activity, but with problem and moderate risk gamblers collapsed to reduce the standard error of the estimate. Lotteries (1.7%) and raffles/sweeps (0.8%) highest spend gamblers were significantly under-represented amongst problem and moderate risk gamblers, compared with all gamblers (4.7%). EGMs, and sports betting highest spend gamblers were significantly over-represented amongst problem, moderate and low risk gamblers, as were highest spend bingo gamblers though caution should be made interpreting the estimate for bingo as the relative standard error is greater than 50% of the estimate.

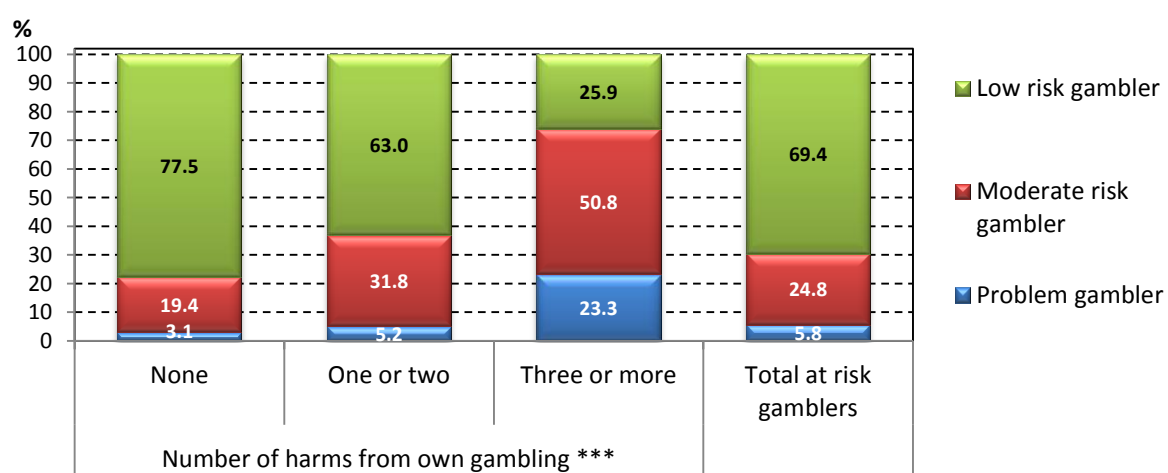
**Table 23:** Problem gambling risk by highest spend activity, all gamblers

	Problem or moderate risk gamblers % (SE)	Low risk gamblers % (SE)	Non-risk gamblers % (SE)	Population N
All gamblers	4.7 (0.7)	10.7 (1.1)	84.6 (1.3)	134,524
Lotteries ***	1.7 (0.7)	8.0 (1.3)	90.2 (1.4)	46,006
Raffles/sweeps ***	0.8 (0.6)	3.6 (1.6)	95.7 (1.7)	25,139
EGMs ***	15.6 (3.2)	19.2 (3.8)	65.2 (4.7)	17,185
Racetrack betting	5.2 (2.3)	9.3 (2.6)	85.6 (3.4)	16,501
Keno	2.7 (1.3)	12.6 (5.2)	84.7 (5.3)	10,772
Casino table games	7.0 (3.4)	22.2 (8.7)	70.8 (8.9)	9,887
Instant scratch tickets	1.0 (0.8)	11.1 (5.5)	87.9 (5.5)	3,339
Sports betting *	10.0 (4.8)	22.5 (9.0)	67.4 (9.3)	2,881
Informal games	2.2 (2.4)	14.8 (13.2)	83.1 (13.6)	1,153
Bingo *	47.2 (25.3)	10.3 (7.5)	42.5 (21.1)	1,011
Other gambling	0.0 (0.0)	18.8 (13.0)	81.2 (13)	593
Non-sports betting	0.0 (0.0)	0.0 (0.0)	100.0 (0.0)	58

Significant association between highest spend activity and PGSI: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

## 6.8 Harms because of own gambling and help-seeking for at-risk gamblers

The questions collecting information from gamblers on harms experienced because of their own gambling were only asked of gamblers who answered one or more of the PGSI questions as occurring sometimes or more (i.e. at-risk gamblers). Figure 44 shows problem gambling risk by number of harms experienced from own gambling for at-risk gamblers only, while Table 24 shows this data along with population counts. This association, not surprisingly, was statistically significant, with the prevalence of problem gambling increasing from 3.1% for those who identified no harms from the list, increasing to 5.2% for those identifying one or two harms, and 23.3% for those identifying three or more harms, compared with 5.8% amongst all at-risk gamblers. Of those at-risk gamblers experiencing three or more problems, most (51%) were moderate risk gamblers, while 23% and 26% of them were problem gamblers and low risk gamblers respectively.



**Figure 44:** PGSI by number of harms from own gambling, at-risk gamblers

Significant association between highest spend activity and PGSI: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Table 24 includes weighted population counts and PGSI prevalence for at-risk gamblers by number of harms from own gambling ( $p < 0.001$ ). Approximately 5,170 at-risk gamblers identified at least one harm because of their own gambling, while 2,505 experienced three or more harms.

**Table 24:** PGSI by number of harms from of own gambling, at-risk gamblers

	No harms	1 to 2 harms	3 or more harms	Total
PGSI ***				
Problem gamblers	485 (3.1)	138 (5.2)	583 (23.3)	1,206 (5.8)
Moderate risk gamblers	3,009 (19.4)	846 (31.8)	1,273 (50.8)	5,128 (24.8)
Low risk gamblers	12,053 (77.5)	1,680 (63.0)	649 (25.9)	14,383 (69.4)
<b>Total</b>	<b>15,547 (100)</b>	<b>2,665 (100)</b>	<b>2,505 (100)</b>	<b>20,717 (100)</b>

Significant association between number of harms and PGSI: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Table 25 lists what negative consequences at-risk gamblers experienced because of their own gambling. It is important to note that not all of the listed negative consequences are equal in the impact they cause on people's lives. Only 25% of at-risk gamblers identified at least one of the negative consequences. Endorsed negative consequences with at least 1,000 at-risk gamblers were: 'raided savings accounts/funds' (12.4%), followed by 'felt stress/ anxiety/depression' (11.9%), 'borrowed money from family/friends' (9.4%), 'ran out of money for bills' (8.8%),

'relationship problems with family' (6.6%), 'ran out of money for food' (6.4%), 'had a problem with work' (4.9%), and 'no money for rent/mortgage' (4.8%).

**Table 25:** Type of negative consequences experienced because of own gambling, at-risk gamblers

Negative consequences	% (SE)	N
No negative consequences endorsed	75.0 (3.9)	15,547
Any harm	25.0 (3.9)	5,170
Raided savings accounts/funds	12.4 (2.5)	2,566
Felt stress/anxiety/depression	11.9 (2.6)	2,475
Borrowed money from family/friends	9.4 (3.1)	1,957
Ran out of money for bills	8.8 (3.0)	1,824
Relationship problems with family	6.6 (2.8)	1,363
Ran out of money for food	6.4 (2.7)	1,326
Had a problem with work	4.9 (2.5)	1,018
Ran out of money for rent/mortgage	4.8 (2.5)	1,002
Relationship problems with friends	4.4 (1.8)	920
Debt collectors repossessed goods	3.3 (2.4)	676
Physical/verbal violence towards you	2.7 (1.2)	559
Sold/hocked possessions	2.1 (1.1)	434
Kids missed school	1.1 (0.9)	229
Did something illegal	0.5 (0.3)	100
Kids missed out on something	0.5 (0.2)	107
Other	0.4 (0.2)	79

The survey was supposed to collect information on help-seeking behaviour from all at-risk gamblers, following on from the at-risk gamblers experience of negative consequences because of their own gambling. However, an error in the data capture by the survey company meant that only 207 of 408 unweighted at-risk gamblers (weighted 9,410 from 20,717) were asked about their help-seeking behaviour. Only five of the 207 unweighted respondents sought help because of their own gambling, while for the weighted data this was 4.7% (N=437 people) seeking help. The most common response to who they sought help from were speaking to a family member or a friend, followed by a Doctor, online help, a counsellor or staff through a self-exclusion process.

### 6.9 Problem gambling and in-venue ATM access and spoken to by staff

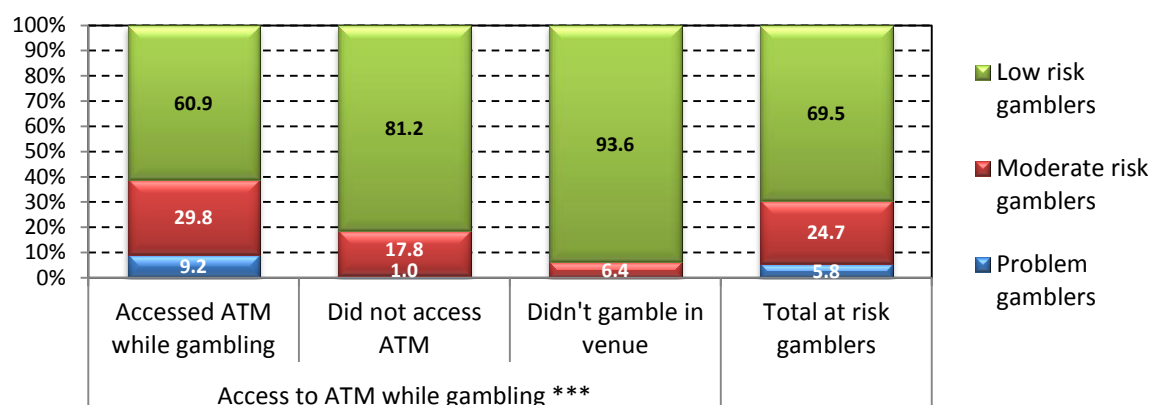
More than half (59%) of at-risk gamblers accessed an in-venue ATM while in a gambling session (Table 26). This association did not vary by regions, age or gender.

**Table 26:** In-venue ATM access while in a gambling session, at-risk gamblers

In-venue ATM access while gambling	% (SE)	Population N
Accessed ATM for gambling	58.7 (4.9)	12,152
Did not access ATM	39.4 (5.0)	8,151
Didn't gamble in venue	1.9 (0.9)	388
<b>Total at-risk gamblers (N)</b>	<b>100.0</b>	<b>20,692</b>

The association between accessing an in-venue ATM for gambling and problem gambling risk for at-risk gamblers was statistically significant (Figure 45). Amongst gamblers who accessed an ATM for gambling, 9.2% were problem gamblers, 30%

moderate risk and 61% low risk gamblers, compared with 1%, 17.8% and 81% respectively for those who did not access at ATM.



**Figure 45: In-venue ATM access for gambling by PGSI, at-risk gamblers**

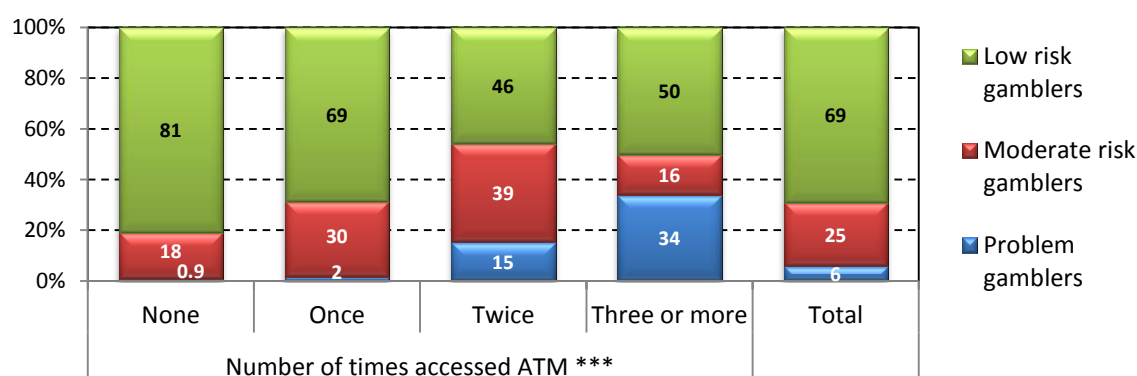
Significant association between accessing an ATM and PGSI: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Most at-risk gamblers (57%) accessed an ATM just once while they were gambling, though 24% accessed the ATM twice and a further 13%, three times (Table 27). ATM access did not vary significantly by region, gender or age.

**Table 27: Number of times accessed In-venue ATM while in a gambling session, at-risk gamblers**

Number of times accessed ATM while gambling	% (SE)	Population N
None	5.1 (1.7)	622
Once	57.1 (5.5)	6,920
Twice	24.4 (4.7)	2,953
Three or more	13.4 (3.9)	1,629
Total who accessed ATM	100.0	12,124

Figure 46 shows the association between gambling risk for at-risk gamblers and number of times accessed ATM in a gambling session. This association was statistically significant, with problem gambling increasing the more times the gambler accessed an ATM.



**Figure 46: Number of times accessed ATM on average per gambling session by PGSI, at-risk gamblers**

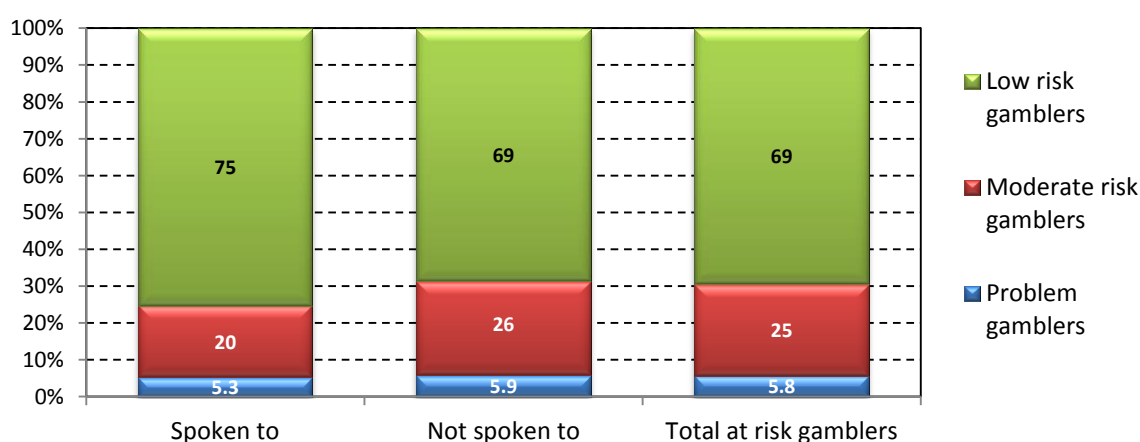
Significant association between accessing an ATM and PGSI: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Twelve percent of at-risk gamblers were spoken to about their gambling by a staff member of a venue (Table 28). This did not vary significantly across regions, age or gender.

**Table 28:** Spoken to by staff about own gambling, at-risk gamblers

In-venue ATM access while gambling	% (SE)	Population
		N
Spoken too about gambling	12.0 (4.8)	2,471
Not spoken to	88.0 (4.8)	18,187
<b>Total at-risk gamblers (N)</b>	<b>100.0</b>	<b>20,658</b>

Figure 47 shows that amongst at-risk gamblers, there was no significant difference between problem gambling risk and being spoken to by a staff member of a venue. That is, problem and moderate risk gamblers were no more likely to be spoken to by a staff member of a venue about their gambling than low risk gamblers.



**Figure 47:** Spoken to by venue staff member about their gambling by PGSI, at-risk gamblers

### 6.10 Problem gambling by socio-demographic and socioeconomic characteristics

The following two tables show the prevalence of problem gambling risk by socio-demographic and socioeconomic factors, with factors showing a statistically significant association with problem gambling risk marked with an asterisk. Indigenous status and main language spoken at home were the only socio-demographic variables that had a statistically significant association with the PGSI (Table 29). Specifically, Indigenous compared with non-Indigenous people had a significantly higher prevalence in problem gambling (1.1% cf. 0.6%), moderate risk gambling (5.6% cf. 2.2%) and low risk gambling (12.4% cf. 6.9%). People who did not speak English at home were less likely to be problem gamblers (0.7% cf. 0%), but were more likely to be moderate risk gamblers (8.8% cf. 2.5%).



**Table 29:** Socio-demographic characteristics by PGSI, NT adult population

	<b>Problem gambler % (SE)</b>	<b>Moderate risk % (SE)</b>	<b>Low risk % (SE)</b>	<b>None or little risk % (SE)</b>	<b>Non- gambler % (SE)</b>
Northern Territory	0.7 (0.2)	2.9 (0.5)	8.1 (0.9)	64.3 (1.4)	24.0 (1.2)
Indigenous status *					
Non-Indigenous	0.6 (0.2)	2.2 (0.4)	6.9 (0.7)	66.7 (1.2)	23.7 (1.0)
Indigenous	1.1 (0.5)	5.6 (1.9)	12.4 (3.3)	55.9 (4.9)	25.0 (4.2)
Main language spoken at home ***					
English	0.7 (0.2)	2.5 (0.4)	8.3 (0.9)	66.6 (1.4)	21.9 (1.2)
Not English	0.0 (0.0)	8.8 (4.5)	6.0 (2.1)	32.7 (5.5)	52.5 (6.6)
Household type					
Couple: children living at home	0.7 (0.4)	3.2 (1.0)	8.1 (1.3)	62.1 (2.1)	25.9 (1.8)
Couple: no children/not living at home	0.5 (0.4)	1.9 (0.7)	5.5 (1.0)	70.2 (2.2)	21.9 (2.0)
Single parent: children living at home	0.8 (0.6)	2.1 (1.0)	11.7 (6.3)	57.4 (7.8)	28.0 (7.2)
Single: no children/not living at home	0.5 (0.3)	2.2 (1.0)	8.7 (2.2)	68.0 (3.7)	20.7 (3.1)
Group or shared house	1.1 (0.8)	4.7 (2.0)	12.0 (3.0)	59.5 (5.0)	22.7 (4.2)
Other	0.0 (0.0)	6.5 (3.9)	7.0 (3.4)	61.5 (8.4)	25.0 (6.6)

Significant association between socio-demographic factor and PGSI: \*\*\* p<0.001, \*\* p<0.01, \* p<0.05

Table 30 shows the association between socioeconomic variables and problem gambling risk. Labour force status (p<0.001), FIFO/DIDO status (p<0.05), student status (p<0.05), highest education (p<0.001), and personal income (p<0.001) were all significantly associated with problem gambling risk. Unemployed, part-time employed, full-time students, those with Year 12 or below education, and those with personal income less than \$30,000 and more than \$100,000 per annum had higher problem gambling prevalence.

**Table 30: Socioeconomic factors by the PGSI, NT adult population**

	<b>Problem gambler % (SE)</b>	<b>Moderate risk % (SE)</b>	<b>Low risk % (SE)</b>	<b>No or little risk % (SE)</b>	<b>Non- gambler % (SE)</b>
Northern Territory ***	0.7 (0.2)	2.9 (0.5)	8.1 (0.9)	64.3 (1.4)	24.0 (1.2)
Labour force status ***					
Full-time employed	0.4 (0.2)	2.8 (0.6)	8.5 (1.1)	67.7 (1.7)	20.5 (1.4)
Part-time employed	1.4 (0.8)	1.9 (0.8)	7.7 (2.3)	53.7 (3.8)	35.3 (3.9)
Unemployed (looking for work)	4.0 (3.8)	0.5 (0.3)	4.7 (1.8)	59.8 (8.2)	30.9 (7.1)
NILF	0.3 (0.2)	4.8 (1.8)	6.8 (2.1)	60.4 (3.2)	27.6 (2.9)
Other	0.0 (0.0)	0.0 (0.0)	20.8 (11.0)	59.0 (12.7)	20.2 (8.5)
Fly-in Fly-out/Drive-in Drive-out *					
Other occupation/work type	0.7 (0.2)	2.8 (0.6)	7.1 (0.8)	66.3 (1.6)	23.2 (1.5)
FIFO/DIDO worker	0.1 (0.1)	2.1 (1.2)	15.3 (4.3)	61.3 (4.8)	21.2 (3.6)
Not in the labour force/unemployed	1.1 (0.8)	3.7 (1.3)	7.2 (1.7)	60.2 (2.9)	27.9 (2.6)
Student status *					
Full-time student	2.5 (2.1)	1.1 (0.8)	7.9 (2.7)	48.7 (8.6)	39.7 (7.9)
Part-time student	0.0 (0.0)	4.7 (2.0)	11.1 (2.4)	61.0 (4.2)	23.2 (3.8)
Not studying	0.6 (0.2)	2.8 (0.5)	7.8 (1.0)	65.6 (1.5)	23.1 (1.3)
Highest education ***					
Bachelor degree or higher	0.3 (0.1)	1.1 (0.3)	4.4 (0.8)	65.9 (2.0)	28.3 (2.0)
Diploma, technical Certificate III-IV	0.5 (0.2)	4.6 (1.2)	8.7 (2.0)	67.8 (2.7)	18.4 (2.1)
Finished Year 12 (Senior)	1.3 (1.0)	2.1 (0.7)	11.8 (2.2)	63.1 (3.1)	21.7 (2.5)
Finished Year 10 (Junior)	0.8 (0.7)	2.3 (1.0)	10.1 (3.0)	66.2 (4.4)	20.5 (3.5)
Less than Year 10	1.6 (1.2)	7.0 (4.2)	11.0 (3.7)	40.9 (6.2)	39.4 (6.5)
Gross personal income ***					
Less than \$30,000	1.1 (0.6)	4.3 (1.6)	8.8 (2.3)	46.3 (3.3)	39.5 (3.7)
\$30,000-\$49,999	0.3 (0.3)	2.0 (1.1)	10.1 (2.9)	65.3 (3.8)	22.3 (2.9)
\$50,000-\$69,999	0.3 (0.2)	4.2 (1.4)	7.1 (1.7)	65.0 (3.3)	23.2 (2.9)
\$70,000-\$99,999	0.5 (0.2)	2.0 (0.9)	9.5 (2.6)	66.4 (3.3)	21.6 (2.7)
\$100,000-\$119,999	1.0 (0.7)	1.3 (0.4)	6.7 (1.6)	71.3 (3.2)	19.7 (3.0)
\$120,000 or more	1.1 (1.0)	1.6 (0.6)	7.2 (1.7)	76.0 (2.7)	14.1 (1.9)
SEIFA Advantage-Disadvantage					
590-976 (more disadvantaged)	1.1 (0.7)	3.5 (1.3)	5.9 (1.5)	64.3 (3.7)	25.2 (3.4)
979-1021	0.3 (0.2)	2.2 (0.9)	10.1 (2.4)	60.1 (2.8)	27.3 (2.4)
1023-107	1.0 (0.4)	3.3 (1.0)	6.0 (1.0)	67.1 (2.0)	22.5 (1.7)
1073-112	0.4 (0.2)	2.6 (0.7)	10.5 (1.7)	66.2 (2.3)	20.3 (1.9)

Significant association between socioeconomic factor and PGSI: \*\*\* p<0.001, \*\* p<0.01, \* p<0.05

### 6.11 Problem gambling by health and health risk factors

Table 31 shows the tabulation of the PGSI by self-assessed health and health risk factors. Note that standard errors will be higher in this table, compared with previous PGSI estimates, as the health-related variables were only collected in the sub-sample. Having an alcohol problem, smoking status, smoke-free home status, and exposure to personal stressors were all significantly associated with the PGSI. Those with an alcohol problem were more likely to be moderate and low risk gamblers compared to those without. Smokers had elevated risk across all PGSI categories compared with ex- and never smokers, while those living in houses where someone smokes inside had higher risk of problem and moderate risk gambling, compared with smoke free homes. People who were exposed to three or more personal stressors in the last year had higher problem gambling risk, compared with those experiencing less than three stressors.

**Table 31:** Health and health risk factors by the PGSI, NT adult population

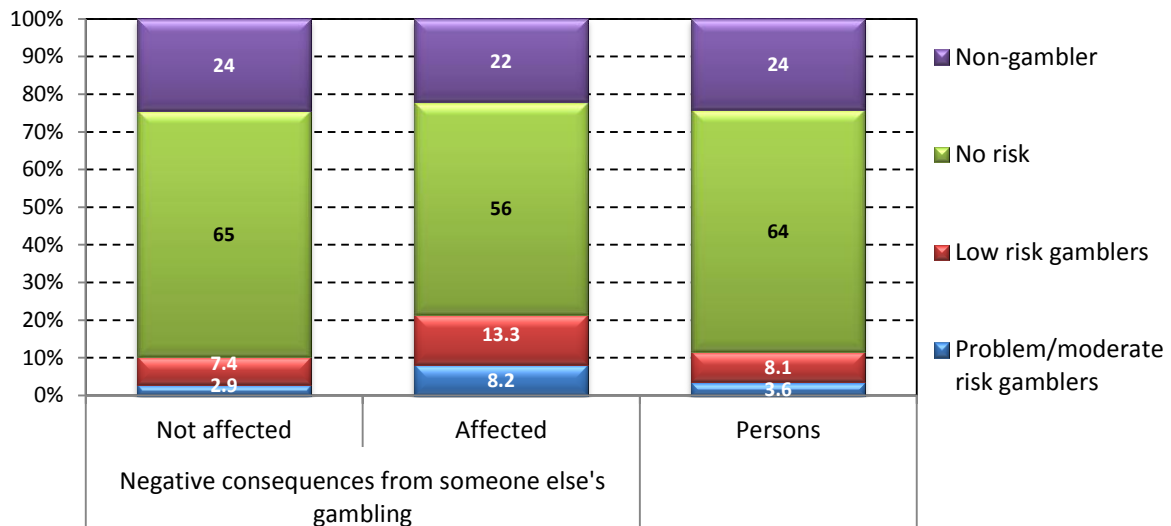
	<b>Problem gambler % (SE)</b>	<b>Moderate risk gambler % (SE)</b>	<b>Low risk gambler % (SE)</b>	<b>No or very low risk gambler % (SE)</b>	<b>Non- gambler % (SE)</b>
Northern Territory	0.7 (0.2)	2.9 (0.5)	8.1 (1.0)	64.3 (2.3)	24.1 (2.2)
Self-assessed health					
Excellent	0.3 (0.2)	3.0 (1.5)	5.1 (1.5)	66.7 (5.4)	24.9 (4.8)
Very good	0.6 (0.3)	2.0 (0.7)	7.2 (1.9)	67.3 (3.8)	22.9 (3.7)
Good	0.5 (0.4)	3.3 (0.9)	11.0 (1.8)	58.3 (4.3)	26.9 (4.1)
Fair	1.9 (1.1)	4.3 (2.0)	6.3 (1.7)	70.3 (5.0)	17.1 (3.7)
Poor	2.2 (1.8)	1.7 (1.0)	9.0 (4.3)	70.8 (7.8)	16.2 (6.7)
CAGE Alcohol problem **					
No problem	0.8 (0.3)	2.0 (0.5)	5.5 (0.7)	69.8 (2.7)	21.9 (2.5)
Alcohol problem	0.8 (0.4)	5.6 (1.7)	16.4 (4.0)	58.2 (6.0)	19.0 (5.7)
Unknown/missing	0.2 (0.1)	4.2 (2.0)	11.7 (3.1)	45.3 (5.5)	38.7 (5.7)
Smoking status ***					
Never smoker	0.2 (0.1)	2.0 (0.5)	7.4 (1.1)	60.9 (3.4)	29.5 (3.2)
Ex-smoker	0.6 (0.4)	2.4 (0.7)	6.4 (1.1)	75.6 (2.7)	14.9 (2.3)
1 to 9 cigarettes per day	0.1 (0.1)	4.3 (3.6)	20.8 (7.9)	54.1 (10.5)	20.7 (8.6)
10 or more cigarettes per day	3.1 (1.5)	6.8 (2.7)	7.5 (2.6)	59.2 (8.5)	23.5 (7.3)
Someone smokes inside the home *					
Never	0.5 (0.2)	2.6 (0.5)	8.2 (1.1)	65.8 (2.4)	22.9 (2.2)
Sometimes	0.8 (0.7)	2.2 (1.1)	6.8 (3.1)	55.8 (10.9)	34.4 (10.6)
Most of the time or always	4.3 (2.9)	10.6 (5.4)	8.4 (3.4)	44.5 (13.7)	32.2 (11.8)
Financial stress					
Did not run out	0.5 (0.2)	2.4 (0.5)	7.8 (1.0)	65.0 (2.3)	24.4 (2.2)
Ran out last 12 months	2.5 (1.5)	8.2 (3.3)	12.0 (4.6)	56.1 (11.8)	21.2 (9.5)
Number of personal stressors **					
None	0.4 (0.2)	3.0 (1.2)	6.7 (1.3)	54.9 (4.9)	35.0 (4.9)
One or more	0.8 (0.3)	2.6 (0.5)	8.6 (1.2)	68.1 (2.5)	20.0 (2.1)
Number of personal stressors **					
None	0.4 (0.2)	3.0 (1.2)	6.7 (1.3)	54.9 (4.9)	35.0 (4.9)
One or two	0.3 (0.1)	1.8 (0.5)	8.9 (1.6)	71.0 (3.2)	18.1 (2.4)
Three or more	1.2 (0.6)	3.4 (0.9)	8.3 (1.9)	65.4 (3.9)	21.8 (3.4)

Significant association between health risk factor and PGSI: \*\*\* p<0.001, \*\* p<0.01, \* p<0.05

## 6.12 Problem gambling risk by harm from someone else's gambling

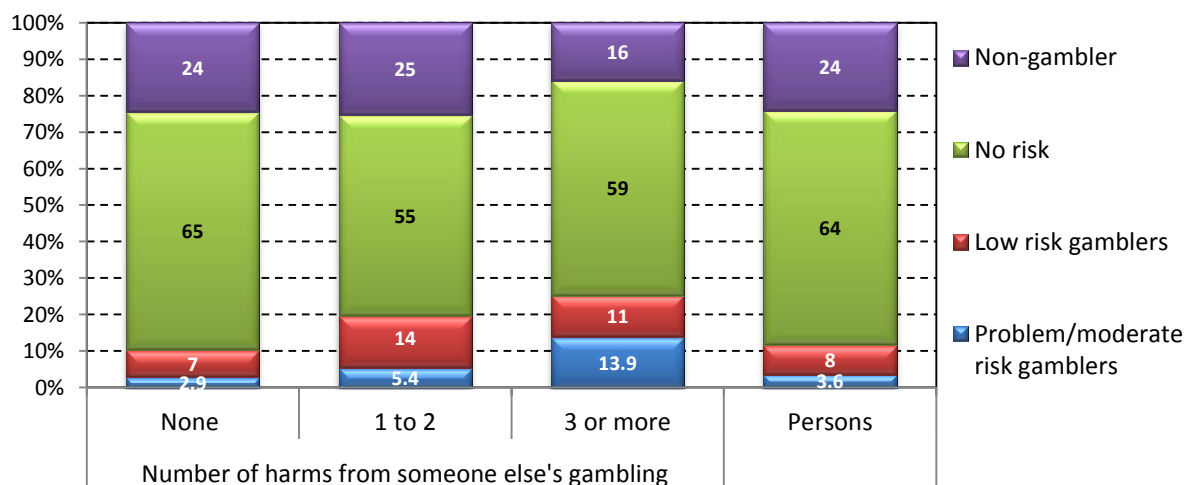
The survey collected information from people on whether they had been negatively affected by another person's gambling in the last year. The questions on negative consequences from another person's gambling are analysed more thoroughly in the next chapter. For this chapter problem gambling risk estimates by whether the gambler was negatively affected by someone else's gambling, number of negative consequences and relationship to person whose gambling negatively affected them are presented. To improve the accuracy of estimates shown in the next few figures, problem and moderate risk gambling categories of the PGSI have been collapsed.

Figure 48 shows that there was no significant association ( $p=0.11$ ) between the PGSI and being negatively affected from someone else's gambling. However, the percentage of at-risk gamblers amongst those affected by someone else's gambling was 22% compared with 10% in those not affected by another person's gambling.



**Figure 48:** Negative consequences from someone else's gambling by PGSI, NT adult population

Figure 49 shows the association between problem gambling risk and the number of negative consequences experienced because of another person's gambling. This association was not statistically significant, though a clear trend is observable in the problem/moderate risk gamblers group with increasing prevalence with the more harms they experienced from someone else's gambling. There were also fewer non-gamblers in the group that were affected by three or more negative consequences.



**Figure 49:** Negative consequences from someone else's gambling by PGSI, NT adult population

Table 32 shows problem gambling prevalence for people negatively affected by another person's gambling. Caution is advised interpreting estimates in this table, as most have large standard errors. Problem/moderate risk gambling was significantly higher for people who reported a brother or sister (44.5%) as causing the negative consequences and lower for acquaintance (4.5%), compared with all people negatively affected (8.2%).

**Table 32:** Person whose gambling negatively affected respondents by PGSI, NT adult population affected by someone else's gambling

	Problem/ moderate risk gamblers % (SE)	Low risk gamblers % (SE)	No risk gamblers % (SE)	Non-gambler % (SE)	Persons N
Parent	2.7 (2.0)	3.2 (2.8)	75.8 (17.8)	18.3 (17.4)	6,343
Son or daughter	0.0 (0.0)	6.8 (5.7)	34.0 (23.4)	59.3 (25.9)	741
Friend	10.9 (5.9)	18.6 (9.1)	65.6 (11.9)	4.9 (3.1)	5,993
Work colleague	22.2 (18.4)	25.7 (13.3)	24.5 (13.3)	27.6 (17.1)	775
Spouse	16.8 (11.9)	8.2 (4.4)	44.3 (18.0)	30.7 (22.2)	1,329
Acquaintance **	4.5 (5.5)	0.5 (0.6)	21.3 (16.0)	73.7 (19.5)	1,905
Ex-partner	0.0 (0.0)	20.6 (16)	74.2 (18.5)	5.2 (5.0)	1,004
Brother or sister ***	44.5 (21.9)	36.4 (19.7)	14.7 (11.6)	4.4 (4.6)	1,211
Other family member	2.2 (2.3)	31.7 (18.2)	40.0 (19.3)	26.2 (18.9)	1,819
Parent in-law	0.0 (0.0)	0.0 (0.0)	88.3 (10.5)	11.7 (10.5)	910
Other	0.0 (0.0)	0.0 (0.0)	82.1 (16.5)	17.9 (16.5)	359
<b>Total affected</b>	<b>8.2 (2.9)</b>	<b>13.3 (4.0)</b>	<b>56.3 (8.6)</b>	<b>22.1 (7.4)</b>	<b>23,034</b>

Significant association between person negatively affected by and PGSI: \*\*\* p<0.001, \*\* p<0.01, \* p<0.05

### 6.13 Problem gambling by motivations for gambling

Tables 33 and 34 show problem gambling risk for the five domains of the Gambling Motivations and Expectancies Scale. All five domains were significantly associated with problem gambling risk. Problem gambling prevalence was highest amongst people who screened as having a high motivation of gambling to 'escape' (9.5% cf. 0.4%), followed by 'money' (2.4% cf. 0.6%). Table 34 shows the significant positive association between problem gambling risk and the number of motivations a respondent scored high on for their gambling.

**Table 33:** Gambling motivations 'excitement', 'escape' and 'ego' by PGSI, NT adult gamblers

	All gamblers	Excitement ***		Escape ***		Ego ***	
		Less	High	Less	High	Less	High
<b>Problem gambler</b>	0.9 (0.3)	0.5 (0.2)	2.8 (1.3)	0.4 (0.2)	9.5 (4.2)	0.9 (0.3)	2.3 (1.4)
<b>Moderate risk</b>	3.8 (0.7)	2.7 (0.6)	9.0 (2.9)	3.1 (0.7)	16.5 (4.9)	3.5 (0.7)	15.2 (7.2)
<b>Low risk</b>	10.7 (1.3)	9.0 (1.1)	18.7 (5.2)	10.1 (1.3)	20.6 (6.6)	10.2 (1.3)	30.1 (11.9)
<b>No risk</b>	84.6 (1.5)	87.7 (1.3)	69.4 (6.4)	86.4 (1.5)	53.4 (8.4)	85.4 (1.5)	52.4 (12.3)
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Population (N)</b>	133,992	110,822	23,170	126,390	7,602	130,455	3,537

Significant association between gambling motivation and PGSI: \*\*\* p<0.001, \*\* p<0.01, \* p<0.05

**Table 34:** Gambling motivations ‘social’ and ‘money’ by PGSI, NT adult gamblers

	All gamblers	Social ***		Money ***		Number of high motivations ***		
		Less	High	Less	High	0	1-2	3-5
<b>Problem gambler</b>	0.9 (0.3)	0.6 (0.2)	2.0 (1.1)	0.6 (0.2)	2.4 (1.4)	0.2 (0.1)	1.2 (0.5)	8.4 (4.8)
<b>Moderate risk</b>	3.8 (0.7)	3.2 (0.8)	5.7 (1.6)	2.7 (0.6)	9.9 (2.8)	1.1 (0.4)	6.7 (1.6)	17.1 (5.8)
<b>Low risk</b>	10.7 (1.3)	8.2 (1.1)	18.9 (4.2)	9.7 (1.4)	16.2 (3.6)	7.2 (1.2)	14.5 (2.7)	27.3 (8.5)
<b>No risk</b>	84.6 (1.5)	88.1 (1.4)	73.4 (4.9)	86.9 (1.6)	71.5 (4.8)	91.5 (1.3)	77.6 (3.4)	47.1 (9.6)
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Population (N)</b>	133,992	101,996	31,995	113,514	20,478	79,001	49,400	5,591

Significant association between gambling motivation and PGSI: \*\*\* p<0.001, \*\* p<0.01, \* p<0.05

### 6.14 Multivariable model of PGSI score

In previous sections of this chapter, all statistical associations were bivariate. That is, they were between two variables only, namely the PGSI and the explanatory variable of interest (e.g. motivations, age, gender etc). However, significant bivariate associations between explanatory variables and the PGSI may not remain significant, when controlling or adjusting for other variables in a multivariable model predicting PGSI score. Therefore, in order to determine which variables are significantly associated with a person's PGSI score, while controlling for other significant predictors, a multivariable (also known as multivariate) model is required. The distribution of PGSI score is well suited to a negative binomial regression model, with this model accommodating the large number of zero scores (i.e. no or very little risk) amongst gamblers.

Due to the large number of explanatory variables available for predicting PGSI score, a blocked approach is used to determine which variables have a significant multivariable adjusted association with PGSI score. Explanatory variables were divided into domains of socio-demographic and socioeconomic; health risk factors; gambling participation (for each activity and the number of activities) and motivations. For each domain, all variables showing a moderately significant ( $p<0.10$ ) association with the PGSI score were entered into a model simultaneously, and backward selection applied, with variables removed one by one, starting with the least significant one, until all variables contained in the model for that domain were significant at  $p<0.05$ . Once this process was completed for each domain, all significant variables from each domain were entered simultaneously into a model and backward selection again carried out until all variables remained significant at  $p<0.05$ .

Table 35 shows the final negative binomial regression model for PGSI score, with variables from all domains represented in this model. The table includes the distribution of explanatory variables, the percentage problem/moderate risk gambler, the multivariable adjusted PGSI score ratio (SR) from the negative binomial regression, and the significance between the reference category (denoted by 1.0) and other categories for that explanatory variable. The explanatory variable having the largest effect size on PGSI score was EGM frequency of play, with a score ratio (SR) of 13.28 (95% CI 7.63-23.1) for weekly or more EGM players, and 6.38 (95% CI 3.17-12.8) for monthly players, compared with non-EGM gamblers. The SR indicates that on average, weekly EGM players PGSI

score was 13 times that of non-EGM gamblers (the reference category). Experiencing financial stress was the variable with the second largest effect size on the PGSI score. Compared with people who had not ran out of money in the last year, those who had run out in the last 2 weeks had a score ratio of 7.56 (95% CI 3.11-18.4), while those who ran out in the last year has a score ratio of 2.48 (95% CI 1.22-5.03). Compared with gamblers who played only one activity, those playing three (SR 2.94 [95% CI 1.61-5.37]), four (SR 2.45 [95% CI 1.28-4.67]) and five or more (SR 3.68 [95% CI 1.92-7.06]) activities all had significantly higher PGSI scores. People with Year 10 or less education had significantly higher PGSI scores (SR 2.67 [95% CI 1.20-5.94]) than those with a Bachelor degree or more. Not speaking English at home was associated with significantly higher PGSI scores (SR 5.03 [95% CI 2.61-9.73]), as was identifying as Indigenous (SR 1.94 [95% CI 1.16-3.27]). People who screened as having personal alcohol problems in the last year had significantly higher PGSI scores (SR 2.18 [95% CI 1.37-3.49]) than those who did not have an alcohol problem (as were those who did not answer this question (SR 1.84 [95% CI 1.16-2.93])). Lastly, gamblers in the top two quartiles of the 'money' motivation scale had significantly higher PGSI scores (SR 2.91 [95% CI 1.62-5.24] and 2.88 [95% CI 1.63-5.09]) compared with those in the lowest money motivation quartile. The estimated amount of PGSI score variance explained by the model could only be calculated using unweighted data, with the unweighted model giving an adjusted  $R^2$  of 13.5%.

**Table 35:** Multivariable negative binomial regression model of PGSI score and distribution of explanatory variables and problem/moderate risk gambling, 2015 NT adult gamblers

<b>Adjusted R<sup>2</sup>=13.5%</b> <b>Significant multivariable adjusted</b> <b>explanatory variables</b>	<b>Distribution</b> <b>% (SE)</b>	<b>PG &amp; MR</b> <b>gambler</b> <b>% (SE)</b>	<b>PGSI Score</b> <b>Ratio</b> <b>(95% CI)</b>	<b>p-</b> <b>value<sup>1</sup></b>
<b>EGMs ***</b>				
No EGM betting	64.0 (3.1)	2.4 (0.8)	1.0	-
Less than monthly	29.3 (3.1)	4.5 (1.3)	1.28 (0.79-2.08)	0.309
1-3 times per month	5.0 (1.4)	17.9 (7.2)	6.38 (3.17-12.8)	<0.001
1 or more times per week	1.7 (0.4)	56.2 (9.9)	13.28 (7.63-23.1)	<0.001
<b>Casino table games ***</b>				
No casino table games	81.6 (2.8)	3.6 (0.7)	1.0	-
Less than monthly	16.3 (2.7)	10.4 (3.2)	2.39 (1.51-3.80)	<0.001
Monthly or more	2.1 (1.1)	5.2 (4.0)	1.94 (0.43-8.78)	0.389
<b>Number of gambling activities ***</b>				
One	20.5 (2.1)	1.1 (0.7)	1.0	-
Two	33.1 (3.3)	2.1 (1.1)	1.09 (0.60-2.00)	0.770
Three	17.1 (2.0)	4.9 (1.5)	2.94 (1.61-5.37)	<0.001
Four	14.0 (1.8)	7.8 (2.5)	2.45 (1.28-4.67)	0.007
Five or more	15.2 (1.9)	12.3 (3.1)	3.68 (1.92-7.06)	<0.001
<b>Highest education level ***</b>				
Bachelor or higher	27.0 (2.3)	2.2 (0.6)	1.0	-
Certificate III, IV, & Diploma	35.0 (2.8)	5.8 (1.5)	1.05 (0.61-1.80)	0.857
Completed year 12	13.2 (1.5)	5.3 (1.9)	1.58 (0.92-2.69)	0.095
Completed year 10	19.7 (3.3)	3.1 (1.3)	0.54 (0.27-1.08)	0.082
Less than year 10	5.1 (1.6)	14.7 (8.1)	2.67 (1.20-5.94)	0.016
<b>Main language spoken at home ***</b>				
English	97.3 (0.6)	4.0 (0.7)	1.0	-
Not English	2.7 (0.6)	28.9 (12.2)	5.03 (2.61-9.73)	<0.001
<b>Indigenous status *</b>				
Non-Indigenous	78.5 (3.6)	3.6 (0.6)	1.0	-
Indigenous	21.5 (3.6)	8.8 (3.0)	1.94 (1.16-3.27)	0.012
<b>Ran out of money for essentials ***</b>				
Did not run out of money in last 12 months	90.5 (2.6)	3.8 (0.7)	1.0	-
Ran out in last 12 months	7.2 (2.6)	12.8 (6.2)	2.48 (1.22-5.03)	0.012
Ran out in last 2 weeks	2.3 (0.6)	16.2 (8.0)	7.56 (3.11-18.4)	<0.001
<b>Personal alcohol problems last 12 months **<sup>2</sup></b>				
No problems	71.2 (2.5)	3.5 (0.7)	1.0	-
Alcohol problems	16.0 (1.9)	8.0 (2.2)	2.18 (1.37-3.49)	0.001
Missing	12.8 (1.7)	7.1 (3.2)	1.84 (1.16-2.93)	0.010
<b>Motivation 'money' ***</b>				
1 <sup>st</sup> quartile (less motivation)	27.4 (2.4)	1.4 (0.8)	1.0	-
2	33.6 (3.0)	3.1 (0.8)	1.35 (0.75-2.41)	0.316
3	18.6 (2.8)	5.7 (1.8)	2.91 (1.62-5.24)	<0.001
4 <sup>th</sup> quartile (most motivation)	20.3 (2.3)	10.9 (2.9)	2.88 (1.63-5.09)	<0.001
<b>All gamblers total</b>	<b>100.0</b>	<b>4.7 (0.8)</b>	-	-
<b>Population</b>	<b>133,440</b>	-	-	-

NOTES: Global p-value for variable \*\*\* = p<0.001, \*\* = p<0.01, \* = p<0.05  
1 = p-value for comparison with reference category; 2 = CAGE alcohol problem screen



## 7 NEGATIVE CONSEQUENCES FROM ANOTHER PERSON'S GAMBLING

### 7.1 Background

Socio-demographic and socioeconomic characteristics of people can differentially expose individuals to health risks and gambling-related harms (Canale, Vieno & Griffiths 2016, Langham et al. 2016, Marmot & Wilkinson 1999). Gambling and resultant harms are increasingly being viewed as a social determinant of health and one that requires public health policy responses to reduce associated harms (Browne et al. 2016, Marshall 2009). Langham et al. (2016), in a large qualitative study identified over 70 specific harms that could arise directly or indirectly from gambling, and classified these under the following dimensions:

- Financial harms
- Relationship disruption, conflict or breakdown
- Emotional or psychological distress
- Decrements to health
- Cultural harms
- Reduced performance at work or study, and
- Criminal activity

Within each dimension there is also a severity aspect to harms in that they have 'general', 'crisis' or 'legacy' affects, and these can extend over the life course and in some cases be intergenerational (Dowling, Jackson, Thomas & Frydenberg 2010, Suomi, Jackson, Dowling, Lavis, Patford, Thomas, Harvey, Abbott, Bellringer, Koziol-McLain & Cockman 2013). Furthermore, harms can extend beyond individuals to families and communities, with some harms being amplified depending on community characteristics (e.g. population size, area level socioeconomic disadvantage). For example, shame associated with problem gambling or being the partner of someone experiencing gambling problems is often more visible in small communities which may lead to feelings of stigmatisation (Langham et al. 2016).

The reach and extent of gambling related harms on population health was recently assessed by Browne and colleagues (2016) using a burden of harm approach. This technique has been used extensively in health research to determine the burden in the population of different illnesses, diseases and health risk factors. The authors found that numerically, more harms occur amongst moderate and low risk gamblers, rather than problem gamblers, because these groups have much larger numbers of people in them than the problem gambler group. Specifically, they found that low risk, moderate risk and problem gamblers share 50%, 34% and 15% respectively, of the total harms from gambling.

This survey asked NT adults whether, in the last 12 months, they had been negatively affected by someone else's gambling (see Appendix for exact survey question). We also collected who the person was whose gambling was affecting them, and what negative consequences they experienced (from 16), and whether they sought help and from where.

### 7.1.1 Chapter contents

Specifically, this chapter presents:

- Negative consequences from another person's gambling for the NT, regions, age and gender
- Negative consequences from another person's gambling by socioeconomic characteristics of those affected
- Negative consequences from another person's gambling by health and health risk factors
- Negative consequences from another person's gambling by participation in different gambling activities
- Negative consequences from another person's gambling by problem gambling risk of the person being affected
- Relationship to person whose gambling is negatively affecting them for the NT, regions, age and gender, and
- Types of harms experienced for the NT, regions, age and gender.

### 7.2 Chapter highlights

- Thirteen percent of adults in the NT experienced at least one negative consequence because of another person's gambling in the year before the survey, which equates to just over 23,000 people.
- Socio-demographic and socioeconomic characteristics significantly associated with increased risk of experiencing negative consequences because of another person's gambling were Indigenous identification (28%), single person with children living at home (32%), living in a group household (24%), and gross personal income \$70,000 to \$99,999 (22%).
- Health risk factors significantly associated with increased risk of being negatively affected by someone else's gambling were smoking 10 or more cigarettes per day (37%), and running out of money for essentials in the last year (48%).
- EGM play in the last year (22%) was significantly associated with increased risk of experiencing negative consequences because of another person's gambling.
- The person whose gambling negatively affected the respondent was most commonly the parent (28%), followed by friend (27%), acquaintance (9%), other family member (8%), spouse (6%), brother/sister (5%), ex-partner (5%), in-law (4%), work colleague (4%) and son/daughter (3%).
- Negative consequences experienced by respondents because of someone else's gambling were raiding savings (6%), friend relationship problems (6%), feeling stress/anxiety/depression (5%), run out of money for bills (5%), family relationship problems (5%), borrowing from family/friends (4%), run out of money for food (2%), run out of money for rent/mortgage (2%).
- Women (8%) were significantly more likely than men (2.4%) to identify feeling stress/anxiety/depression because of someone else's gambling, and those less than 35 years (10%) were significantly more likely to raid savings compared with those 55 years or over (2%).

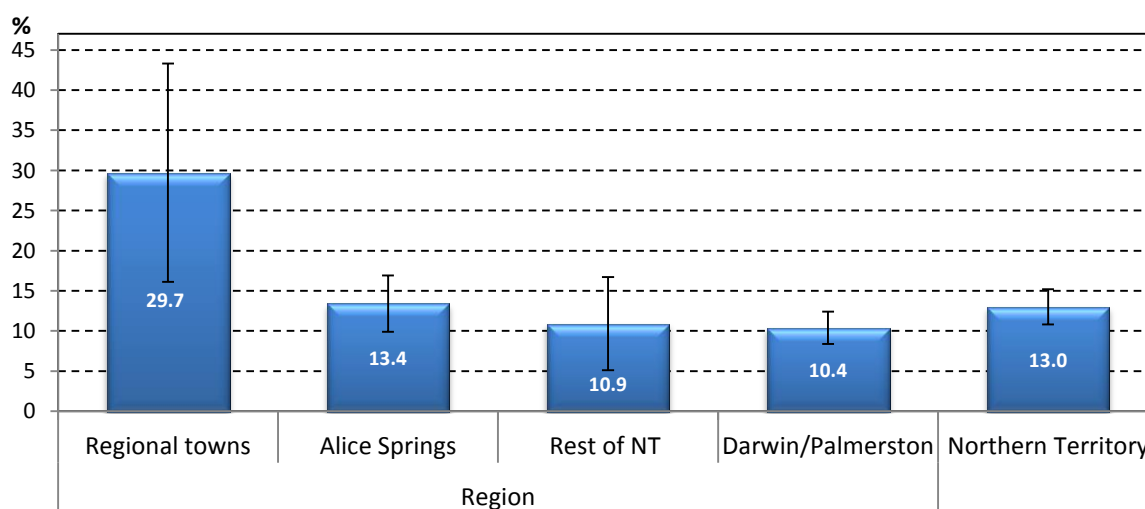
### 7.3 Harm from another person's gambling by region, gender and age

Gambling by another person negatively affected around 23,000 people or 13% of the NT adult population in the past year (Table 36). This included around 15,000 people (8.7%) experiencing one or two negative consequences and a further 7,600 (4.3%) experiencing three or more.

**Table 36:** Negatively affected by someone else's gambling, NT adult population

Negative consequences	% (SE)	Population
		N
None	87.0 (2.2)	153,832
One or two	8.7 (2.2)	15,401
Three or more	4.3 (0.8)	7,633
<b>Total</b>	<b>100.0</b>	<b>176,866</b>
One or more	13.0 (2.2)	23,034

Figure 50 shows the percentage of adults negatively affected by another person's gambling for the NT and regions. There was variation between regional towns and other localities; however, the association was not statistically significant ( $p=0.11$ ). The combined regional towns of Katherine, Tennant Creek and Nhulunbuy (30%) had the highest percentage of adults negatively affected by another person's gambling, followed by Alice Springs (13%), Rest of the NT (11%) and Darwin/Palmerston (10%).



**Figure 50:** Negatively affected by someone else's gambling by region, NT adults

Table 37 shows the number of negative consequences experienced in the last year because of another person's gambling for the NT and regions. This association was statistically significant ( $p=0.029$ ), with two notable differences between regions. First, the high percentage of adults experiencing one or two negative consequences in Regional Towns (27%), compared with other towns and regions all less than 10%. Second, the largest urban cities of Darwin/Palmerston (4.6%) and Alice Springs (5.9%) had the highest percentage adults experiencing three or more harms.

**Table 37:** Number of negative consequences because of another's gambling by region, NT adults

	Number of harms *			Number of harms *		
	None	1 to 2	3 or more	None	1 to 2	3 or more
	% (SE)			Population (N)		
Regional Towns	70.3 (13.6)	26.9 (13.9)	2.8 (2.3)	12,953	4,961	522
Alice Springs	86.6 (3.5)	7.5 (2.8)	5.9 (2.2)	27,046	2,346	1,844
Rest of NT	89.1 (5.8)	9.3 (5.7)	1.6 (0.8)	18,365	1,915	334
Darwin/Palmerston	89.6 (2.0)	5.8 (1.8)	4.6 (1.0)	95,469	6,179	4,934
<b>Northern Territory</b>	<b>87.0 (2.2)</b>	<b>8.7 (2.2)</b>	<b>4.3 (0.8)</b>	<b>153,832</b>	<b>15,401</b>	<b>7,633</b>

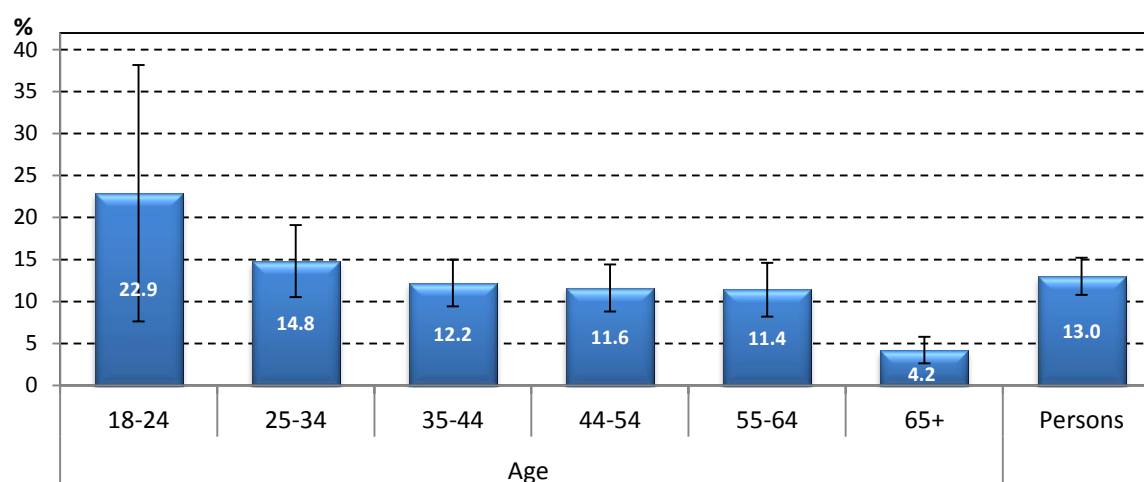
Significant association between region and number of harms: \*\*\* p<0.001, \*\* p<0.01, \* p<0.05

The association between gender and the number of negative consequences experienced because of someone else's gambling was not statistically significant (Table 38). A slightly higher percentage of men (13.5%) compared with women (12.4%) experienced negative consequences because of another's gambling. A higher percentage of males reported one or two harms (10.2%) than women (7.1%), but women were more likely to report three or more harms (5.4%) compared with men (3.3%). Around 9,300 males experienced one or two negative consequences because of another's gambling and a further 3,000 experienced three or more negative consequences. For females, around 6,000 experienced one or two negative consequences, and a further 4,600 experienced three or more.

**Table 38:** Number of harms because of someone else's gambling by gender, NT adult population

Negative consequences	Male	Female	Persons	Male	Female	Persons
	% (SE)	% (SE)	% (SE)	N	N	N
None	86.5 (3.9)	87.5 (2.1)	87.0 (2.2)	78,683	75,150	153,832
One or two	10.2 (3.9)	7.1 (1.8)	8.7 (2.2)	9,322	6,078	15,401
Three or more	3.3 (0.9)	5.4 (1.2)	4.3 (0.8)	2,989	4,644	7,633
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>90,994</b>	<b>85,872</b>	<b>176,866</b>
One or more	13.5 (3.9)	12.4 (2.1)	13.0 (2.2)	12,312	10,722	23,034

Figure 51 shows the association between negatively being affected by someone else's gambling and age. This association was not statistically significant, but there was a clear trend with people under 25 years more likely to be negatively affected, and people over 65 years being less likely to be affected by someone else's gambling.



**Figure 51:** Negatively affected by someone else's gambling by age, NT adults

Table 39 shows the non-significant association between number of harms from another person's gambling and age. Prevalence of being negatively affected by another person's gambling was highest for people under 25 years, but the largest number of people being affected is those aged 25-34 years (7,462 people), followed by 35-44 years (4,192 people), 18-24 years (4,002 people), 45-54 years (3,901 people), 55-64 years (2,802) and 65 years or more (675 people).

**Table 39:** Number of harms because of someone else's gambling by age, NT adult population

	Number of harms			Number of harms		
	None	1 or 2	3 or more	None	1 or 2	3 or more
	% (SE)			Population (N)		
18-24	77.1 (15.3)	20.5 (15.5)	2.4 (1.8)	13,452	3,586	416
25-34	85.2 (4.3)	9.7 (4.1)	5.1 (1.7)	43,006	4,872	2,590
35-44	87.8 (2.8)	6.4 (2.0)	5.8 (2.1)	30,256	2,202	1,990
44-54	88.4 (2.8)	6.6 (2.1)	5.0 (1.9)	29,776	2,214	1,687
55-64	88.6 (3.2)	8.1 (3.1)	3.3 (1.0)	21,871	1,989	813
65+	95.8 (1.6)	3.3 (1.5)	0.8 (0.6)	15,472	539	136
<b>Persons</b>	<b>87.0 (2.2)</b>	<b>8.7 (2.2)</b>	<b>4.3 (0.8)</b>	<b>153,832</b>	<b>15,401</b>	<b>7,633</b>

## 7.4 Negative consequences from someone else's gambling by socio-demographic characteristics

Table 40 shows associations between socio-demographic characteristics and the number of negative consequences experienced because of another person's gambling. Indigenous people were significantly more likely to experience a negative consequence because of another's gambling than non-Indigenous adults (27.9% cf. 8.9%). Household type was also significantly associated with negative consequences, with people living in single parent households (32.3%) and group households (23.9%) more likely to experience one or more negative consequences. No other socio-demographic variables were significant at  $p < 0.05$ .

**Table 40:** Number of negative consequences because of someone else's gambling by other socio-demographic characteristics, NT adult population

	Number of negative consequences			Population N
	None % (SE)	1 or 2 % (SE)	3 or more % (SE)	
Northern Territory ***	87.0 (2.2)	8.7 (2.2)	4.3 (0.8)	176,916
Indigenous status				
Non-Indigenous	91.1 (1.6)	5.0 (1.4)	3.9 (0.8)	138,517
Indigenous	72.1 (8.0)	22.0 (8.0)	5.8 (2.0)	38,399
Main language spoken at home				
English	86.7 (2.3)	8.8 (2.3)	4.5 (0.8)	169,897
Not English	93.2 (3.2)	5.9 (3.1)	1.0 (1.0)	6,867
Household type *				
Couple: children living at home	88.9 (2.7)	6.9 (2.5)	4.2 (1.2)	68,577
Couple: no children/not living at home	93.4 (1.8)	4.7 (1.7)	1.9 (0.6)	45,602
Single parent: children living at home	67.6 (13.6)	25.5 (14.3)	6.8 (3.1)	18,019
Single: no children/not living at home	89.8 (3.7)	5.7 (2.6)	4.5 (2.7)	22,014
Group or shared house	76.1 (8.2)	13.7 (8.0)	10.2 (4.2)	15,502
Other	91.7 (5.3)	7.0 (4.8)	1.3 (1.4)	7,042

Significant association between socio-demographic factor and number of harms:

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

## 7.5 Negative consequences from another's gambling by socioeconomic characteristics

Table 41 shows the association between socioeconomic characteristics and the number of harms experienced because of another person's gambling. Student status was significantly associated with experiencing negative consequences because of another person's gambling (full time 40.4% *cf.* part-time 14% and not student 10.9%), while highest education level had a marginally non-significant ( $p=0.087$ ) association with number of negative consequences because of someone else's gambling. People earning \$70,000 to \$99,999 per annum were significantly more likely to be negatively affected (22.4%), and those earning between \$30,000 to \$49,999 (6.7%) and \$100,000 to \$129,999 (3.9%) were significantly less likely to experience negative consequences from another person's gambling.

**Table 41:** Number of negative consequences because of someone else's gambling by socioeconomic characteristics, percentage and number of the NT adult population

	Number of negative consequences			Population N
	None % (SE)	1 or 2 % (SE)	3 or more % (SE)	
Northern Territory	87.0 (2.2)	8.7 (2.2)	4.3 (0.8)	176,916
Labour force status				
Full-time employed	85.9 (3.1)	9.3 (3.1)	4.8 (1.0)	121,041
Part-time employed	90.5 (3.1)	6 (2.4)	3.5 (2.1)	20,964
Unemployed (looking for work)	93.3 (3.9)	5.1 (3.3)	1.6 (1.6)	4,792
Not in the labour force	88.4 (3.1)	8.7 (3.0)	2.9 (0.9)	27,841
Other	83.5 (11.0)	7.2 (7.1)	9.3 (8.5)	2,189
Fly-in Fly-out/Drive-in drive-out worker				
FIFO/DIDO worker	79.5 (10.4)	16.5 (10.6)	4.0 (1.8)	26,458
Other occupation/work type	88.2 (2.2)	7.1 (2.0)	4.7 (1.1)	114,556
Not in the labour force/unemployed	88.7 (2.7)	8.1 (2.5)	3.2 (1.0)	34,823
Student status *				
Full-time student	59.6 (20.1)	35.7 (21.1)	4.7 (4.1)	10,577
Part-time student	85.6 (3.9)	6.6 (2.8)	7.9 (2.7)	18,427
Not studying	89.1 (1.8)	7.0 (1.6)	3.9 (0.8)	147,362
Highest education				
Bachelor degree or higher	88.3 (2.8)	8.6 (2.6)	3.1 (1.1)	54,707
Diploma, technical Certificate III-IV	88.3 (2.9)	6.2 (2.5)	5.5 (1.5)	55,450
Finished Year 12 (Senior)	88.3 (3.5)	3.8 (1.8)	7.9 (3.1)	21,646
Finished Year 10 (Junior)	80.3 (9.2)	18.3 (9.3)	1.5 (0.7)	32,206
Less than Year 10	90.5 (4.3)	3.9 (2.2)	5.6 (3.5)	12,697
Gross personal income **				
Less than \$30,000	86.8 (3.3)	9.9 (3.2)	3.3 (1.0)	29,141
\$30,000-\$49,999	93.3 (2.4)	2.2 (1.1)	4.5 (2.1)	23,342
\$50,000-\$69,999	90.7 (2.7)	2.9 (1.3)	6.4 (2.3)	34,218
\$70,000-\$99,999	77.6 (6.6)	18.6 (6.7)	3.8 (1.6)	47,134
\$100,000-\$119,999	96.1 (1.5)	2.0 (1.0)	1.9 (1.0)	17,785
\$120,000 or more	87.5 (5.2)	7.5 (5.0)	5.0 (2.3)	25,296
SEIFA Advantage-Disadvantage				
590-976 (most disadvantaged)	84.3 (6.5)	13.2 (6.6)	2.4 (1.0)	47,395
979-1021	85.8 (2.9)	6.4 (2.0)	7.8 (2.2)	44,444
1023-107	88.2 (3.2)	7.7 (3.0)	4.1 (1.4)	47,233
1073-112	90.1 (3.6)	7.0 (3.5)	2.8 (1.1)	37,844

Significant association between socioeconomic factor and number of harms:

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

## 7.6 Negative consequences from another person's gambling by health risk factors

Table 42 shows associations between health and health risk factors, and the number of negative consequences experienced because of another person's gambling. Smoking status and running out of money for essentials both had a significant association with number of negative consequences. Specifically, heavier smokers (10 or more per day) were statistically more likely to be negatively affected by someone else's gambling (37% cf. 13%), and people who ran out of money for essentials in the last year (48% cf. 13%). People who experienced five or more personal stressors were more likely to experience harms from another person's gambling, though this association was not significant.

**Table 42:** Number of negative consequences because of another's gambling by health and health risk factors, percentage and number of the NT adult population

	Number of negative consequences			Population N
	None % (SE)	1 or 2 % (SE)	3 or more % (SE)	
Northern Territory	87.0 (2.2)	8.7 (2.2)	4.3 (0.8)	176,916
Self-assessed health status				
Excellent	90.6 (3.9)	6.2 (3.6)	3.2 (1.5)	35,578
Very good	91.1 (2.0)	4.1 (1.2)	4.7 (1.6)	54,767
Good	81.7 (5.0)	13.5 (5.1)	4.7 (1.3)	65,193
Fair	86.9 (4.9)	9.6 (4.7)	3.5 (1.9)	16,159
Poor	83.0 (8.5)	11.4 (8.2)	5.6 (3.5)	4,689
CAGE alcohol problems				
No problems	88.1 (3.0)	8.4 (2.9)	3.5 (0.8)	122,576
Alcohol problems	85.0 (3.5)	7.4 (2.7)	7.6 (2.3)	26,481
Unknown (missing data)	84.2 (4.9)	11.3 (4.5)	4.5 (2.2)	27,859
Smoking status ***				
Never smoker	90.0 (2.3)	6.5 (2.1)	3.5 (1.1)	93,045
Ex-smoker	91.7 (1.6)	4.6 (1.2)	3.8 (1.1)	48,464
1 to 9 per day	89.6 (4.2)	5.4 (3.2)	5.0 (2.6)	12,948
10 or more per day	63.1 (10.8)	28.6 (11.7)	8.3 (2.9)	22,422
People smoke inside your home				
Never	86.5 (2.5)	9.2 (2.4)	4.3 (0.8)	157,174
Sometimes	92.4 (3.5)	3.4 (2.1)	4.1 (2.7)	11,640
Most of the time or always	89.0 (5.4)	6.7 (4.7)	4.3 (2.5)	8,000
Money for essentials ***				
Did not run out of money	90.4 (1.5)	6.4 (1.4)	3.2 (0.7)	160,412
Ran out in last 12 months	52.3 (13.0)	31.6 (15.5)	16.1 (5.6)	16,028
Number of stressors last year				
None	91.3 (3.8)	7.3 (3.8)	1.4 (0.8)	45,400
One or two	88.2 (5.0)	9.9 (5.0)	1.9 (0.9)	61,284
Three or four	87.9 (3.0)	5.8 (2.0)	6.3 (2.3)	36,291
Five or more	75.5 (5.4)	13.2 (4.6)	11.2 (3.0)	29,051

Significant association between health risk factor and number of harms:

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

## 7.7 Negative consequences from another person's gambling by gambling participation

Gambling per se did not increase the risk of being negatively affected by someone else's gambling (Table 43), with the percentage affected by someone else's gambling not significantly different between non-gamblers and gamblers (12% cf. 13.4%). However, gambling on EGMs and instant scratch tickets were significantly ( $p=0.026$  and  $p=0.009$  respectively) associated with number of negative consequences because of another person's gambling. Compared with the negative consequences experienced across the total Northern Territory population, EGM gamblers were significantly more likely to experience one or two harms because of another person's gambling (16.1%), but not three or more, while instant scratch ticket gamblers were less likely to experience one or two harms (5.1%), but significantly more likely to experience three or more harm (9.1%). Between 18% and 21% of those gambling on casino table games, sports betting, and racetrack betting experienced negative consequences from someone else's gambling, though neither of these associations were statistically significant, due to large standard errors around estimates.



**Table 43:** Number of negative consequences because of someone else's gambling by gambling activity, percentage and number of the NT adult population

	Number of negative consequences				Population N
	None % (SE)	1 or 2 % (SE)	3 or more % (SE)	One or more % (SE)	
Northern Territory	87.0 (2.2)	8.7 (2.2)	4.3 (0.8)	13.0 (2.2)	176,916
Non-gamblers	88.0 (4.1)	9.2 (4.0)	2.8 (1.4)	12.0 (4.1)	42,625
Any gambling activity	86.6 (2.6)	8.6 (2.6)	4.8 (0.9)	13.4 (2.6)	134,291
EGMs *	77.6 (6.3)	16.1 (6.4)	6.2 (1.9)	22.4 (6.3)	48,224
Sports betting	79.2 (8.6)	13.4 (8.1)	7.4 (4.1)	20.8 (8.6)	15,426
Race track betting	81.9 (6.4)	15.1 (6.5)	3.0 (0.9)	18.1 (6.4)	48,859
Casino table games	82.3 (6.3)	11.5 (5.6)	6.2 (3.0)	17.7 (6.3)	24,560
Other betting	84.4 (11.0)	15.6 (11.0)	0.0 (0.0)	15.6 (11.9)	940
Informal games	85.0 (8.3)	5.5 (3.7)	9.4 (7.5)	15.0 (8.3)	3,276
Instant scratch tickets **	85.8 (3.0)	5.1 (1.8)	9.1 (2.4)	14.2 (3.0)	31,761
Keno	86.3 (2.6)	6.6 (1.9)	7.1 (2.0)	13.7 (2.6)	43,552
Raffles	87.0 (2.1)	6.7 (1.6)	6.3 (1.5)	13.0 (2.1)	71,658
Lotteries	88.3 (1.8)	5.9 (1.3)	5.8 (1.3)	11.7 (1.8)	84,256
Bingo	89.9 (6.0)	4.9 (4.2)	5.3 (4.3)	10.1 (6.0)	3,715
Non-sports betting	100.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	146
Number of activities					
One	88.0 (4.1)	9.2 (4.0)	2.8 (1.4)	12.0 (4.1)	42,575
Two	92.9 (2.3)	4.3 (2.0)	2.8 (1.0)	7.1 (2.3)	27,712
Three	86.5 (6.7)	10.1 (6.8)	3.3 (1.3)	13.5 (6.7)	44,426
Four	88.3 (3.0)	8.4 (2.7)	3.3 (1.4)	11.7 (3.0)	23,097
Five or more	80.4 (6.9)	12.5 (6.7)	7.1 (3.1)	19.6 (6.9)	18,683

Significant association between gambling activity and number of harms:

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

## 7.8 Negative consequences from another person's gambling by problem gambling risk

Table 44 shows the association between negative consequences from someone else's gambling and the PGSI. The association was not statistically significant, though around twice the percentage of people in PGSI at-risk categories were negatively affected by someone else's gambling (21.3% to 31.5%) compared with non-risk gamblers (11.4%) and non-gamblers (12%).

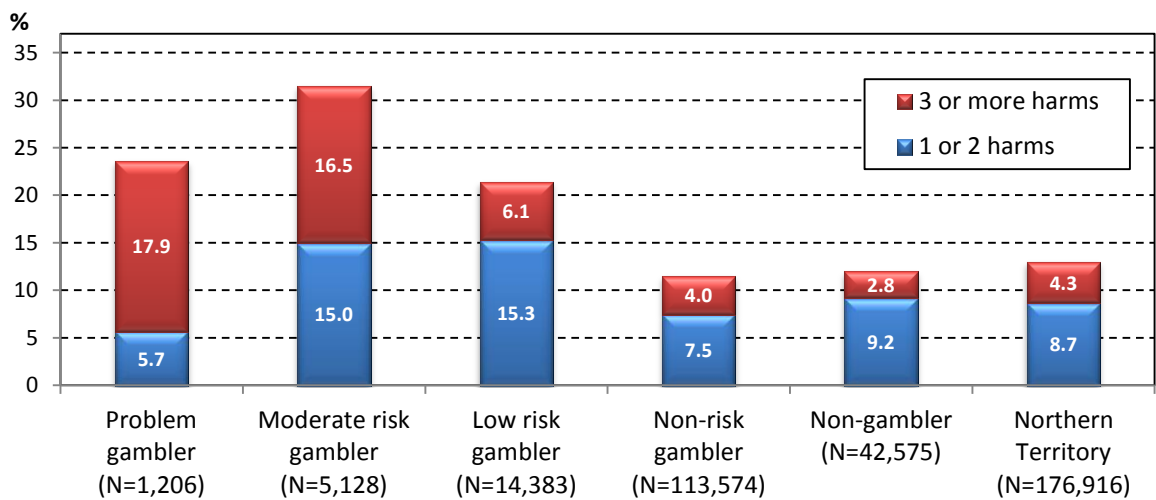
**Table 44:** Number of negative consequences by the PGSI, percentage NT adult population

	Number of negative consequences				Population N
	None	1 or 2	3 or more	1 or more	
Problem gambler	76.4 (11.9)	5.7 (4.2)	17.9 (11.2)	23.6 (11.9)	1,206
Moderate risk gambler	68.5 (8.8)	15.0 (7.3)	16.5 (6.7)	31.5 (8.8)	5,128
Low risk gambler	78.7 (4.8)	15.3 (4.4)	6.1 (2.4)	21.3 (4.8)	14,383
Non-risk gambler	88.6 (3.0)	7.5 (3.0)	4.0 (1.0)	11.4 (3.0)	113,574
Non-gambler	88.0 (4.1)	9.2 (4.0)	2.8 (1.4)	12.0 (4.1)	42,625
<b>Northern Territory</b>	<b>87.0 (2.2)</b>	<b>8.7 (2.2)</b>	<b>4.3 (0.8)</b>	<b>13.0 (2.2)</b>	<b>176,916</b>

NOTES: Caution advised in interpreting some estimates in this table due to large (> 25%) relative standard errors

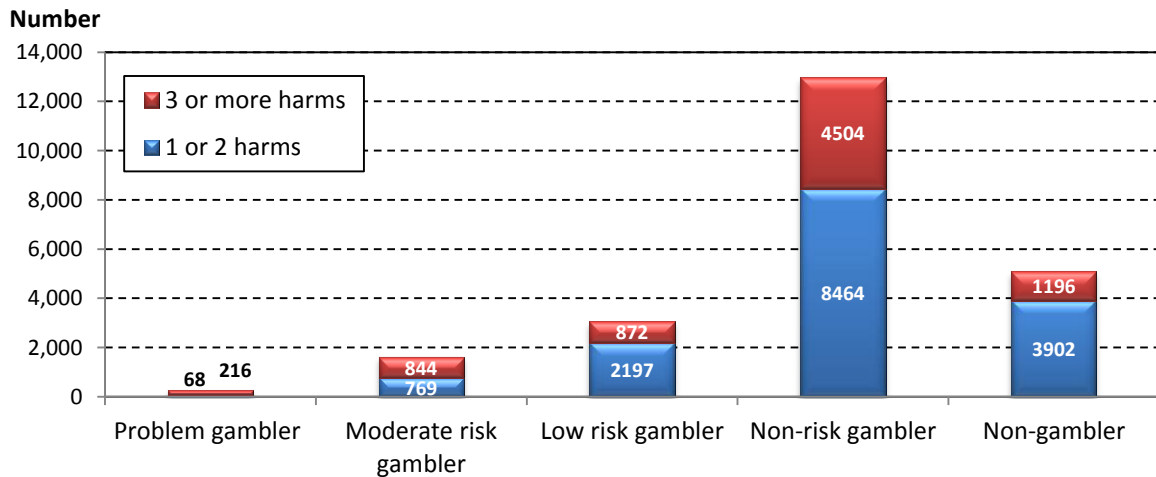
The association between negative consequences from another person's gambling and the PGSI is visualised in Figure 52. Around 6% of problem gamblers experienced one or two negative consequences from another person's gambling, and 18% experienced three or more. A similar percentage of moderate (15%) and low risk (15.3%) gambler groups experienced one or two negative consequences from

someone else's gambling; however, 16.5% of moderate risk gamblers experienced three or more negative consequences, compared with 6.1% for low risk gamblers, and 4% or less for non-risk gamblers and non-gamblers.



**Figure 52:** Number of negative consequences by the PGSI, percentage NT adult population

Figure 53 graphs the population affected by the PGSI, and shows that while the at-risk gambler groups had the highest proportions being negatively affected by someone else's gambling, around 13,000 non-risk gamblers and 5,000 non-gamblers experienced one or more negative consequences from another's gambling. Overall, around 5,000 at-risk gamblers were negatively affected by someone else's gambling, and this at-risk group also experience harms from their own gambling (see Section 4.6).

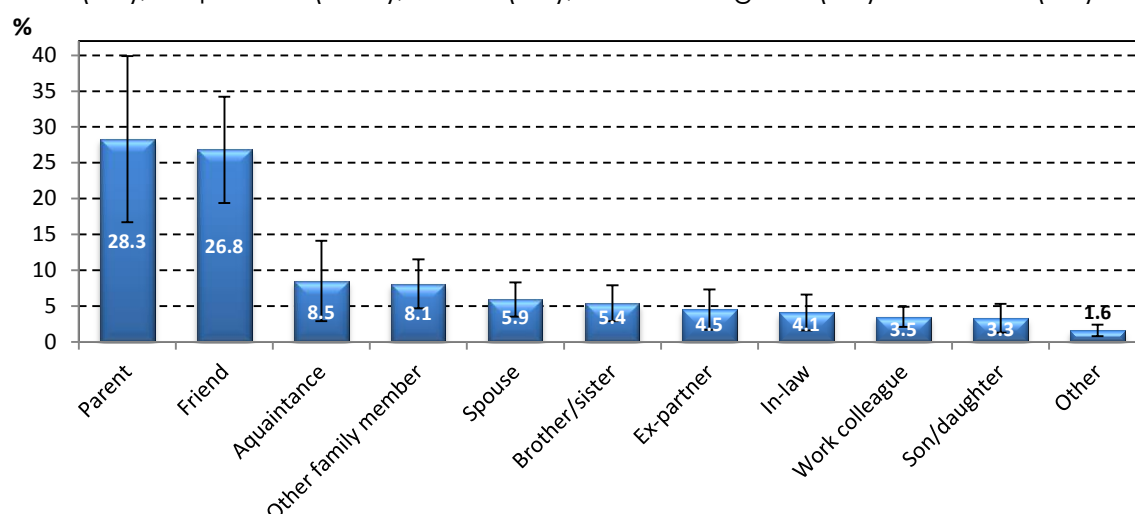


**Figure 53:** Number of negative consequences from someone else’s gambling by the PGSI, NT adult population

### 7.9 Relationship to person causing gambling-related negative consequences

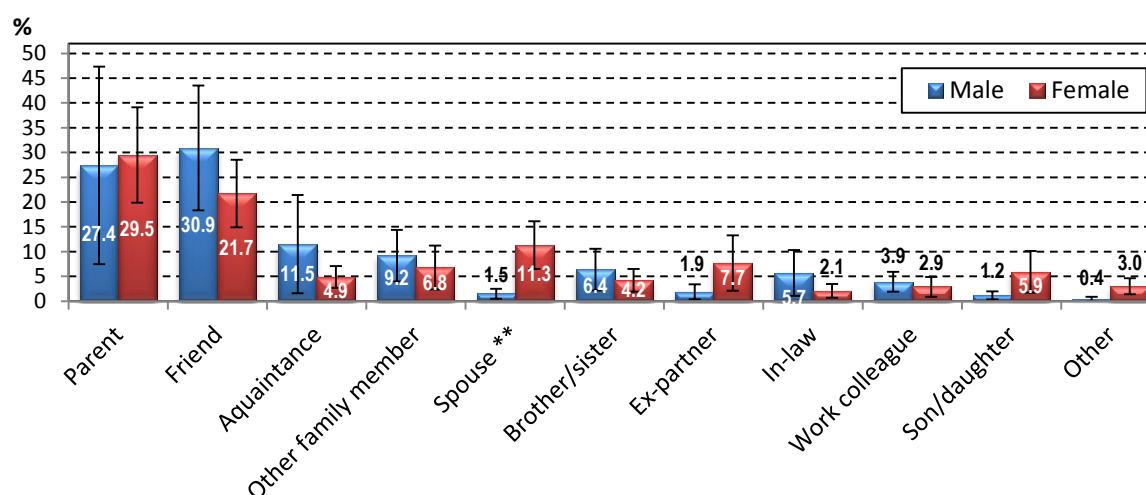
Figure 54 shows how the person whose gambling was causing harms was related to the person being affected. Parent (28%) and friend (27%) were the most commonly endorsed responses as the person whose gambling negatively affected them,

followed by acquaintance (9%), other family member (8%), spouse (6%), brother or sister (5%), ex-partner (4.5%), in-law (4%), son or daughter (3%) and other (2%).



**Figure 54:** Relationship to person whose gambling negatively affected them, percentage affected persons

Figure 55 shows the relationship to the person whose gambling negatively affected them by gender. Parent and friend were the most endorsed responses for both males and females. A significantly higher percentage of females than males identified spouse as the person whose gambling negatively affected them (11% cf. 2%), while other non-significant, but notable differences were friend (males 30.9% cf. females 21.7%), acquaintance (11.5% cf. 4.9%), ex-partner (8% cf. 2%), and son/daughter (6% cf. 1%). Table 45 shows the number of people and percentage for the relationship to the person whose gambling negatively affected by gender.



**Figure 55:** Relationship to person whose gambling negatively affected them by gender, affected persons

NOTES: Caution advised in interpreting some estimates in this table due to large (> 25%) relative Significant association between person whose gambling affected respondent and gender:

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05  
standard errors

Table 45 includes population counts with the percentage affected by gender. Around 3,300 men and 3,000 women were negatively affected by parents gambling, and a further 3,800 men and 2,100 women were negatively affected by a friend's gambling. A significantly larger number of women (1,100) compared with men (190) were negatively affected by their spouse's gambling.

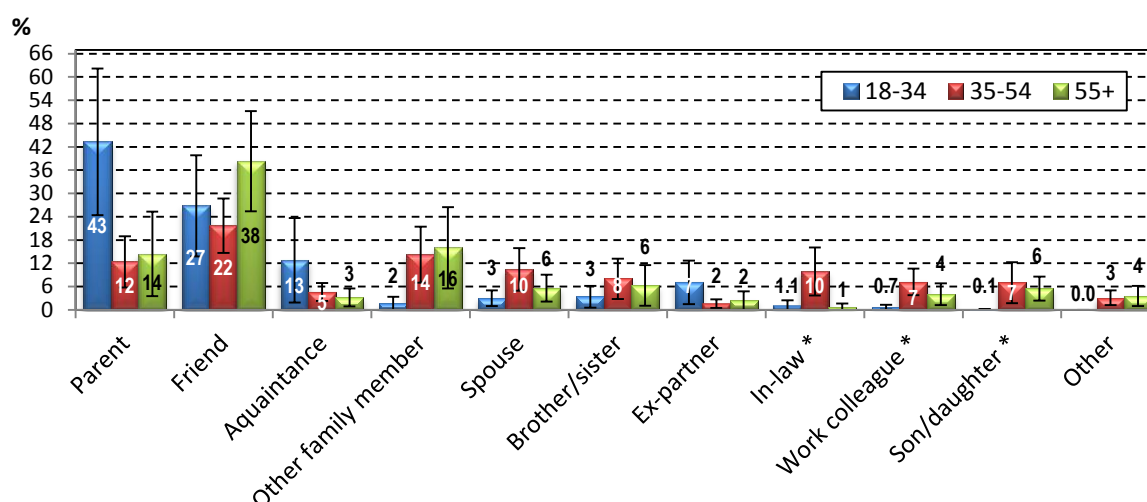
**Table 45:** Relationship to person whose gambling negatively affected them by gender, affected persons

	Male % (SE)	Female % (SE)	Persons % (SE)	Male N	Female N	Persons N
Parent	27.4 (19.9)	29.5 (9.6)	28.3 (11.6)	3,370	2,973	6,343
Friend	30.9 (12.6)	21.7 (6.8)	26.8 (7.4)	3,799	2,194	5,993
Acquaintance	11.5 (9.9)	4.9 (2.2)	8.5 (5.6)	1,411	493	1,905
Other family member	9.2 (5.2)	6.8 (4.4)	8.1 (3.4)	1,130	689	1,819
Spouse **	1.5 (1.0)	11.3 (4.8)	5.9 (2.4)	190	1,139	1,329
Brother/sister	6.4 (4.2)	4.2 (2.3)	5.4 (2.5)	789	422	1,211
Ex-partner	1.9 (1.5)	7.7 (5.6)	4.5 (2.8)	228	776	1,004
In-law	5.7 (4.6)	2.1 (1.4)	4.1 (2.5)	697	212	910
Work colleague	3.9 (2.0)	2.9 (2.0)	3.5 (1.4)	480	295	775
Son/daughter	1.2 (0.8)	5.9 (4.2)	3.3 (2.0)	149	592	741
Other	0.4 (0.5)	3.0 (1.6)	1.6 (0.8)	54	304	359
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>12,299</b>	<b>10,090</b>	<b>22,388</b>

NOTES: Caution advised in interpreting some estimates in this table due to large (> 25%) relative  
Significant association between person whose gambling affected respondent and gender:

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

Figure 56 graphs the relationship to the person whose gambling negatively affected them by age. Age groups have been collapsed to reduce standard errors. There were significant differences across age groups for in-law (10% for 35-54 years and around 1% for other age groups); work colleague (higher for 35-54 years and 55 or more years, compared with those under 35 years); and son/daughter (higher for people 35 years and over). Other non-significant but large differences occurred for parent (more than three times higher in those under 35 years at 43%, compared with older groups less than 15%); other family member (six times higher amongst those over 35 years at 14% to 15%); spouse (highest in 35-54 years at 10%, and lowest in 18 to 34 years).



**Figure 56:** Relationship to person whose gambling negatively affected them by age, affected persons

Significant association between person whose gambling affected respondent and age:  
 \*\*\* p<0.001, \*\* p<0.01, \* p<0.05

Table 46 includes population counts with the percentage affected by another person's gambling by age. People under 35 years carry much of the burden associated with other people's gambling, with nearly 5,000 (43%) people negatively affected by their parents gambling; and 3,026 (27%) negatively affected by a friend's gambling. More than 1,300 people (38%) aged 55 years or more and 1,600 (22%) 35 to 54 years age listed a friend as the person whose gambling was negatively affecting them.

**Table 46:** Relationship to person whose gambling negatively affected them by gender, affected persons

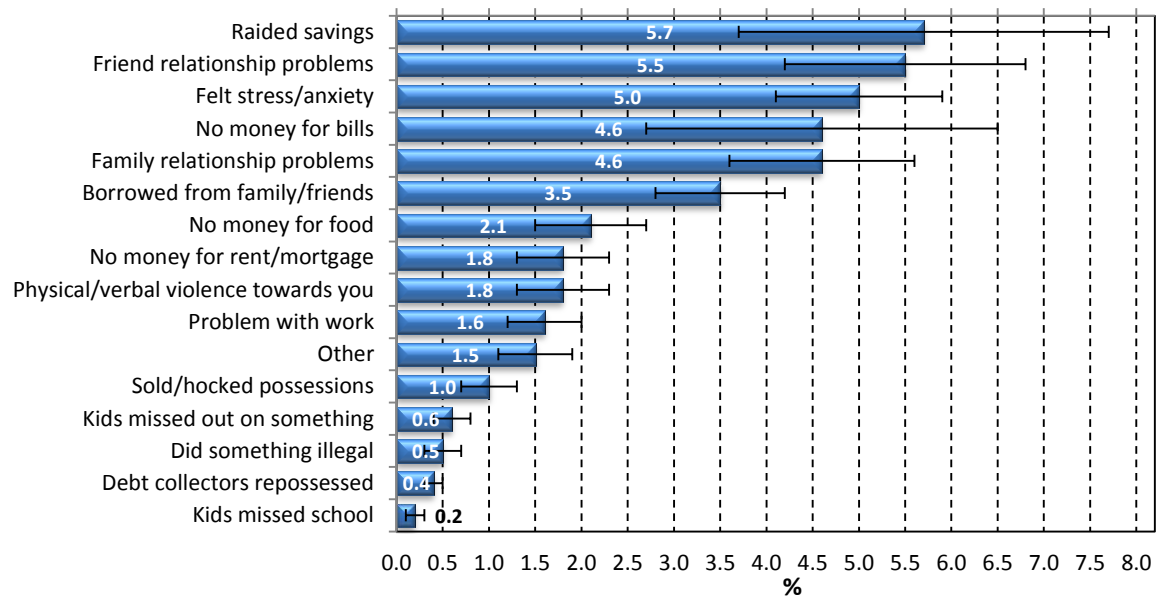
	18-34 years % (SE)	35-54 years % (SE)	55+ years % (SE)	Persons % (SE)	18-34 years N	35-54 years N	55+ years N
Parent	43.3 (18.9)	12.4 (6.6)	14.4 (10.9)	28.3 (11.6)	4,900	952	491
Friend	26.8 (13.0)	21.7 (7.0)	38.3 (12.9)	26.8 (7.4)	3,026	1,662	1,306
Acquaintance	12.8 (10.9)	4.6 (2.3)	3.2 (2.3)	8.5 (5.6)	1,447	350	107
Other family member	1.7 (1.7)	14.2 (7.2)	16.0 (10.5)	8.1 (3.4)	188	1,086	545
Spouse	3.0 (2.0)	10.4 (5.5)	5.6 (3.5)	5.9 (2.4)	343	796	190
Brother/sister	3.4 (2.8)	8.0 (5.2)	6.3 (5.2)	5.4 (2.5)	382	614	215
Ex-partner	7.1 (5.6)	1.6 (1.1)	2.4 (2.4)	4.5 (2.8)	799	124	81
In-law *	1.1 (1.4)	9.9 (6.2)	0.8 (0.8)	4.1 (2.5)	127	756	27
Work colleague *	0.7 (0.6)	7.2 (3.4)	4.0 (2.8)	3.5 (1.4)	82	556	137
Son/daughter *	0.1 (0.1)	7.0 (5.3)	5.5 (3.1)	3.3 (2.0)	13	539	189
Other	0.0 (0.0)	3.1 (1.9)	3.6 (2.6)	1.6 (0.8)	0	237	122
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>11,307</b>	<b>7,672</b>	<b>3,410</b>

Significant association between person whose gambling affected respondent and age:  
 \*\*\* p<0.001, \*\* p<0.01, \* p<0.05

## 7.10 Types of harms experienced because of someone else's gambling

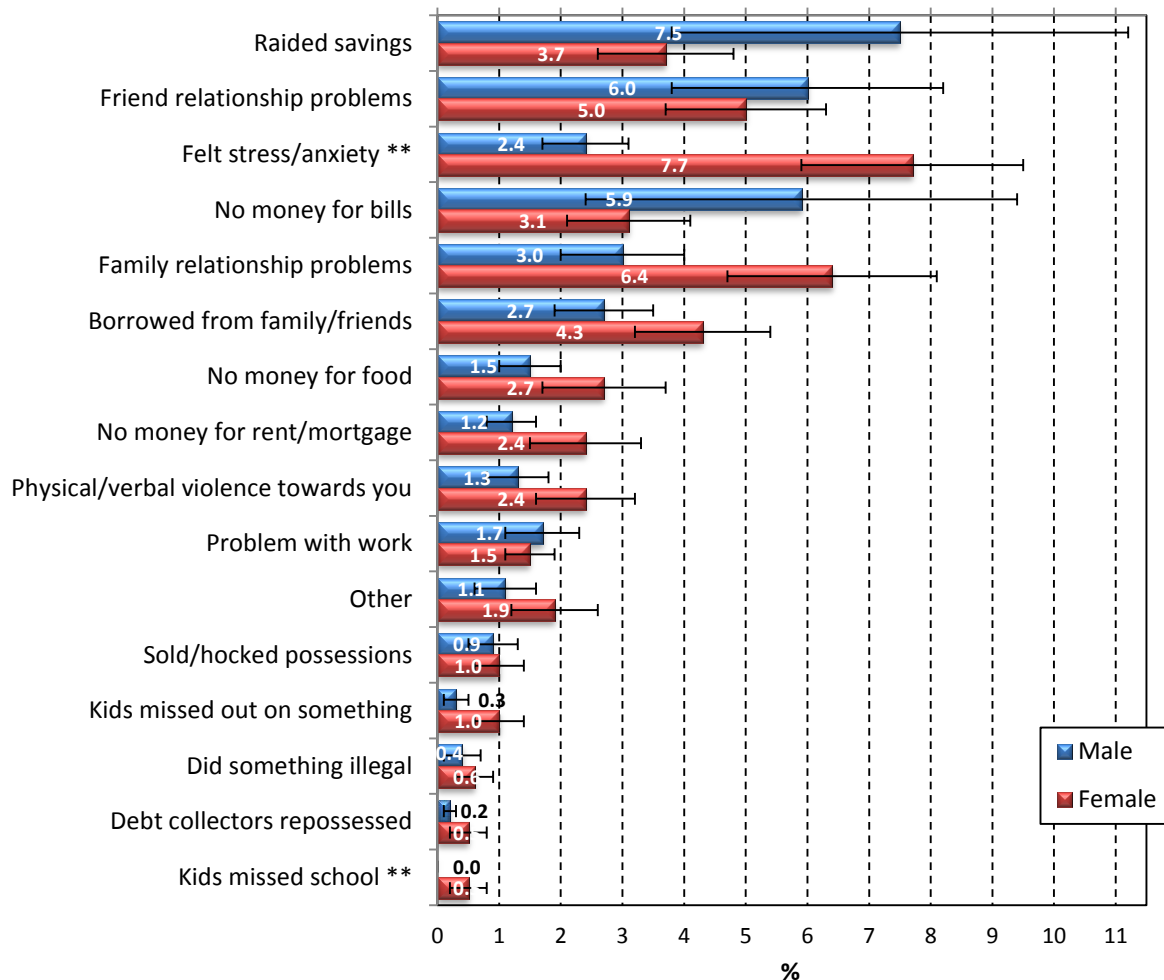
Figure 57 lists sixteen negative consequences and their prevalence in the NT adult population that people said resulted from someone else's gambling. Raiding savings accounts was the most common negative consequence (5.7%), followed by relationship problems with friends (5.5%), feeling stress or anxiety (5%), running

out of money for bills (4.6%), relationship problems with family (4.6%), and borrowing money from family or friends (3.5%). Other negative consequences occurred in less than 2.1% of the adult population.



**Figure 57:** Types of negative consequences because of someone else's gambling, percentage NT Adult population

Figure 58 (see Table 47 for percentages and population counts) shows for men the most commonly reported harm because of someone else's gambling was raided savings (7.5%), and for women it was felt stress or anxiety (7.7%), with the latter being significantly ( $p < 0.01$ ) higher for women compared with men (2.4%). The next most endorsed harm for men was relationship problems with friends (6%), followed by no money for bills (5.9%), relationship problems with family (3%) and borrowed from family/friends (2.7%). For women, the next most endorsed harm after felt stress or anxiety was relationship problems with family (6.4%), followed by relationship problems with friends (5%), borrowed from family/friends (4.3%), and raided savings (3.7%). Females were significantly ( $p < 0.01$ ) more likely to endorse kids missed school (0.5%) than males (0%). While only 0.5% of the NT population did something illegal, which represents around 850 people breaking the law because of someone else's gambling.



**Figure 58: Types of negative consequences because of someone else's gambling by gender, affected population**

NOTES: Caution advised in interpreting some estimates in this table due to large (> 25%) relative Significant association between type of negative consequence and gender:

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

Percentages can sometimes obscure the actual harms and the impact they have on community, so Table 47 shows percentage and population counts by gender. More than 500 women and 300 men did something illegal because of someone else's gambling. Over 6,500 women experienced stress/anxiety/depression because of someone else's gambling and this affected around 2,175 men. Running out of money for bills affected more than 5,000 men and 2,650 women, while 3,700 women and 2,400 men had to borrow money from someone because of another person's gambling.

**Table 47:** Types of negative consequences because of someone else's gambling by gender, affected population

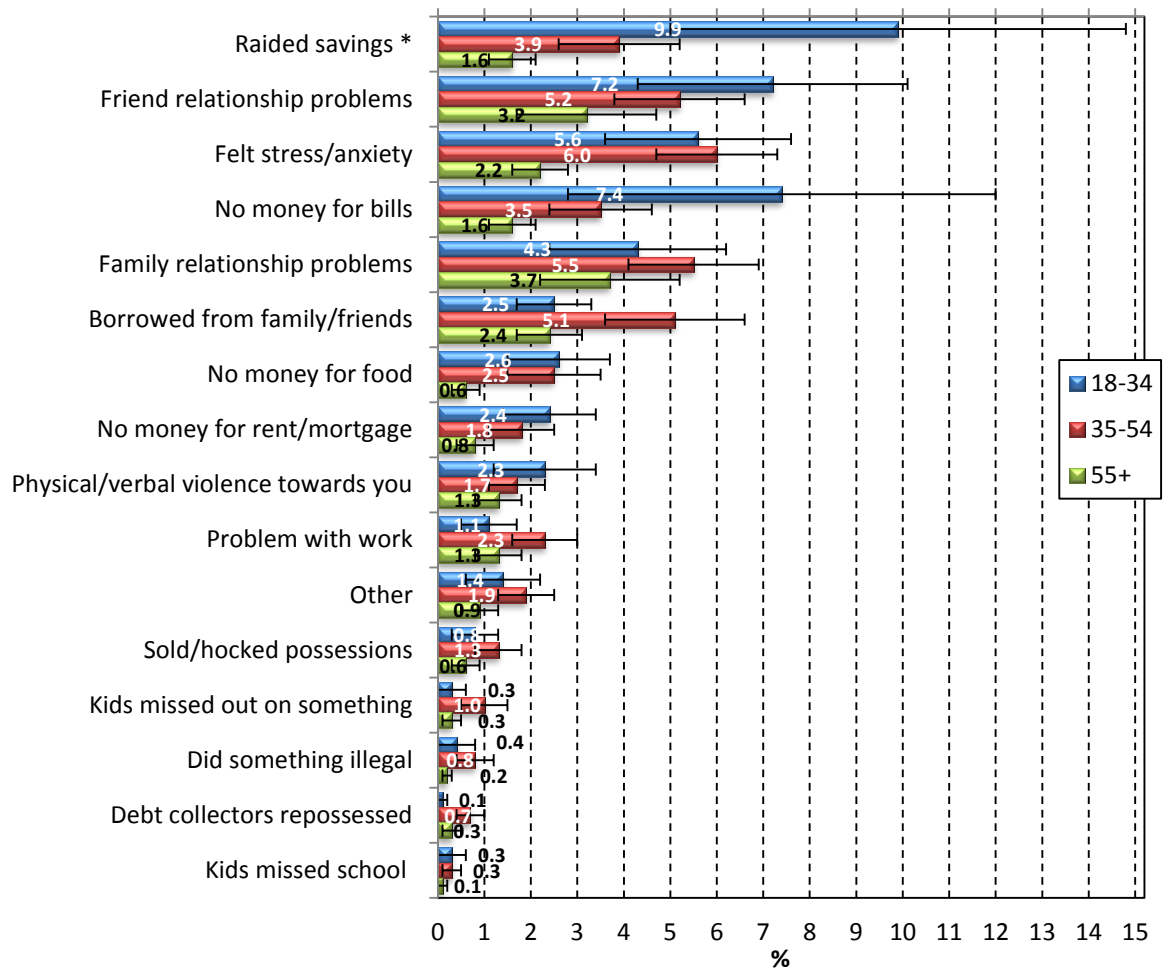
Type of harm	Male % (SE)	Female % (SE)	Persons % (SE)	Male N	Female N	Persons N
Raided savings	7.5 (3.7)	3.7 (1.1)	5.7 (2.0)	6,814	3,186	10,000
Friend relationship problems	6.0 (2.2)	5.0 (1.3)	5.5 (1.3)	5,428	4,310	9,738
Felt stress/anxiety **	2.4 (0.7)	7.7 (1.8)	5.0 (0.9)	2,175	6,584	8,760
No money for bills	5.9 (3.5)	3.1 (1.0)	4.6 (1.9)	5,375	2,686	8,061
Family relationship problems	3.0 (1.0)	6.4 (1.7)	4.6 (1.0)	2,759	5,449	8,208
Borrowed from family/friends	2.7 (0.8)	4.3 (1.1)	3.5 (0.7)	2,433	3,729	6,163
No money for food	1.5 (0.5)	2.7 (1.0)	2.1 (0.6)	1,332	2,332	3,664
No money for rent/mortgage	1.2 (0.4)	2.4 (0.9)	1.8 (0.5)	1,124	2,086	3,210
Physical/verbal violence towards you	1.3 (0.5)	2.4 (0.8)	1.8 (0.5)	1,189	2,072	3,260
Problem with work	1.7 (0.6)	1.5 (0.4)	1.6 (0.4)	1,523	1,323	2,846
Other	1.1 (0.5)	1.9 (0.7)	1.5 (0.4)	963	1,670	2,633
Sold/hocked possessions	0.9 (0.4)	1.0 (0.4)	1.0 (0.3)	823	896	1,719
Kids missed out on something	0.3 (0.2)	1.0 (0.4)	0.6 (0.2)	228	816	1,044
Did something illegal	0.4 (0.3)	0.6 (0.3)	0.5 (0.2)	325	544	869
Debt collectors repossessed	0.2 (0.1)	0.5 (0.3)	0.4 (0.1)	160	467	626
Kids missed School **	0.0 (0.0)	0.5 (0.3)	0.2 (0.1)	42	388	430

NOTES: Caution advised in interpreting some estimates in this table due to large (> 25%) relative  
Significant association between type of negative consequence and gender:  
\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

Figure 59 graphs the association between age and the type of harms experienced because of someone else's gambling, while Table 48 includes population counts along with percentages. While there was considerable variation across age groups for many harms, only raided saving showed a significant association with this type of harm affecting those under 35 years (10%) disproportionately, compared with older age groups (4% and less than 2 % for 18-34 years and 55 years or more age groups). Borrowing money from someone and debt collectors repossessed something were marginally non-significant with those aged 35-54 years more likely than other age groups to be affected by the harm. Other harms that show variation across age groups include relationship problem with friend being more of a problem for younger people and decreasing with age; and having no money for bills and no money for food being more of a problem for younger people and decreasing with age.

Table 48 shows population counts by age for the types of negative consequences experienced because of another person's gambling. For most negative consequences because of someone else's gambling, more people less than 35 years experienced problems. Over 4800 people under 35 years had relationship problem with their friends because of another person's gambling; and around 5000 ran out of money for bills. Amongst older people more than 2000 experienced relationship problems with family or friends because another person's gambling.





**Figure 59: Types of negative consequences because of someone else's gambling by age, affected population**

NOTES: Caution advised in interpreting some estimates in this table due to large (> 25%) relative Significant association between type of negative consequence and age: \*\*\* p<0.001, \*\* p<0.01, \* p<0.05

**Table 48:** Types of negative consequences because of someone else's gambling by age, affected population

Type of harm	18-34 years % (SE)	35-54 years % (SE)	55+ years % (SE)	18-34 years N	35-54 years N	55+ years N
Raided savings *	9.9 (4.9)	3.9 (1.3)	1.6 (0.5)	6,718	2,639	643
Friend relationship problems	7.2 (2.9)	5.2 (1.4)	3.2 (1.5)	4,890	3,526	1,321
Felt stress/anxiety	5.6 (2.0)	6.0 (1.3)	2.2 (0.6)	3,784	4,065	911
No money for bills	7.4 (4.6)	3.5 (1.1)	1.6 (0.5)	5,051	2,366	643
Family relationship problems	4.3 (1.9)	5.5 (1.4)	3.7 (1.5)	2,953	3,754	1,501
Borrowed from family/friends	2.5 (0.8)	5.1 (1.5)	2.4 (0.7)	1,697	3,470	995
No money for food	2.6 (1.1)	2.5 (1.0)	0.6 (0.3)	1,747	1,684	233
No money for rent/mortgage	2.4 (1.0)	1.8 (0.7)	0.8 (0.4)	1,644	1,226	340
Physical/verbal violence towards you	2.3 (1.1)	1.7 (0.6)	1.3 (0.5)	1,592	1,152	516
Problem with work	1.1 (0.6)	2.3 (0.7)	1.3 (0.5)	723	1,579	543
Other	1.4 (0.8)	1.9 (0.6)	0.9 (0.4)	953	1,305	374
Sold/hocked possessions	0.8 (0.5)	1.3 (0.5)	0.6 (0.3)	560	893	265
Kids missed out on something	0.3 (0.3)	1.0 (0.5)	0.3 (0.2)	211	697	135
Did something illegal	0.4 (0.4)	0.8 (0.4)	0.2 (0.1)	288	517	64
Debt collectors repossessed	0.1 (0.1)	0.7 (0.3)	0.3 (0.2)	54	460	111
Kids missed school	0.3 (0.3)	0.3 (0.2)	0.1 (0.1)	188	200	42

NOTES: Caution advised in interpreting some estimates in this table due to large (> 25%) relative Significant association between type of negative consequence and age: \*\*\* p<0.001, \*\* p<0.01, \* p<0.05

## 8 COMMUNITY OPINIONS ON THE NUMBER OF EGMS IN THE NORTHERN TERRITORY

### 8.1 Background

The 2005 NT gambling prevalence survey found that 49% of adults would like a decrease in the number of pokies in their local community, while a further 49% said the numbers were about right, and just 2% indicated they would like to see an increase (Young et al. 2006). Similar findings to the NT were also present in South Australia in their most recent gambling prevalence survey (ACIL Allen Consulting, The Social Research Centre & The Problem Gambling Research and Treatment Centre 2015) and in New Zealand, where more than 60% of the community wanted a reduction in EGMs out outside of the casinos (Abbott, Bellringer, Garrett & Mundy-McPherson 2015).

The 2015 Northern Territory survey asked respondents, *Thinking about pokies, should the number of pokies in the following places be increased, decreased or stay the same?* With answers collected separately for casinos, clubs and hotels. The closest matching question in the 2005 survey asked respondents, *Do you think the number of poker machines and other gaming machines currently available in your local community should be increased, decreased or stay the same?* The 2005 survey data is broadly comparable with the 2015 data on hotels and clubs.

#### 8.1.1 Chapter contents

This chapter contains information on:

- Comparison of community views on changes in EGM numbers between the 2005 and 2015 surveys.
- Community preferences on changes in number of EGMs in hotels, clubs and casinos in the NT
- Community preferences on changes in number of EGMs in hotels, clubs and casinos for regions, gender, age and EGM gambling frequency

### 8.2 Chapter highlights

- Fifty-three percent and 50% of respondents indicated that they would like to see a decrease in EGMs numbers in NT clubs and hotels respectively, while 41% said the same about EGMs in the casinos. Results for clubs and hotels were similar to that observed in the 2005 survey regarding EGM numbers in community venues.
- There was significant variation across regions (30% in Regional Towns to 59% in Alice Springs) and age groups (38% for those under 35 years to 61% in those 55 years and over) about community indicating a preference for a decrease in EGM numbers in hotels.
- The age effect present for EGMs in hotels was not observed for clubs or casino EGM numbers.
- There was a significant association between EGM frequency of play and community opinion on EGM numbers in hotels, clubs and the casinos. Specifically, 60% of weekly EGM players indicated a preference for a decrease in EGM numbers in hotels and 52% for clubs.
- The majority of the community opinion indicates a preference for a decrease in EGM numbers in both hotels and clubs, but less so for casinos, and this opinion was more common amongst weekly EGM players.

### 8.3 Community opinions on EGM numbers in hotels, clubs and casinos

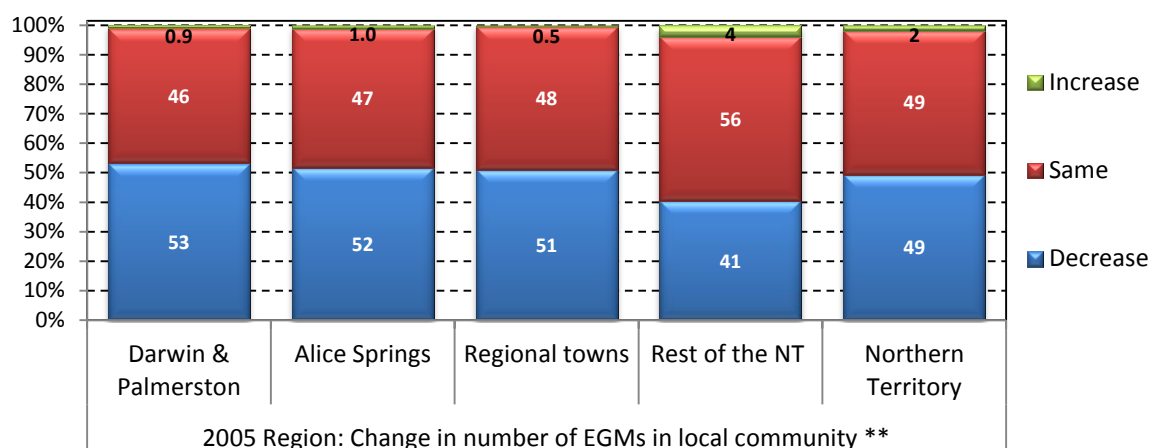
In 2005, just under half of all NT adults thought the number of EGMs should decrease in their local community, and a further 49% said that the number of EGMs should stay the same. The 2015 question posed separately for hotels, clubs and casinos found similar responses for clubs and hotels in 2015, with 53% and 50% stating there should be a decrease in clubs and hotels respectively, and 42% and 49% stating there should be no change to EGM numbers in clubs and hotels respectively. In 2015, for casinos, 41% of respondents said a decrease in EGM numbers and 55% endorsed keeping EGM numbers the same. Five percent said there should be an increase in EGMs in clubs, compared with 2% for hotels, and 4% in casinos, while in the 2005 survey it was 2% of people.



**Figure 60:** Community opinions on whether to change the number of EGMs in the NT by venue type, 2005 and 2015 NT Adult population

### 8.4 Community opinion on change in number of EGMs by region, age and gender

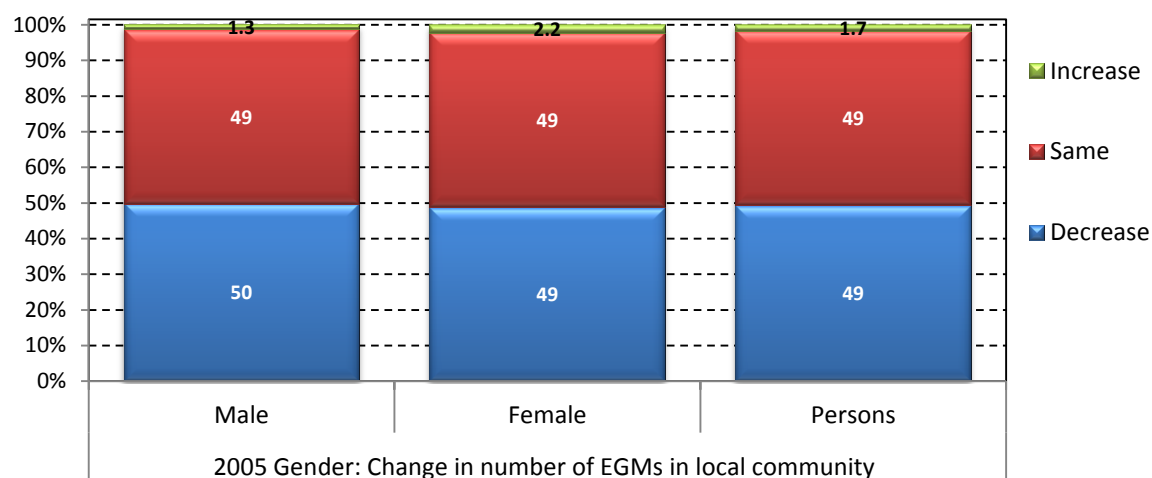
In 2005, there was a significant association between region and a change in EGM numbers in the local community (Figure 61). In the Rest of the NT a smaller percentage of people answered that they would like to see a decrease in EGM numbers (41%), compared with other regions ranging between 51 and 53%. More also said stay the same in the Rest of the NT (56% *cf.* between 46 and 48%), and a greater percentage said they would like an increase in EGM numbers (4% *cf.* 1% or less in other regions).



**Figure 61:** Community opinions on whether to change the number of EGMs in the local community by region, 2005 NT Adult population

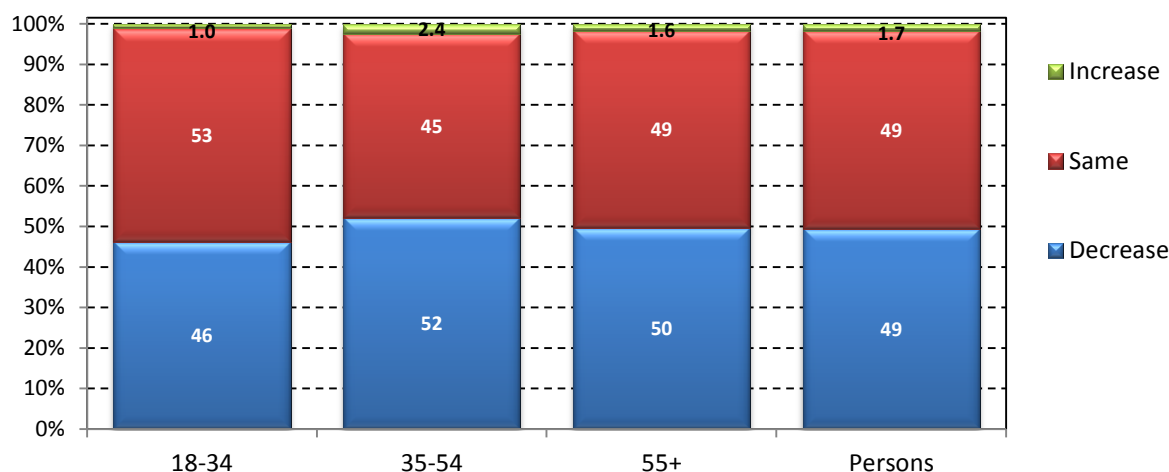
Significant association between region and change in EGM numbers: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Figure 62 shows 2005 preferences for changes in the number of EGMs in the local community by gender. There was no significant difference between how men and women answered this question, though a higher percentage of women (2.2%) responded that they would support and increase in EGM numbers compared with men (1.3%).



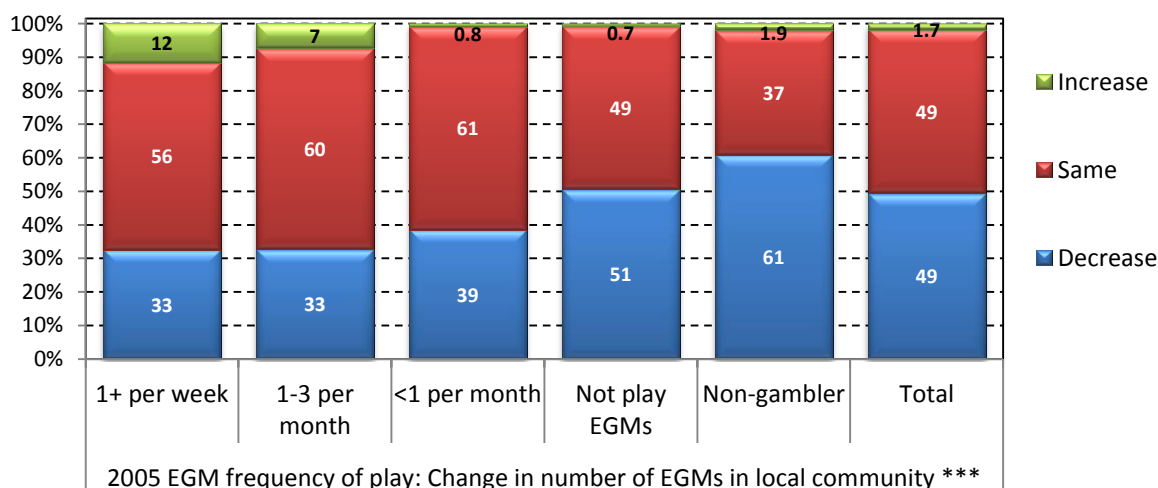
**Figure 62:** Community opinions on whether to change the number of EGMs in the local community by gender, 2005 NT Adult population

Figure 63 shows there was no significant difference between age groups in whether people answered that they would like to see a change in the number of EGMs in the local community, though a higher percentage of younger respondents answered keeping EGM numbers the same (53%), compared with those 35 years and over (between 45 and 49%).



**Figure 63:** Community opinions on whether to change the number of EGMs in the local community by gender, 2005 NT Adult population

In 2005, there was a significant association between EGM frequency of play and opinion on the number of EGMs in their local community (Figure 64). EGM gamblers who played EGM monthly or more regularly were more likely to say they would like to see an increase in EGMs in the local community (7 to 12%), compared with less than monthly players (0.8%), gamblers who did not play EGMs (0.7%), and non-gamblers (1.9%). Monthly or more EGM gamblers also differed substantially from other groups in stating that they would prefer decreases in EGM numbers (33% each), compared with less than monthly EGM gamblers (39%), gamblers who did not play EGMs (51%) and non-gamblers (61%).



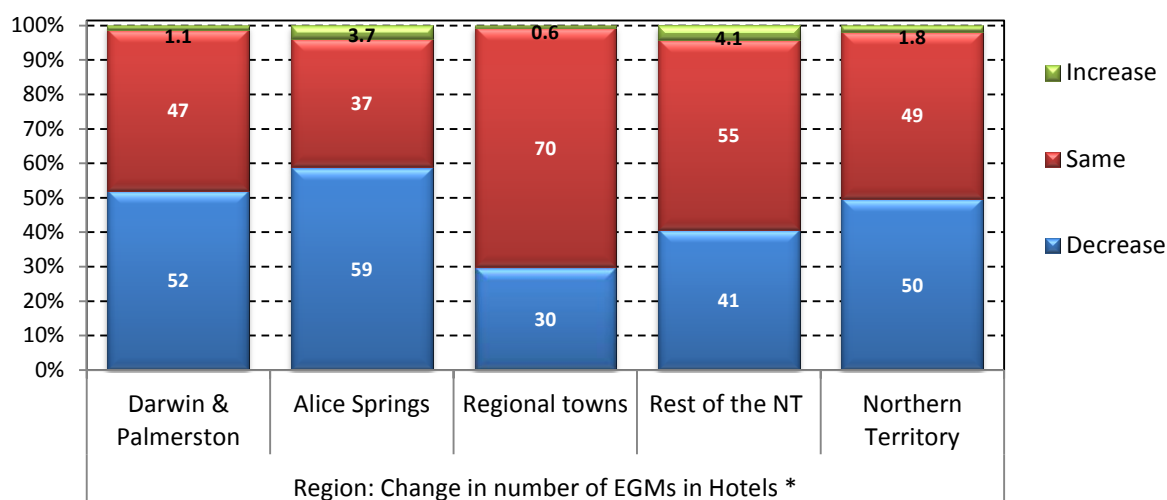
**Figure 64:** Community opinions on whether to change the number of EGMs in the local community by EGM gambling frequency, 2005 NT Adult population

Significant association between EGM frequency of play and change in EGM numbers:  
 \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

### 8.5 Community opinion on change in number of EGMs in hotels in 2015

There were significant differences between where a respondent lived, and their preference for change in EGM numbers in hotels (Figure 65). Specifically, respondents from Regional Towns (30%) and the Rest of the NT (41%) had a smaller

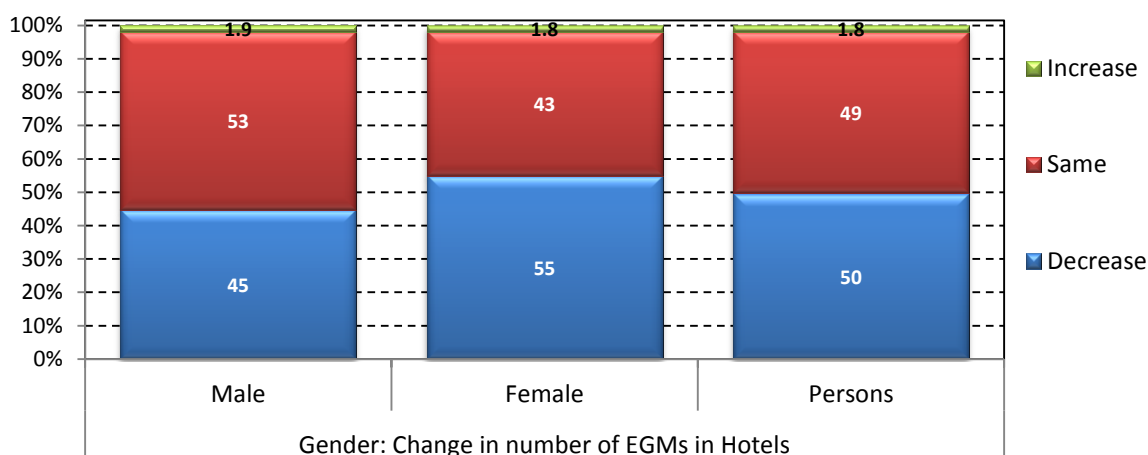
percentage of people stating they would prefer to see decreases in EGM numbers compared with Darwin/Palmerston (52%) and Alice Springs (59%). Correspondingly, respondents from Regional Towns (70%) and the Rest of the NT (55%) also had larger percentage of people stating that would like the EGM numbers to stay the same in hotels, compared with Darwin/Palmerston (47%) and Alice Springs (37%). The Rest of the NT had the highest percentage of respondents stating that they would like to see an increase in EGM numbers in hotels (4%), followed by Alice Springs (3.7%), and the other two regions 1.1% or less said they would like an increase.



**Figure 65:** Community opinions on whether to change the number of EGMs in hotels by region, 2015 NT Adult population

Significant association between region and EGM numbers in hotels: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

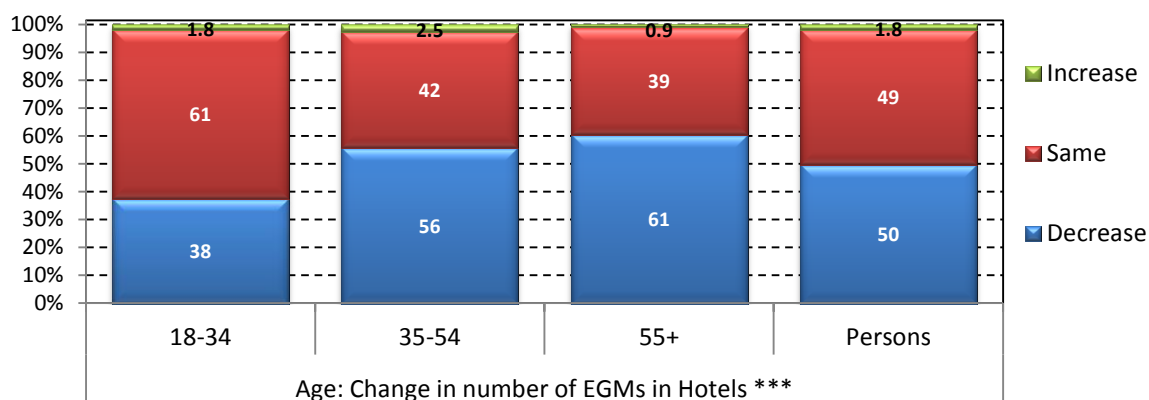
The association between change in EGM numbers in hotels and gender was marginally non-significant ( $p = 0.08$ , see Figure 66), with women (55%) more likely to say that they would like to see a decrease in EGM numbers in hotels, compared with men (45%). There was no difference between men and women in stating they would like an increase in EGM numbers, and a higher percentage of men (53% cf. 43%) said that EGM numbers should stay the same.



**Figure 66:** Community opinions on whether to change the number of EGMs in hotels by gender, 2015 NT Adult population



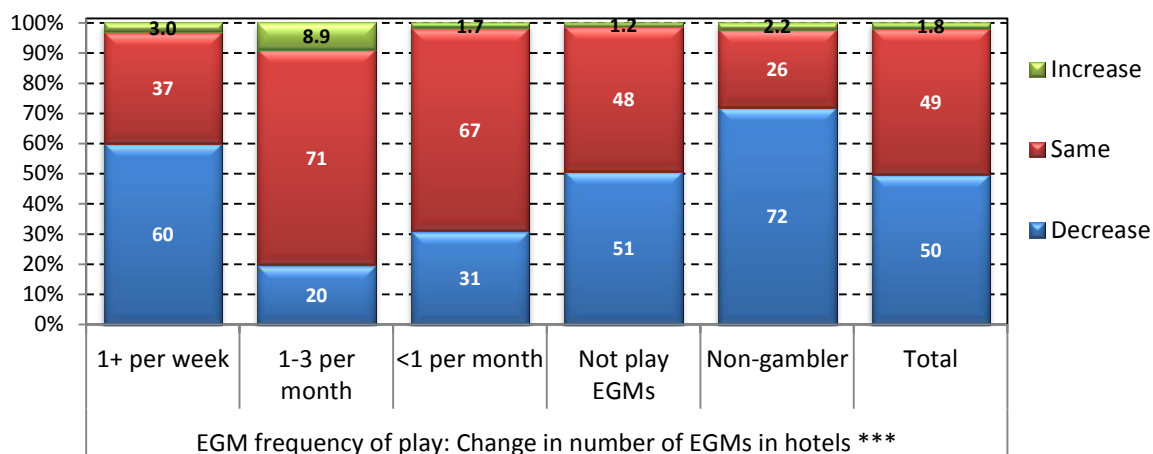
Figure 67 shows the association between age and preference for a change in EGM numbers in hotels. This association was statistically significant, with an increasing percentage of respondents stating they would like to see a decrease in EGM numbers in hotels in older age groups (38% to 56% to 61%). The opposite trend was present for respondents stating that the EGM numbers should stay the same in hotels, from 61% in those under 35 years decreasing to 39% in those 55 years and over. Respondents aged 35-54 years were most likely to say they would like to see an increase in EGM numbers in hotels (2.5%), followed by those under 35 years (1.8%), then respondents 55 years and over (0.9%).



**Figure 67:** Community opinions on whether to change the number of EGMs in hotels by age, 2015 NT Adult population

Significant association between age and EGM numbers in hotels: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Figure 68 shows the association between EGM frequency of play, and preferences for the number of EGMs in hotels. This association was highly significant, with 60% of weekly EGM gamblers saying that they would like a decrease in EGM numbers in hotels, compared with 20% of monthly gamblers, and 31% of less than monthly EGM gamblers. Just over 50% of gamblers who did not play EGMs said they would like to see a decrease in EGM numbers in hotels, while 72% of non-gamblers endorsed a decrease. Nine percent of monthly EGM gamblers would like an increase in EGMs in hotels, compared with 3% of weekly EGM gamblers, and 2% or less for other categories of EGM gambling frequency.



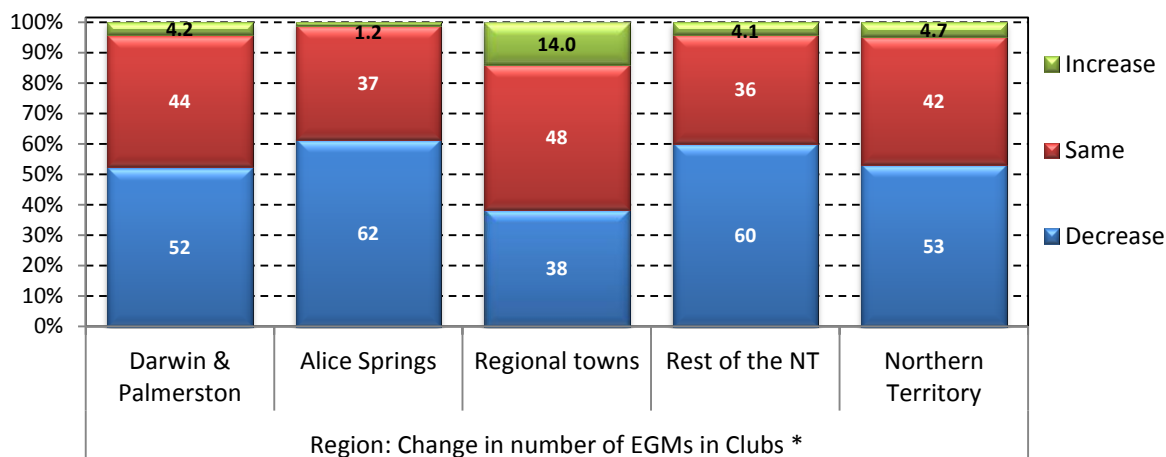
**Figure 68:** Community opinions on whether to change the number of EGMs in hotels by EGM gambling frequency, 2015 NT Adult population

Significant association between EGM frequency of play and EGM numbers in hotels:

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

### 8.6 Community opinion on change in number of EGMs in clubs in 2015

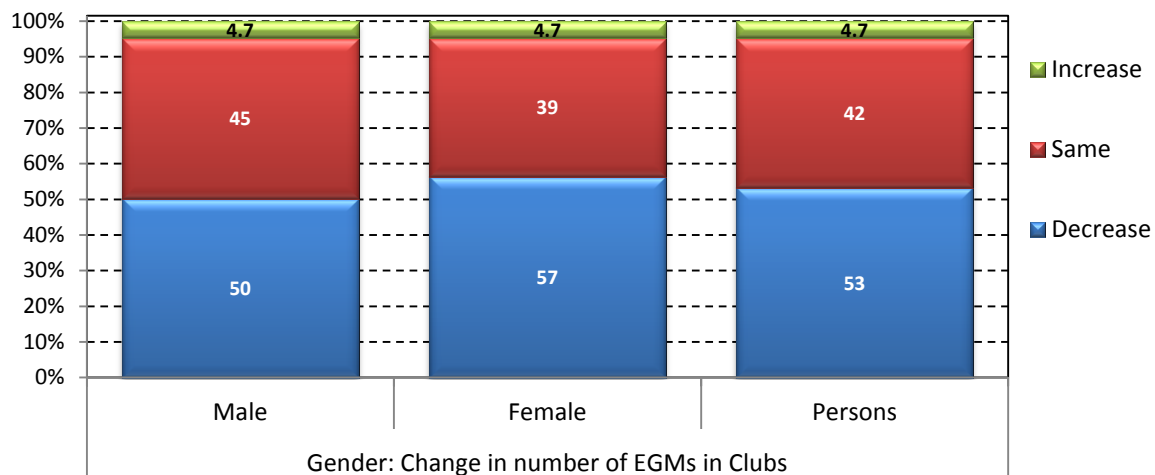
The association between region and preferences for numbers of EGMs in clubs was significant (Figure 69). Around 60% of adults in Alice Springs and the Rest of the NT indicated they would like to see a decrease in EGMs in clubs, while 52% of Darwin/Palmerston and 38% of adults in Regional Towns would like to see a decrease in EGM numbers in clubs. Fourteen percent of adults living in Regional Towns indicated they would like an increase in EGM numbers in clubs, compared with 4% in Darwin/Palmerston and the Rest of the NT, and around 1% in Alice Springs.



**Figure 69:** Community opinions on whether to change the number of EGMs in clubs by region, 2015 NT Adult population

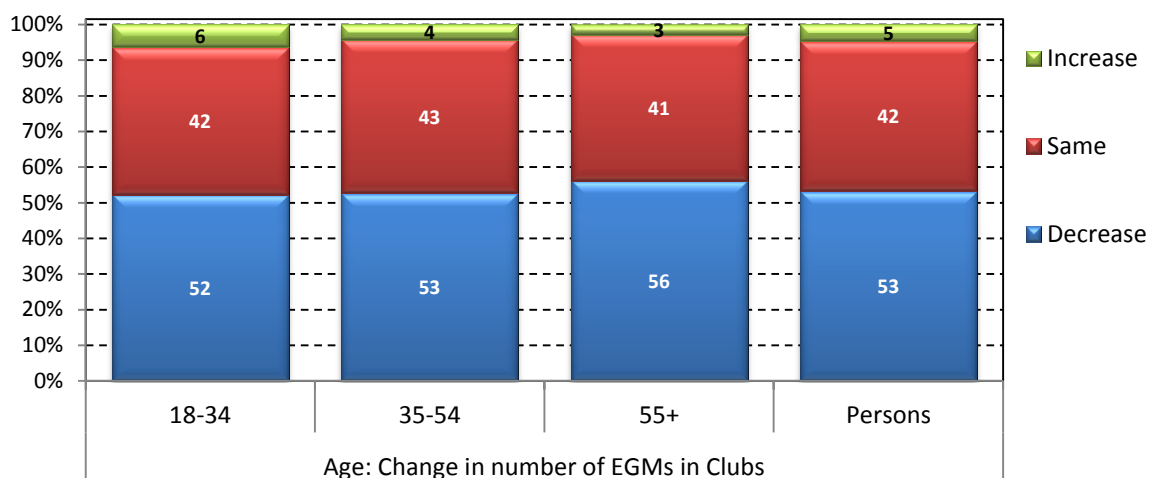
Significant association between region and EGM numbers in clubs: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

The association between preferred changes in EGM numbers in clubs and gender was not statistically significant (Figure 70). However, 57% of women compared with 50% of men indicated they would like to see a decrease in EGM numbers in clubs, and there was no difference between men and women indicating their preference for an increase in EGM numbers (5%).



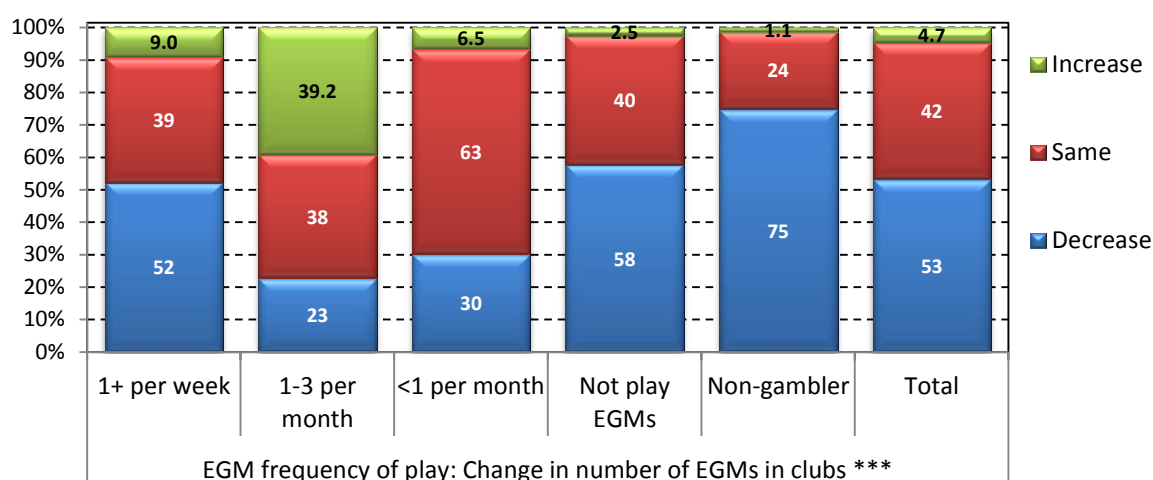
**Figure 70:** Community opinions on whether to change the number of EGMs in clubs by gender, 2015 NT Adult population

There were no significant differences across age groups in preferred change in EGM numbers in clubs (Figure 71). However, there was a small trend across age groups with those less than 35 years more likely to indicate they would like an increase in EGM numbers in clubs (6%), compared with 4% of 34-54 years and 3% of 55 or more years.



**Figure 71:** Community opinions on whether to change the number of EGMs in clubs by age, 2015 NT Adult population

Figure 72 shows there was a similar significant trend as observed between preferred EGM numbers in hotels and age is present for clubs. Just over 50% of weekly EGM players indicated they would like to see a decrease in EGM numbers in clubs across the Territory, compared with 23% of monthly EGM gamblers, 30% of less than monthly EGM gamblers, 58% of non-EGM gamblers and 75% of non-gamblers. Just less than 40% of monthly EGM gamblers indicated they would like to see an increase in EGM numbers in clubs, compared with 9% of weekly EGM gamblers, 6.5% of less than monthly EGM gamblers, 2.5% of non-EGM gamblers and 1% of non-gamblers. Around 40% of weekly and monthly EGM gamblers, and non-EGM gamblers indicated a preference for EGM numbers to stay the same in clubs, compared with 63% of less than monthly EGM gamblers and 24% of non-gamblers.



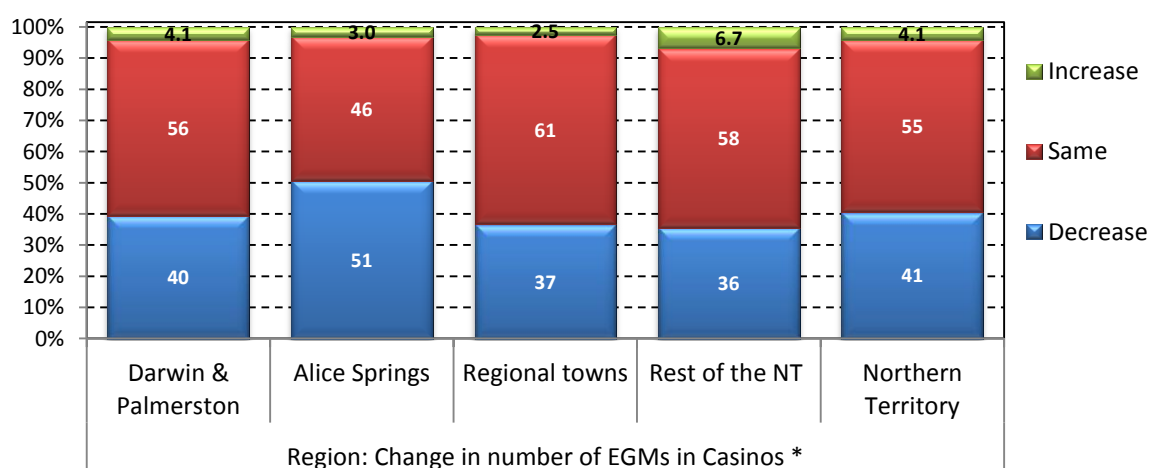
**Figure 72:** Community opinions on whether to change the number of EGMs in clubs by EGM gambling frequency, 2015 NT Adult population

Significant association between EGM frequency of play and EGM numbers in clubs:

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

### 8.7 Community opinion on change in number of EGMs in casinos in 2015

There was a significant association between regions and preferred change in EGM numbers in the casinos in the NT (Figure 73). Just over 50% of respondents in Alice Springs indicated they would like to see a decrease in EGM numbers in casinos, compared with 40% in Darwin/Palmerston, 37% in Regional Towns and 36% in the Rest of NT. Between 2% and 4% of respondents in all regions outside of Rest of the NT indicated that they would like to see an increase in EGM numbers in the casinos, while 6.7% of respondents living in the Rest of the NT indicated they would like to see an increase in EGM numbers.

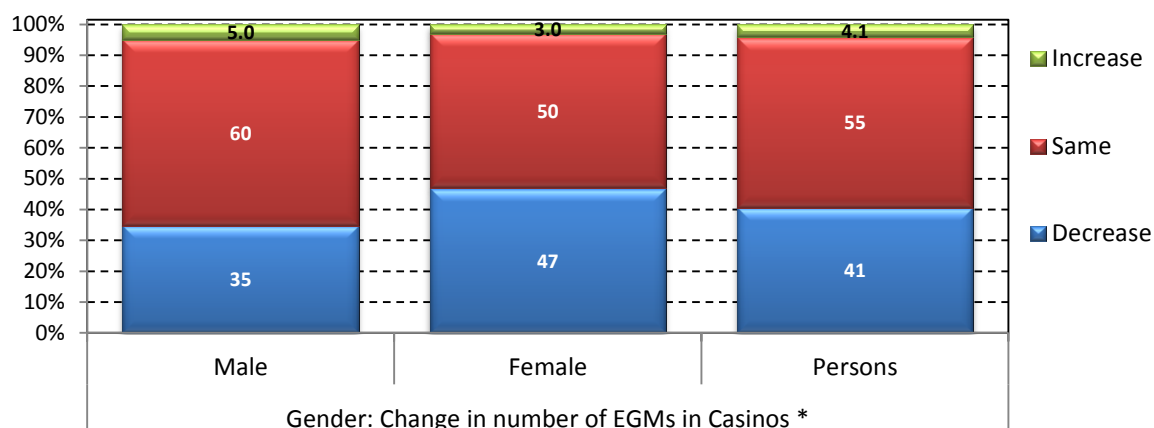


**Figure 73:** Community opinions on whether to change the number of EGMs in casinos by region, 2015 NT Adult population

Significant association between region and EGM numbers in casinos: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

A significantly higher percentage of women (47%) indicated they would like to see a decrease in EGMs in the casinos compared with men (35%), and a higher percentage men (60%) than women (50%) indicated they would like the EGM

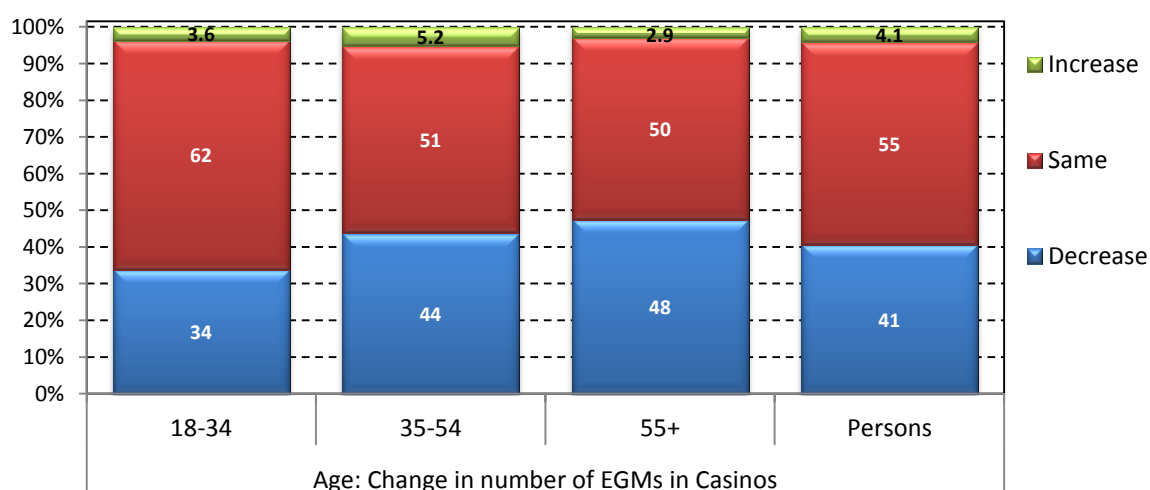
numbers to stay the same (Figure 74). Just 3% of women indicated they would like an increase in EGM numbers in the casinos, compared with 5% of men.



**Figure 74:** Community opinions on whether to change the number of EGMs in casinos by gender, 2015 NT Adult population

Significant association between gender and EGM numbers in casinos: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

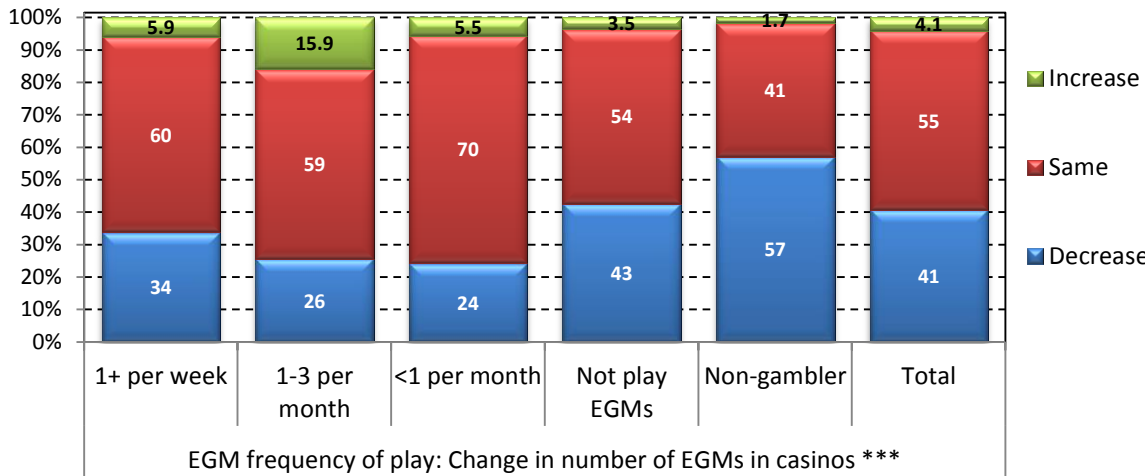
The association between age and change in numbers of EGMs in the casinos was marginally non-significant ( $p < 0.08$ ), as shown in Figure 75. Thirty-four percent of respondents aged less than 35 years endorsed a decrease in EGM numbers in casinos, compared with 44% of those aged 35-54 years and 48% of those aged 55 years and over. About 50% of respondents aged 35 years and over indicated they would like numbers of EGMs to stay the same in the casinos, compared with 62% of people aged less than 35 years. Across age groups, between 3% and 5% of respondents indicated they would like to see an increase in EGM numbers in the casinos.



**Figure 75:** Community opinions on whether to change the number of EGMs in casinos by age, 2015 NT Adult population

Figure 76 shows the significant association between EGM frequency of gambling and preference for change in EGM numbers in the casinos. It follows a similar pattern to that observed for hotels and clubs, though a larger percentage across all categories preferred keeping EGM numbers the same in the casinos. Again,

weekly EGM gamblers (34%) were more likely than other EGM gamblers (24% to 26%) to have a preference for decreasing EGM numbers in the casinos, and again monthly EGM gamblers (16%) were more likely to indicate their preference for an increase in EGM numbers in the casinos compared with other groups (2% to 6%).



**Figure 76:** Community opinions on whether to change the number of EGMs in casinos by EGM gambling frequency, 2015 NT Adult population

Significant association between EGM frequency of play and EGM numbers in casinos:  
 \*\*\* p<0.001, \*\* p<0.01, \* p<0.05

## 9 ELECTRONIC GAMING MACHINES

### 9.1 Background

Electronic Gaming Machines (EGMs) are widespread throughout Australia, except in Western Australia, where they are only located in the single casino (Productivity Commission 2010). EGMs are the gambling activity most associated with problem gambling (Productivity Commission 2010, Young, Markham & Doran 2012), and in the 2005 NT survey, some 90% of problem gamblers played EGMs (Young et al. 2008). Nationally, the 2010 Productivity Commission report estimated that among those who play weekly or more on EGMs, around 15 per cent are problem gamblers with an additional 15 per cent at 'moderate risk'. Furthermore, the Productivity Commission estimated that around 40% of EGM player losses come from problem gamblers and a further 20% from moderate risk gamblers (Productivity Commission 2010).

#### 9.1.1 Chapter contents

This chapter brings together all EGM related information collected in the survey, and includes additional information on EGMs to that provided in Chapter 3 of this report. Specifically, it contains:

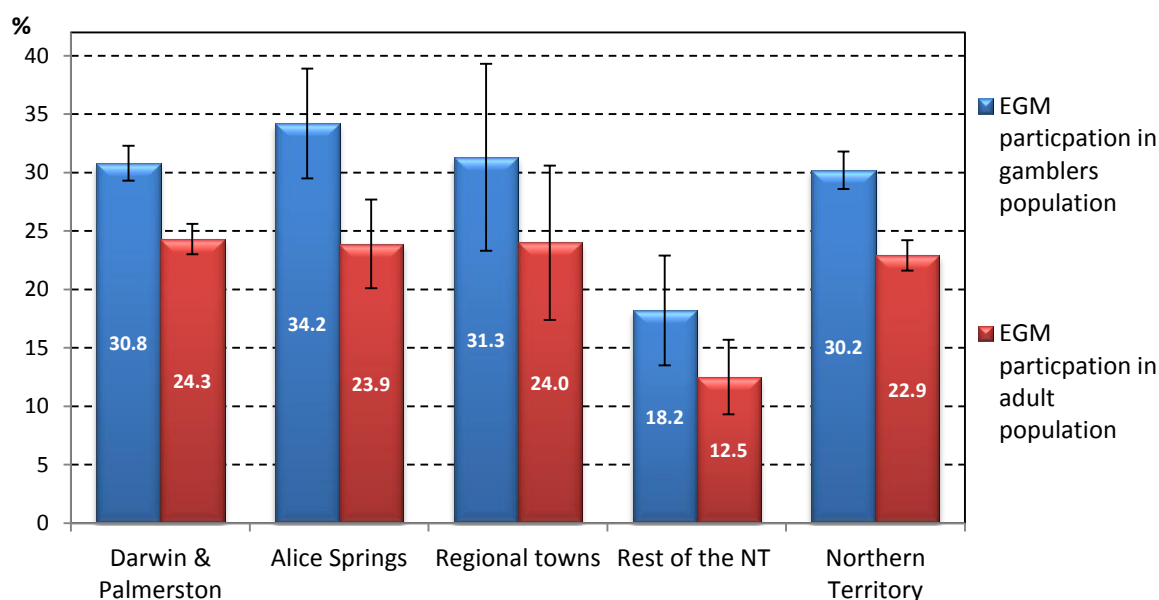
- EGM participation and frequency of play by socio-demographics
- Venue type where plays EGMs by socio-demographics
- Venue preference and distance to venue by socio-demographics
- EGM gambling policy and change to spending on EGMs by socio-demographics
- EGMs patterns of play and problem gambling risk, negative consequences from own and from another person's gambling.

### 9.2 Chapter highlights

- EGM participation in the NT adult population was 23%, with just over 30% of people who gambled, playing EGMs in the last year.
- There was no statistically significant variation in EGM participation across regions, by gender and age, though most (33%) EGM players are aged 25 to 34 years.
- EGM gamblers gambled more frequently for all gambling compared with non-EGM gamblers, with weekly EGM play associated with being 55 years or more, and monthly EGM play more common for those living in Regional Towns or the Rest of the NT.
- Eighty-five percent of EGM gamblers had a regular venue where they usually gambled, with younger people preferring hotels, and older people clubs.
- Ninety-two percent of problem gamblers played EGMs.
- Just over 60% and just under 50% of weekly and monthly EGM gamblers respectively, were classified as either problem or moderate risk gamblers.
- Weekly EGM gamblers had significantly increased prevalence across all PGSI risk categories, with 13% of weekly and 14% of monthly EGM gamblers classified as problem gamblers, compared with less than 1% amongst less than monthly EGM gamblers and all gamblers.
- Casino EGM gamblers were significantly more likely to be classified as moderate and low risk gamblers, while online EGM gamblers were significantly more likely to be problem gamblers.

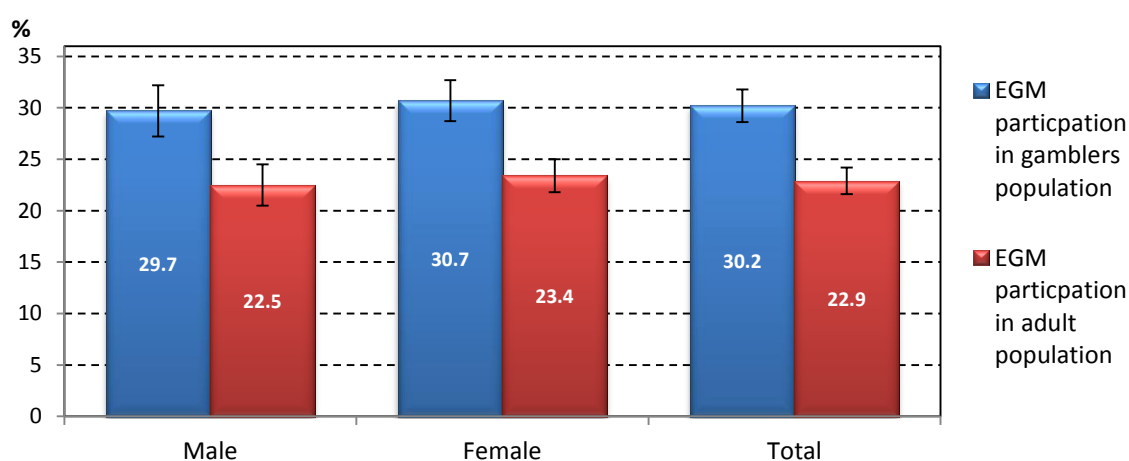
### 9.3 EGM participation in the NT

Figure 77 shows that 23% of the NT adult population played EGMs in the previous year, and 30% of the NT adult gambling population played EGMs. EGM participation varied across regions; however, this association was not statistically significant. Darwin/Palmerston recorded the highest EGM participation rate (24.3%), followed by Regional Towns (24.0%), Alice Springs (23.9%), and the Rest of the NT (12.5%).



**Figure 77:** EGM participation by region, gamblers population and NT adult population

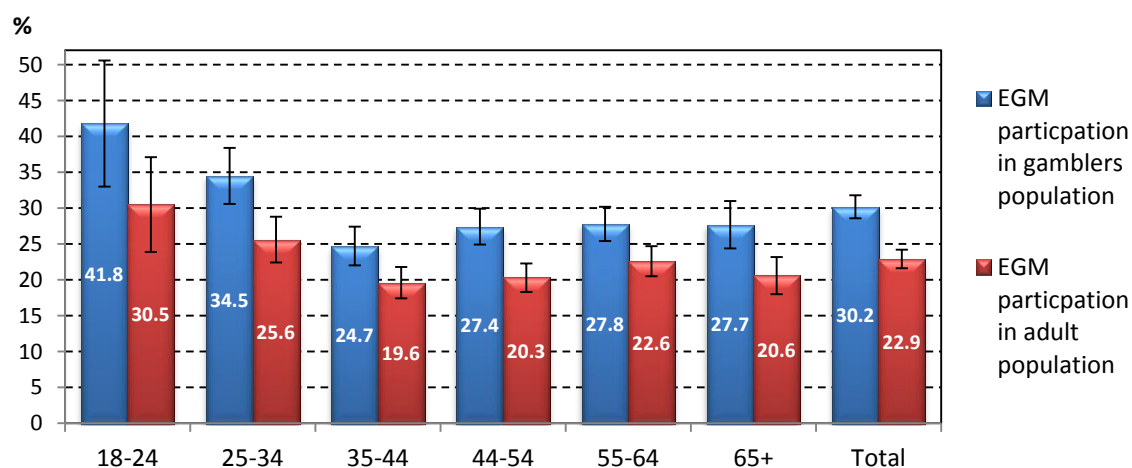
Figure 78 shows the EGM participation rate in the last year by gender in the NT adult and gamblers populations, while Figure 79 shows the same by age. There was no significant difference in EGM participation between men (22.5%) and women (23.4%) in the adult and gamblers populations.



**Figure 78:** EGM participation by gender, gamblers population and NT adult population

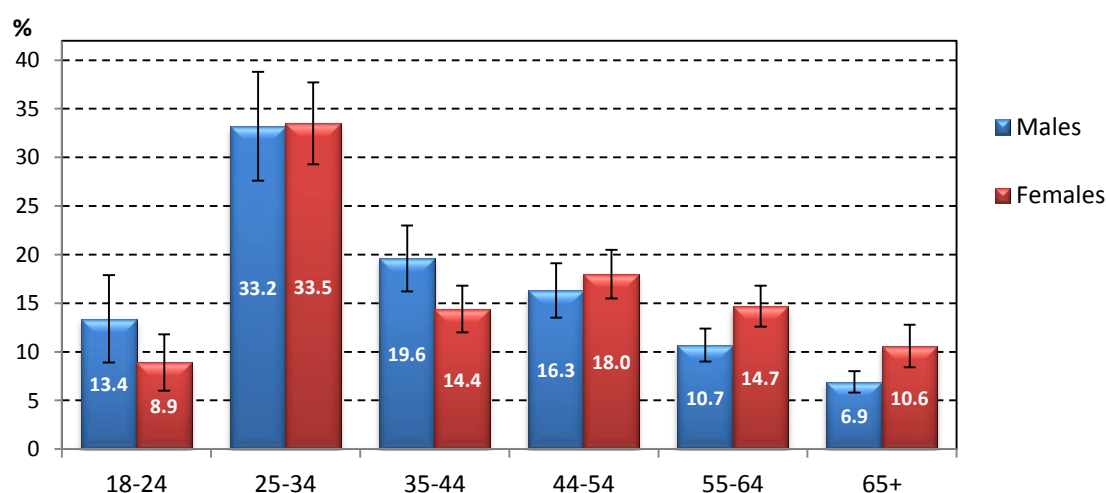


The association between EGM participation and age was not statistically significant (Figure 79), though EGMs were most popular among people aged 18-24 years (30.5%) and 25-34 years (25.6%). Across all other age groups, EGM participation was similar and ranged between 19.6% and 22.6%. Amongst gamblers, EGMs were slightly more popular among the 18-24 years age group, where 41.8% of gamblers played EGMs, compared with 30.5% of the 18-24 years total population (1.37 times higher), compared with the total, where 30.2% of gamblers, and 22.9% of the population played EGMs (1.32 times higher).



**Figure 79:** EGM participation by age, gamblers population and NT adult population

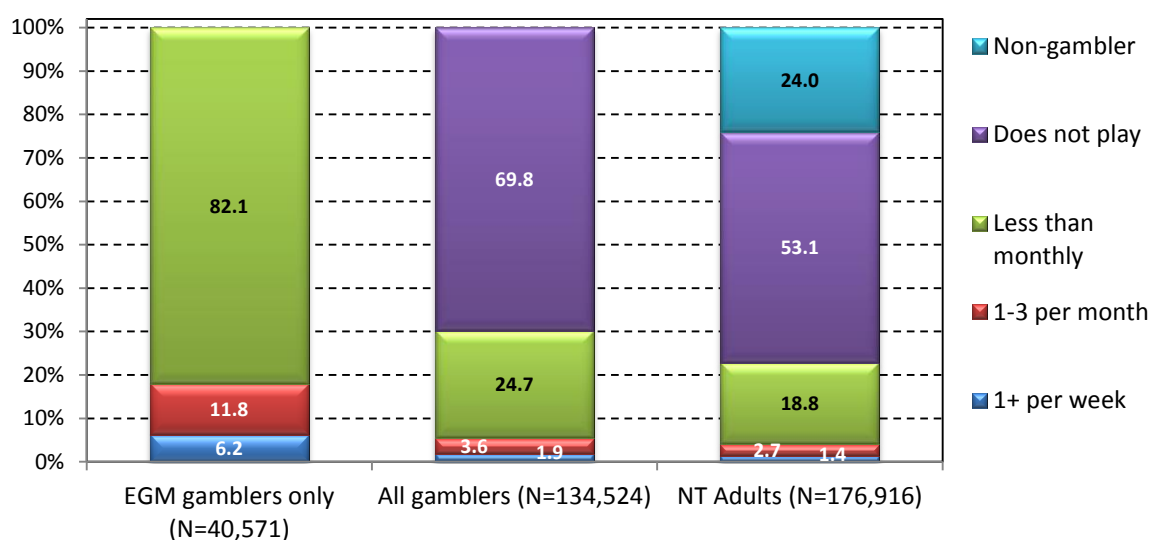
Although EGM participation was highest for the 18-24 years age group, the age distribution of EGM players shown in Figure 80 indicates that the majority of EGM players are aged 25-34 years (33.2% for males and 33.5% for females), followed by 35-44 years for males (19.6%) and 44-54 years for females (18%). Although the association between gender and participation was not significant, the percentage of EGM players over the age of 44 years was higher amongst females (43.3%) compared to males (33.9%).



**Figure 80:** Age distribution of EGM players by gender

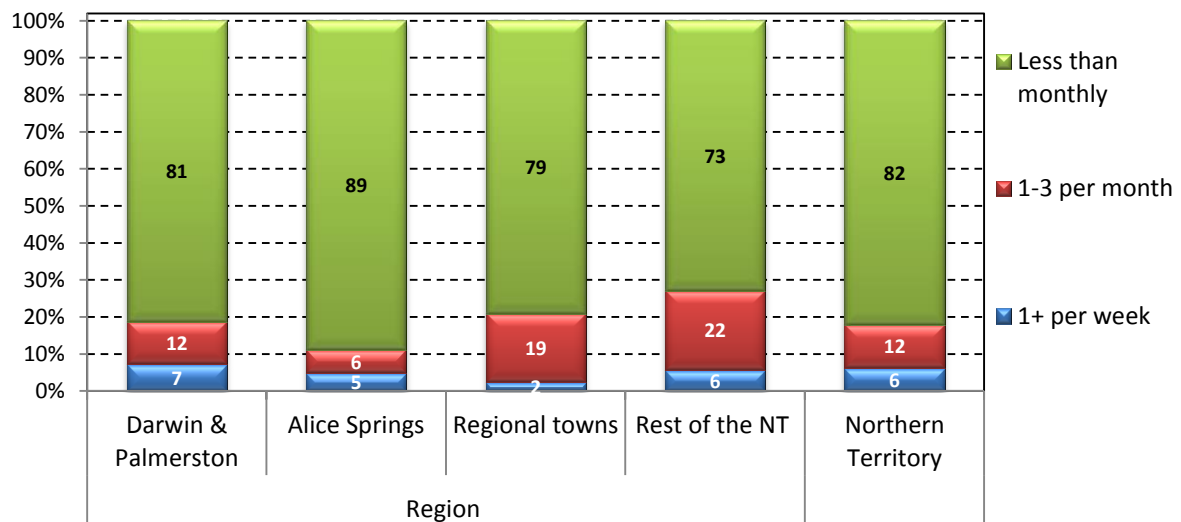
## 9.4 EGM frequency of play

EGM frequency of play provides a more nuanced picture of EGM gamblers than participation in the last year. Research has found as the intensity of EGM play increases, the risks associated with problem gambling also increase (Parke, Parke & Blaszczynski 2016, Young et al. 2006). Figure 81 shows EGM frequency of play for EGM gamblers, all gamblers and in the total population. Most people (82%) who gambled on EGMs did so less than once a month in the year preceding the survey; however, 6% (2,495 people) played weekly and 12% (4,784 people) played one to three times per month. About 4% of the NT adult population (7,300 people) played EGMs at least once per month in the year preceding the survey, and less than 1.5% played them weekly.



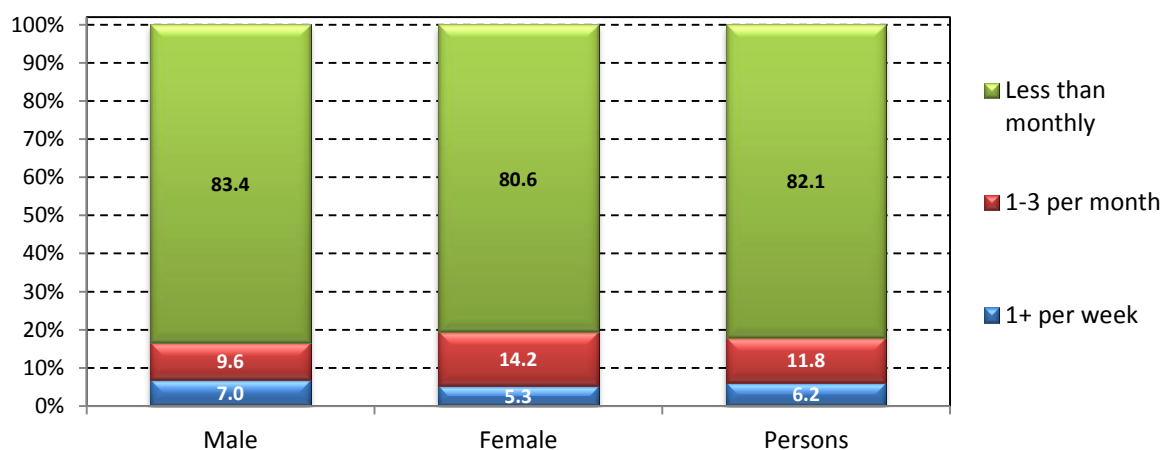
**Figure 81:** Frequency of EGM play in the EGM gamblers, all gamblers and the NT adult populations

There was a non-significant association between EGM frequency of play and region (Figure 82), with the Rest of the NT (22%) and Regional Towns (19%) having more monthly EGM players than Darwin/Palmerston (12%) and Alice Springs (6%). Darwin/Palmerston (7%) had the highest percentage of weekly EGM players, followed by Rest of NT (6%), Alice Springs (5%), and Regional Towns (2%).



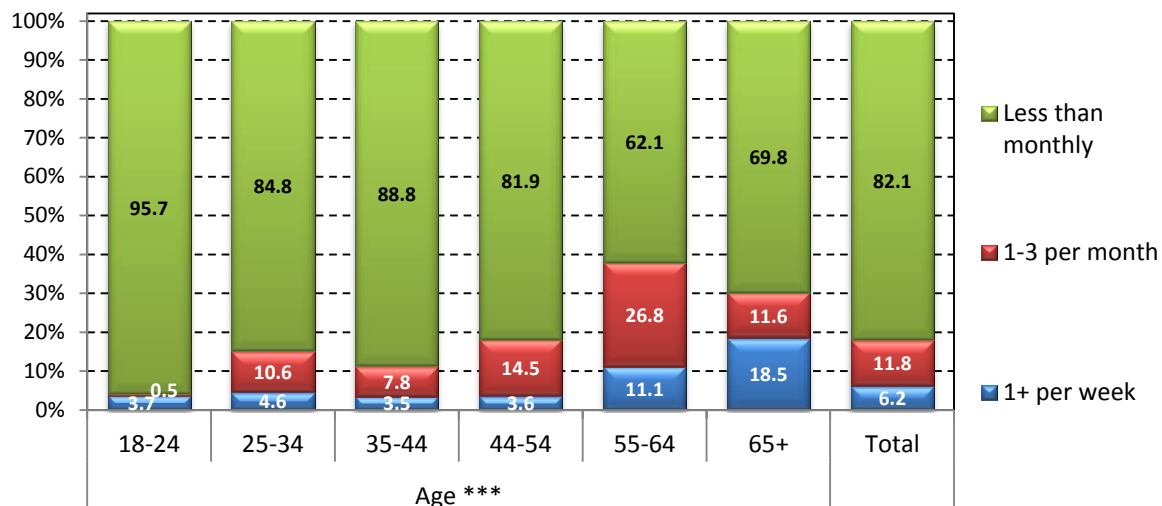
**Figure 82:** Frequency of EGM play by region, EGM players

There was no significant difference between men and women in EGM frequency of play (Figure 83), though, a slightly higher percentage of men (7%) were weekly players compared with women (5%), and a higher percentage of women were monthly players (14%) compared with men (10%).



**Figure 83:** Frequency of EGM play by gender, EGM players

There was a significant association between age and EGM frequency of play, with older age groups more likely to be weekly or monthly EGM players, and those less than 25 years the least likely to be weekly or monthly EGM players (Figure 84).



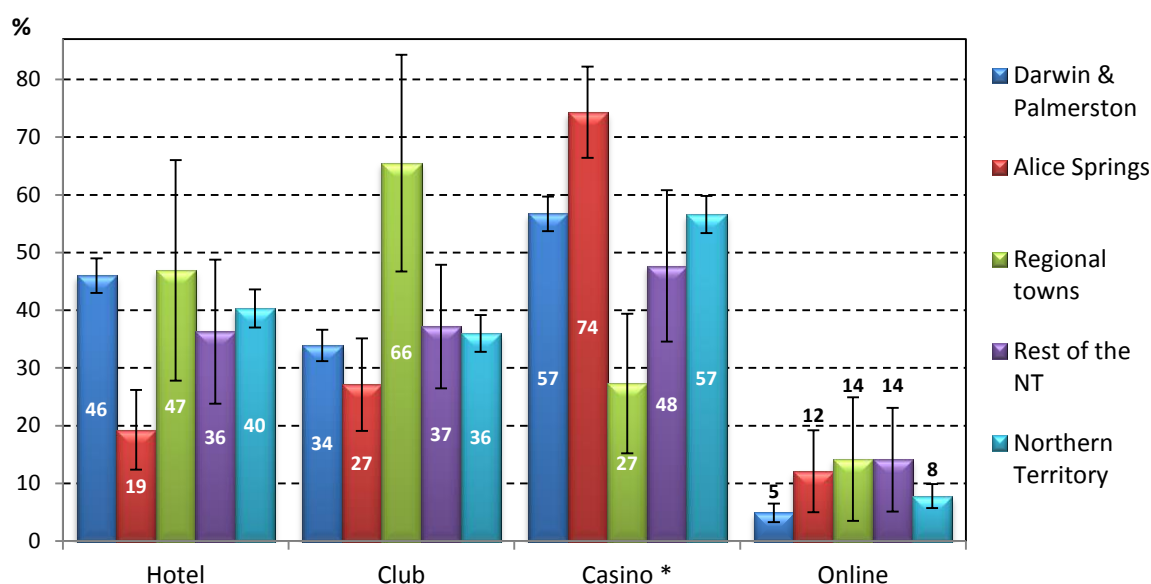
**Figure 84: Frequency of EGM play by age, EGM players**

Significant association between age and EGM frequency of play: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

## 9.5 EGM players venue preferences

### 9.5.1 Venue type for playing EGMs

Table 49 and Figure 85 show the mode and venue type where EGM players gambled by region. The most common venue for playing EGMs was the casinos (56.6%), followed by hotels (40%), clubs (36%) and online (8%). There was large variation across regions in where EGM players gambled, though differences between regions were only significant for playing EGMs at a casino. Regional Towns had the lowest EGM participation at casinos (27%), while Alice Springs (74%) had the highest, and Darwin/Palmerston and the Rest of the NT were intermediate (58.1% and 39.1% respectively). Playing EGMs in clubs was more common in Regional Towns and the Rest of the NT (remote regions), compared with EGM players in Darwin/Palmerston and Alice Springs. Playing EGMs in hotels was most common in Regional Towns (47%) and Darwin/Palmerston (46%), and least common in Alice Springs (19%), and the Rest of NT (36%). Playing EGM style games online was the lowest for Darwin EGM players (5%), and highest for EGM players in Regional Towns and the Rest of the NT at 14%.



**Figure 85: Mode/venue type where played EGMs by region, EGM players**

Significant association between regions and venue: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

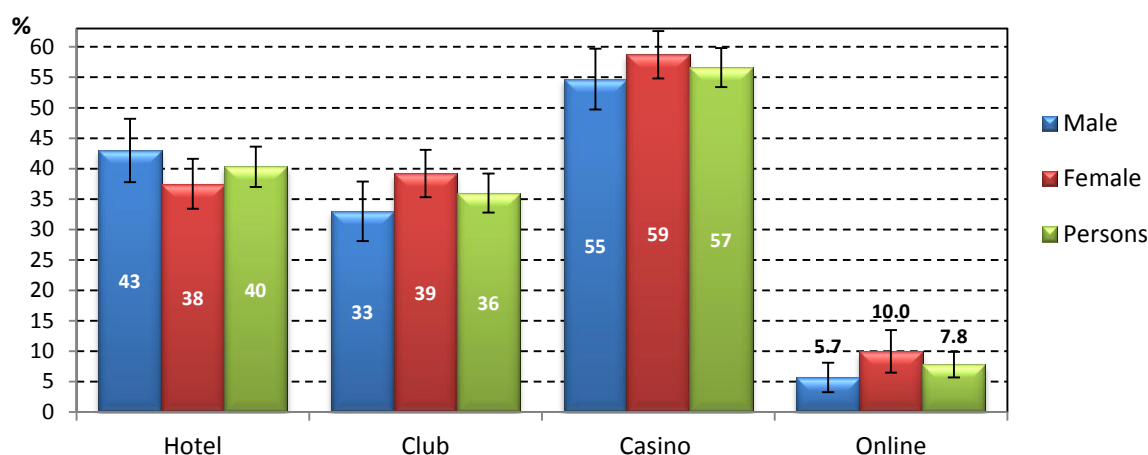
**Table 49: Mode/venue type & number of modes where played EGMs by region, EGM players**

	Darwin & Palmerston % (SE)	Alice Springs % (SE)	Regional Towns % (SE)	Rest of the NT % (SE)	Northern Territory % (SE)
Hotel	46.0 (3.0)	19.3 (6.9)	46.9 (19.1)	36.3 (12.5)	40.3 (3.3)
Club	33.9 (2.7)	27.1 (8.0)	65.5 (18.8)	37.2 (10.7)	36.0 (3.2)
Casino *	56.7 (3.0)	74.3 (7.9)	27.3 (12.1)	47.7 (13.1)	56.6 (3.2)
Online	4.9 (1.6)	12.1 (7.1)	14.2 (10.7)	14.1 (9.0)	7.8 (2.1)
Number of betting modes					
One	71.8 (2.8)	76.2 (7.8)	72.3 (12.2)	79.4 (8.1)	73.2 (2.7)
Two	17.9 (2.3)	15.8 (5.8)	14.6 (6.6)	12.2 (5.4)	16.8 (2.1)
3 to 5	10.3 (2.0)	8.0 (5.9)	13.1 (10.7)	8.4 (6.3)	10.0 (2.1)
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Population playing(N)	26,153	7,879	4,143	2,396	40,571

Note: Percentages will not add up to 100% in top half of table as people play at multiple venues

Significant association between regions and venue: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Figure 86 shows that amongst EGM players, casinos were the most popular place to play EGMs in the last year for both men (54.7%) and women (58.7%), followed by clubs for women (39.2%) and pubs for men (43%). There were no significant differences between men and women in the mode/venue type where they played EGMs. A higher percentage of women (10%) played EGMs online in the last year compared with men (5.7%), though this was not statistically significant.



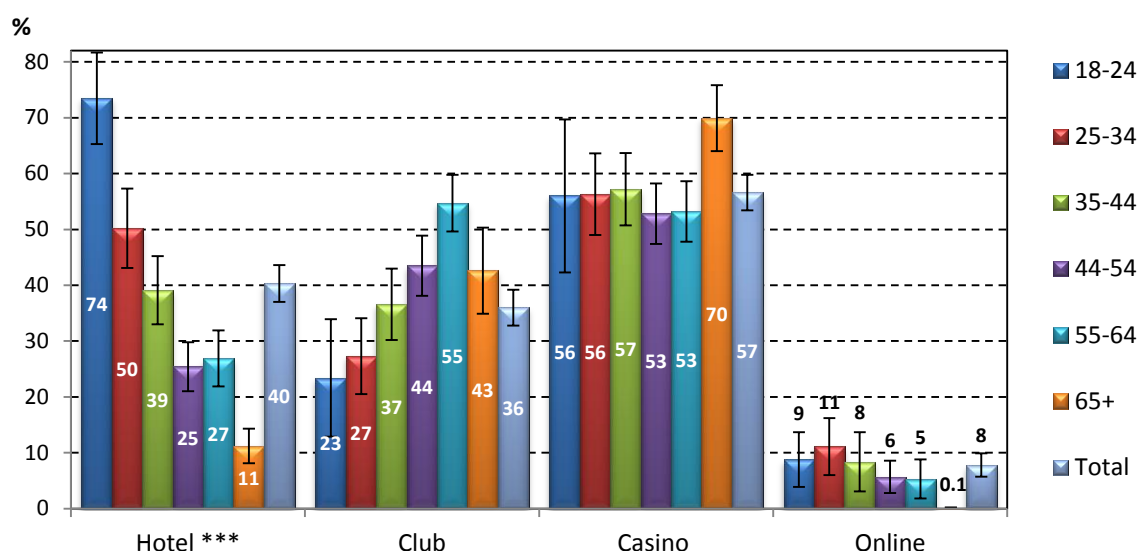
**Figure 86:** Mode/venue type where played EGMs by gender, EGM players

The number of betting modes that men and women used to play EGMs was also not statistically different (Table 50), with most EGM players (73.2%) playing in one type of venue or mode only, though a slightly higher percentage of women gambled on two or more modes/venues (29.1% of women, cf. 24.8% of men).

**Table 50:** Mode/venue type & number of modes where played EGMs by gender, EGM players

	Males %	Females %	Persons %
Hotel	43.0 (5.2)	37.5 (4.1)	40.3 (3.3)
Club	33.0 (4.9)	39.2 (3.9)	36.0 (3.2)
Casinos	54.7 (5.0)	58.7 (3.9)	56.6 (3.2)
Online	5.7 (2.4)	10.0 (3.5)	7.8 (2.1)
Other	0.2 (0.1)	0.3 (0.2)	0.3 (0.1)
Number of betting modes			
One	75.2 (3.6)	71.0 (4.0)	73.2 (2.7)
Two	16.0 (3.0)	17.7 (2.8)	16.8 (2.1)
3 to 5	8.8 (2.2)	11.4 (3.5)	10.0 (2.1)
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Population playing EGMs (N)</b>	<b>20,879</b>	<b>19,692</b>	<b>40,571</b>

Figure 87 graphs the association between age and EGM venue type and mode of play. The association between age and playing EGMs in a hotel was significant ( $p < 0.01$ ), while for clubs it was marginally non-significant ( $p = 0.056$ ). There is a clear downward trend in EGM play at hotels as people become older, with 74% of 18-24 years playing EGMs in hotels, and only 11% of 65 years and over playing EGMs in hotels. The association between age and playing in clubs was the reverse of that seen in hotels. That is, 18-24 years EGM players had the lowest participation in clubs, with playing in EGMs in clubs increasing with age and peaking for the 55-64 years age group (55%), and then declining to 43% for players 65 years and over. Younger people were more likely to play EGMs online.



**Figure 87: Mode/venue type where played EGMs by age, EGM players**

Significant association between where plays EGMs and age: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

The association between age and number of modes of EGM play shown in Table 51 was not significant, though there was a slight trend present for younger players to engage in more activities.

**Table 51: Mode/venue type & number of modes where played EGMs by age, EGM players**

	18-24 % (SE)	25-34 % (SE)	35-44 % (SE)	44-54 % (SE)	55-64 % (SE)	65+ % (SE)	Total % (SE)
Hotel ***	73.5 (8.2)	50.2 (7.1)	39.1 (6.1)	25.4 (4.4)	26.9 (5)	11.2 (3.1)	40.3 (3.3)
Club	23.4 (10.5)	27.3 (6.8)	36.6 (6.4)	43.5 (5.4)	54.7 (5.1)	42.6 (7.7)	36.0 (3.2)
Casino	56.0 (13.7)	56.3 (7.3)	57.2 (6.5)	52.8 (5.4)	53.2 (5.4)	69.9 (5.9)	56.6 (3.2)
Online	8.8 (4.9)	11.1 (5.1)	8.4 (5.3)	5.7 (2.9)	5.3 (3.5)	0.1 (0.1)	7.8 (2.1)
Other	-	-	1.0 (0.6)	-	0.6 (0.4)	0.3 (0.3)	0.3 (0.1)
<b>Number of betting modes</b>							
One	64.6 (11.8)	73.5 (5.6)	70.5 (6.4)	78.7 (3.9)	72.8 (5.0)	77.7 (6.6)	73.2 (2.7)
Two	15.0 (7.2)	14.6 (3.8)	19.7 (5.8)	17.3 (3.6)	16.9 (3.8)	20.8 (6.6)	16.8 (2.1)
3 to 5	20.4 (10.3)	11.9 (4.3)	9.8 (3.9)	4.0 (1.6)	10.3 (4.0)	1.5 (0.8)	10.0 (2.1)
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Population playing EGMs (N)</b>							
	4,548	13,521	6,922	6,934	5,120	3,525	40,571

Significant association between where plays EGMs and age: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

### 9.5.2 Regular venue where plays EGMs

Table 52 shows that most EGM players in the NT (84.9%) had a regular venue where they played EGMs, and this did not vary significantly across regions. However, EGM players from Regional Towns had the highest percentage playing at regular venue (88%), while EGM players in the Rest of the NT had the lowest percentage of players having a regular venue (82.4%). Due to small numbers of people playing online, these estimates had very high standard errors limiting comparison between regions.

**Table 52: Has a regular venue where plays EGMs by region, EGM players**

	Darwin & Palmerston	Alice Springs	Regional Towns	Rest of the NT	Northern Territory
Regular	84.3 (2.2)	86.0 (6.0)	88.0 (5.1)	82.4 (8.1)	84.9 (2.0)
No regular	10.6 (2.0)	7.6 (4.6)	9.4 (4.6)	7.0 (3.2)	9.7 (1.7)
Usually play online	0.8 (0.6)	4.6 (4.5)	0.7 (0.7)	7.2 (6.9)	1.9 (1.0)
Don't know	4.2 (0.9)	1.8 (0.8)	1.9 (1.3)	3.4 (2.4)	3.4 (0.6)
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Population (N)	26,153	7,879	4,143	2,396	40,571

Notes: Caution advised interpreting some estimates in this table due to large relative standard errors

Table 53 shows the percentage of male and female EGM players who had a regular venue where they gambled. Females (87%) were more likely than males (83%) to have a regular venue, though this difference was not statistically significant.

**Table 53: Has a regular venue where plays EGMs by gender, EGM players**

	Male % (SE)	Female % (SE)	Persons % (SE)
Regular venue	83.0 (3.3)	87.0 (2.2)	84.9 (2.0)
No regular venue	11.0 (2.7)	8.3 (1.8)	9.7 (1.7)
Usually play online	2.5 (1.8)	1.3 (0.9)	1.9 (1.0)
Don't know	3.5 (1.0)	3.4 (0.8)	3.4 (0.6)
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Population playing EGMs (N)</b>	<b>20,879</b>	<b>19,692</b>	<b>40,571</b>

Notes: Caution advised interpreting some estimates in this table due to large relative standard errors

Figure 88 shows that younger and older players were more likely to have a regular venue where they played EGMs, with this association being marginally non-significant ( $p=0.051$ ).

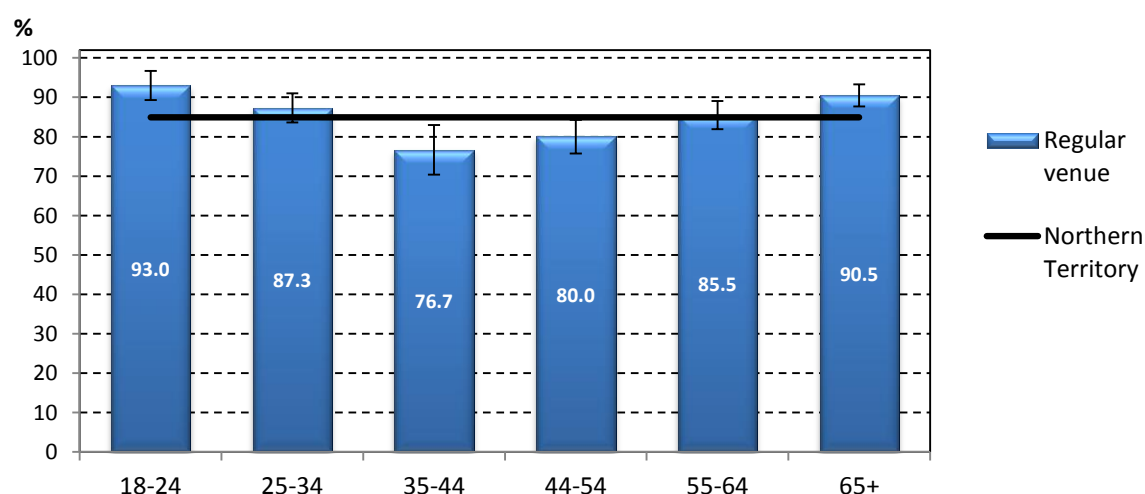
**Figure 88: Regular EGM venue by age, EGM players**

Table 54 presents the data from the previous figure, but includes the additional categories of no regular venue, plays online and don't know/not sure. Across the NT less than 2% of EGM players played online. Across age groups, online play was most popular amongst EGM players aged 35 to 44 years, though this estimate had high standard errors relative to the estimate and was not significant.



**Table 54:** Preferred EGM venue/mode of play by age, EGM players

	18-24 % (SE)	25-34 % (SE)	35-44 % (SE)	44-54 % (SE)	55-64 % (SE)	65+ % (SE)	Total % (SE)
Regular venue	93.0 (3.7)	87.3 (3.7)	76.7 (6.3)	80.0 (4.3)	85.5 (3.6)	90.5 (2.9)	84.9 (2.0)
No regular venue	6.3 (3.5)	9.4 (3.5)	12.1 (5.0)	12.7 (3.4)	10.1 (2.9)	4.3 (2.3)	9.7 (1.7)
Usually play online	0.0 (0.0)	0.2 (0.2)	7.8 (5.3)	3.1 (2.5)	0.0 (0.0)	0.1 (0.1)	1.9 (1.0)
Don't know/not sure	0.7 (0.8)	3.2 (1.2)	3.5 (1.2)	4.2 (1.7)	4.4 (2.2)	5.1 (1.6)	3.4 (0.6)
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
EGM Population (N)	4,548	13,521	6,922	6,934	5,120	3,525	40,571

The next five figures list the venues that were most commonly chosen as an EGM player's regular venue, firstly for the NT and then for each of the four regions. The two casinos (Darwin and Alice springs) were the most commonly selected regular venues for EGM players across the NT (Figure 89). Five of the top six regular venues were located in Darwin and Palmerston.

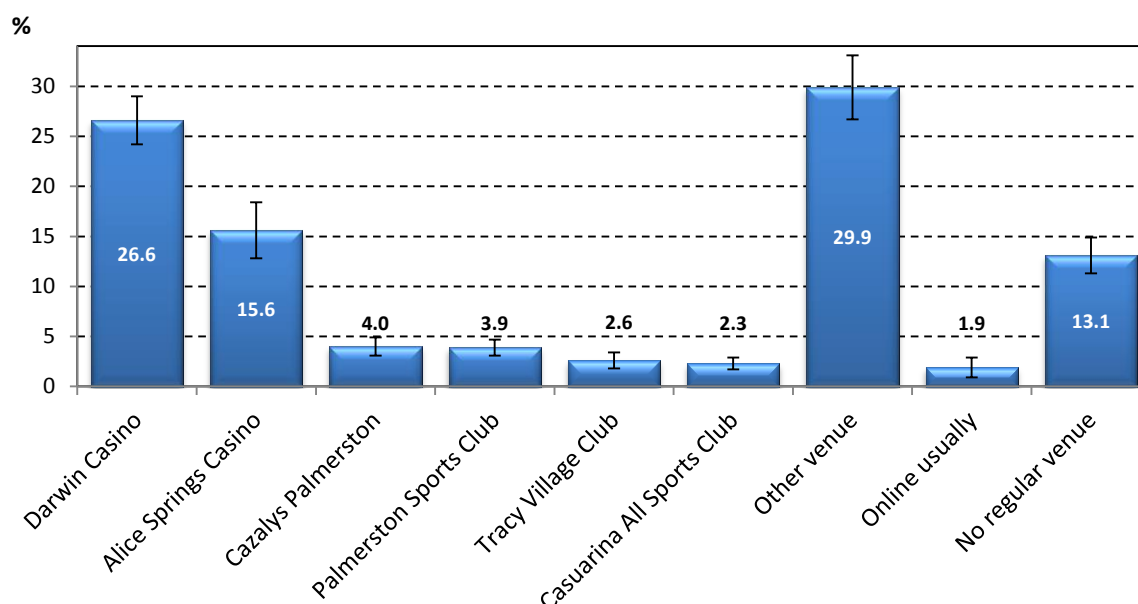
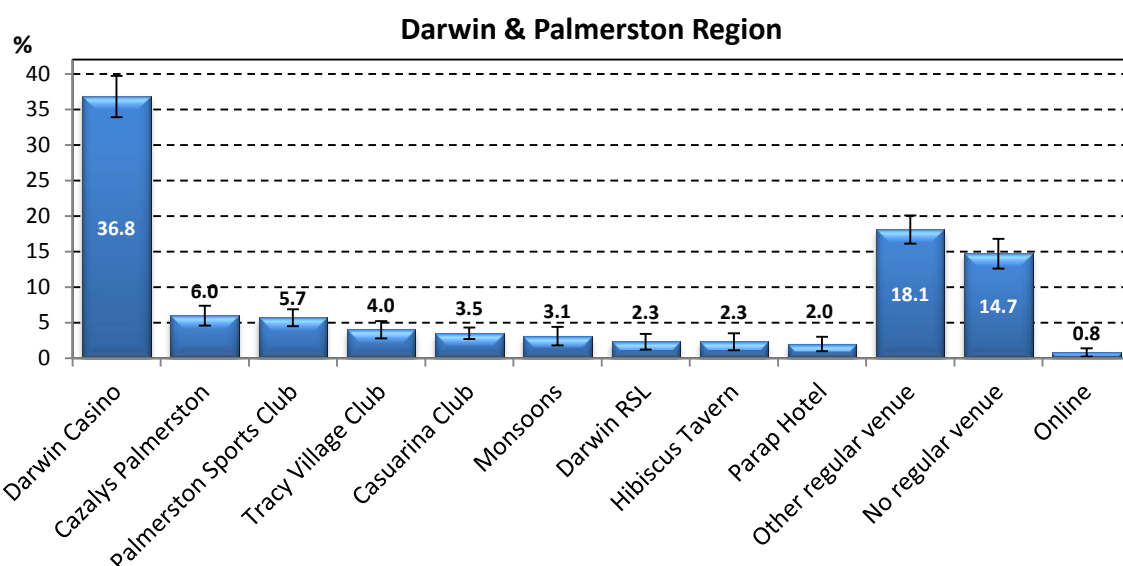
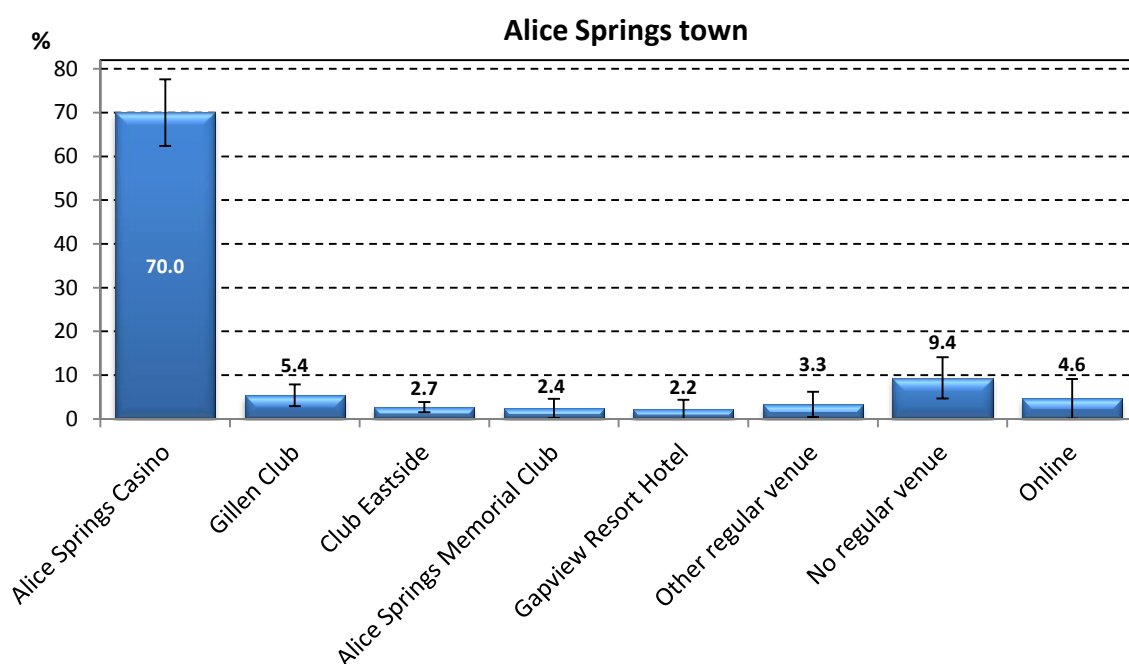
**Figure 89:** Preferred regular venue for playing EGMs for the NT, EGM players

Figure 90 shows preferred regular venues for Darwin/Palmerston EGM gamblers. Darwin casino (37%) was the most common regular venue, followed by two large clubs located in Palmerston (Cazalys and Palmerston Sports Club), and then the two largest clubs in the Darwin region (Tracy Village and Casuarina Club). Monsoons, Hibiscus Tavern and Parap Hotel were the only hotels in the top nine regular venues.



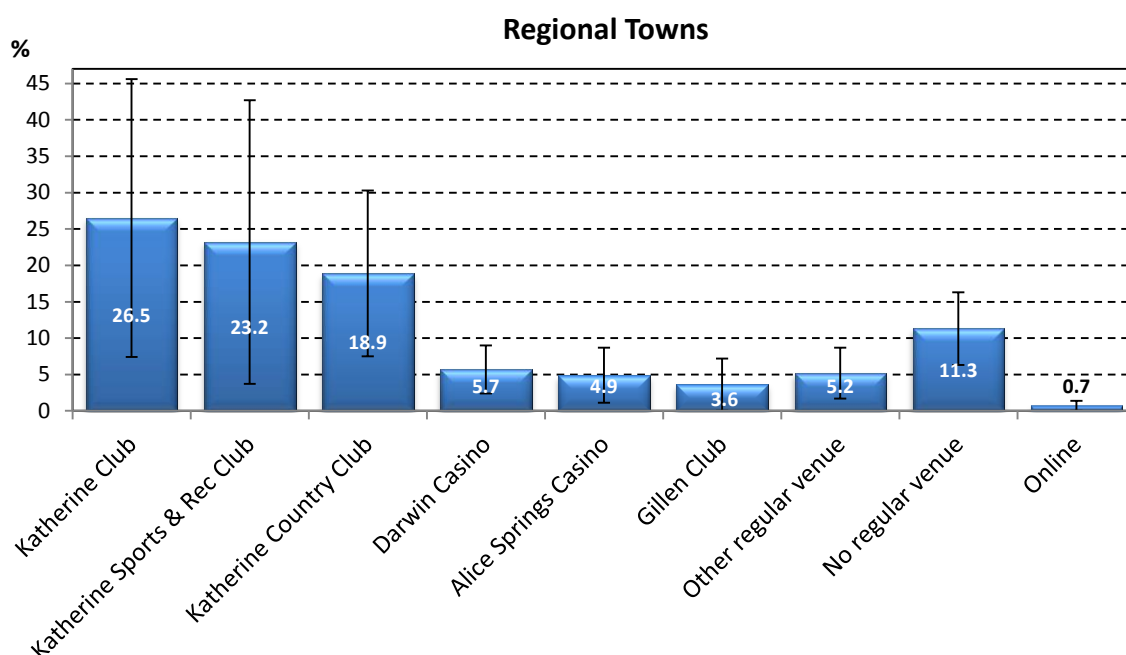
**Figure 90:** Preferred regular venue for playing EGMs, Darwin and Palmerston EGM players

For Alice Springs EGM players, the Alice Springs Casino was the most endorsed regular venue, followed by the Gillen Club, Club Eastside, Alice Springs Memorial Club, and the Gapview Resort Hotel (Figure 91).



**Figure 91:** Preferred regular venue for playing EGMs, Alice Springs EGM players

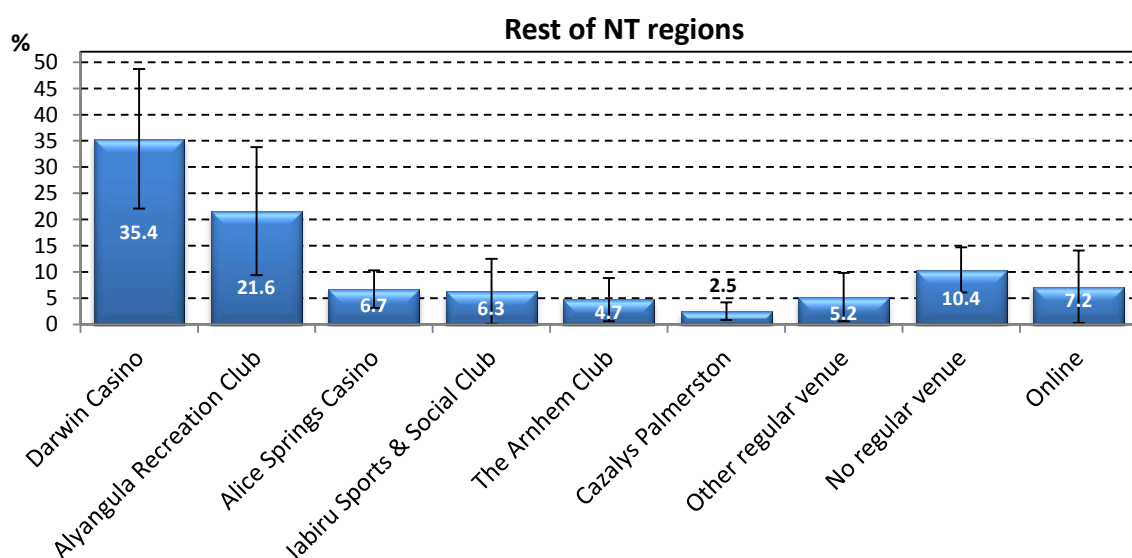
Three clubs in Katherine were the most common regular venues for EGM players from Regional Towns, with this likely reflecting that Katherine is the largest of the three towns making up this regional grouping (Figure 92). The pulling power of the two NT casinos was again apparent, with both Darwin and Alice Springs casinos making the top five regular EGM venues for people living in Regional Towns.



**Figure 92:** Preferred regular venue for playing EGMs, Regional Towns EGM players

Notes: Caution advised interpreting estimates in this figure due to large relative standard errors

The Darwin Casino was the most endorsed regular venue for EGM players living in the Rest of the NT, followed by Alyangula Recreation Club, the Alice Springs Casino, Jabiru Sports and Social Club, the Arnhem Club and Cazalys Palmerston (Figure 93).



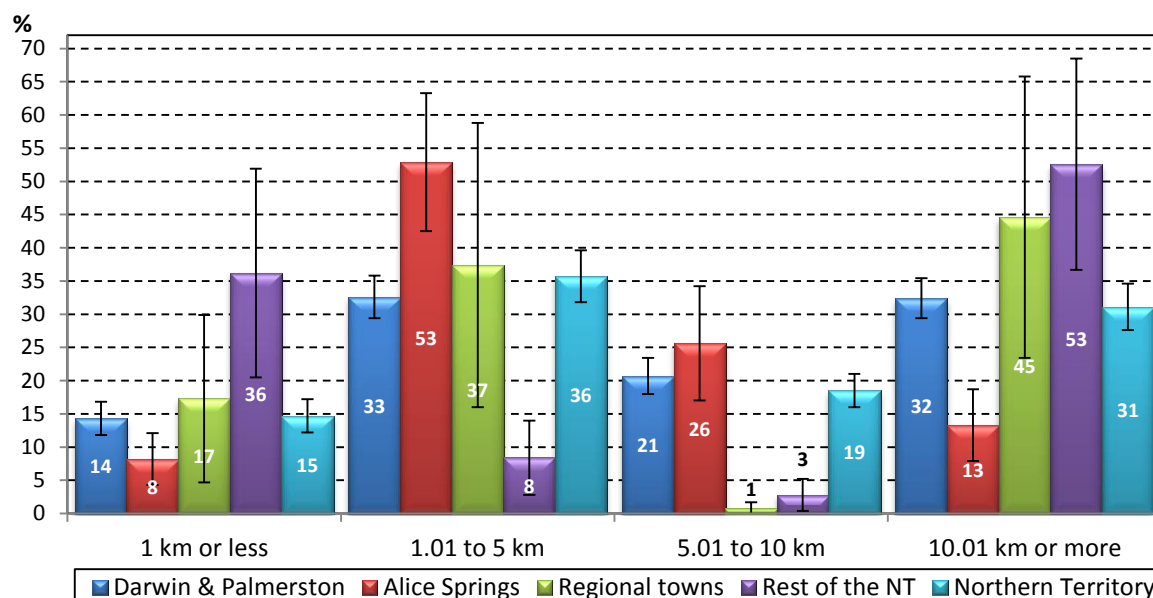
**Figure 93:** Preferred regular venue for playing EGMs, Rest of NT EGM players

Notes: Caution advised interpreting estimates in this figure due to large relative standard errors

### 9.5.3 Distance to regular EGM venue

Figure 94 shows the relationship between region and distance from home to EGM players preferred venue. Unsurprisingly, there was variation between regions in the distance respondents lived from their regular EGM venue; however, this association

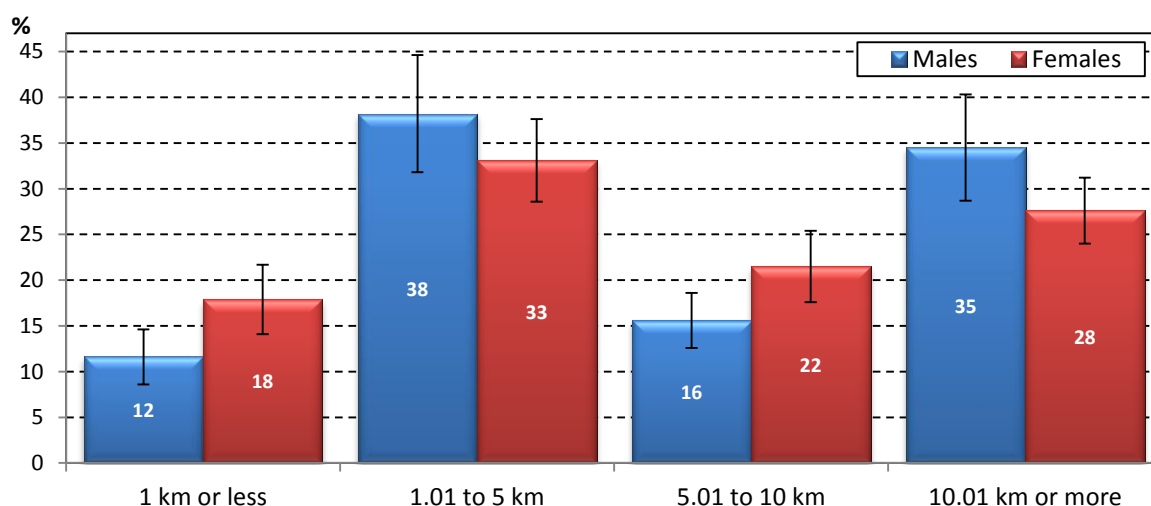
was marginally non-significant ( $p=0.054$ ). For the NT, most people (36%) who had a regular EGM venue lived between 1 and 5 km away, while 31% of people lived 10 km or more. This pattern was similar in Alice Springs, but not for the Rest of the NT and Regional Towns, where most people with a regular EGM venue lived 10 km or more away.



**Figure 94:** Distance from home to regular EGM venue by region, EGM players with regular venue

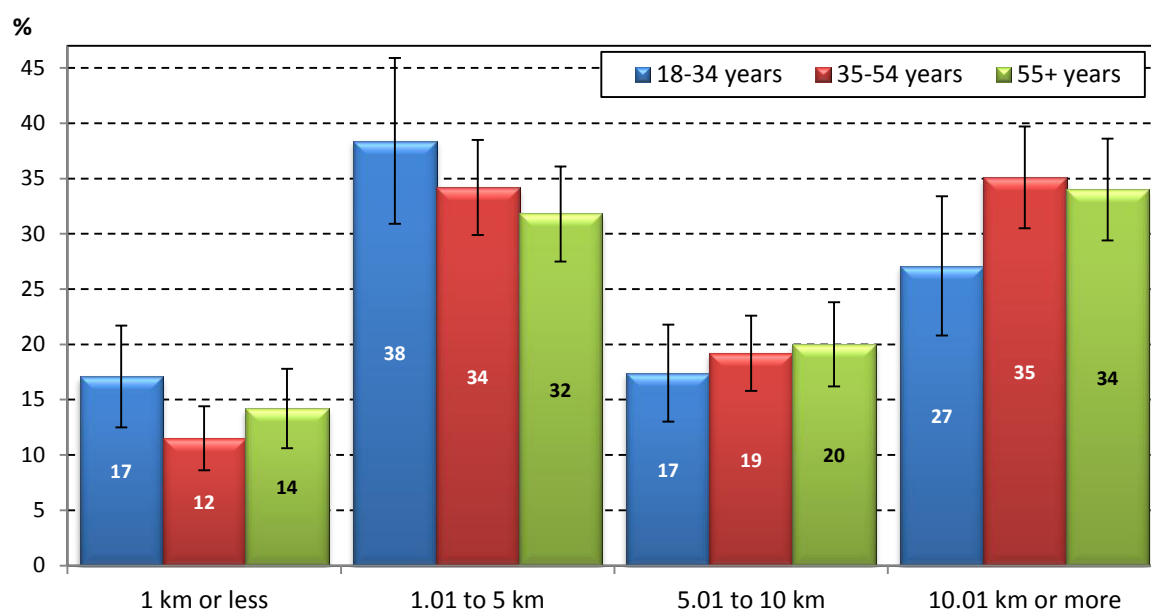
Notes: Caution advised interpreting some estimates in this figure due to large relative standard errors

There was no significant difference between men and women in how far they lived from their regular EGM venue (Figure 95), with most men (38%) and women (33%) living 1 to 5 km away, followed by 10 km or more away (35% and 28% respectively).



**Figure 95:** Distance from home to regular EGM venue by gender, EGM players with regular venue

Figure 96 shows that there was a non-significant association between distance to regular EGM venue and age.

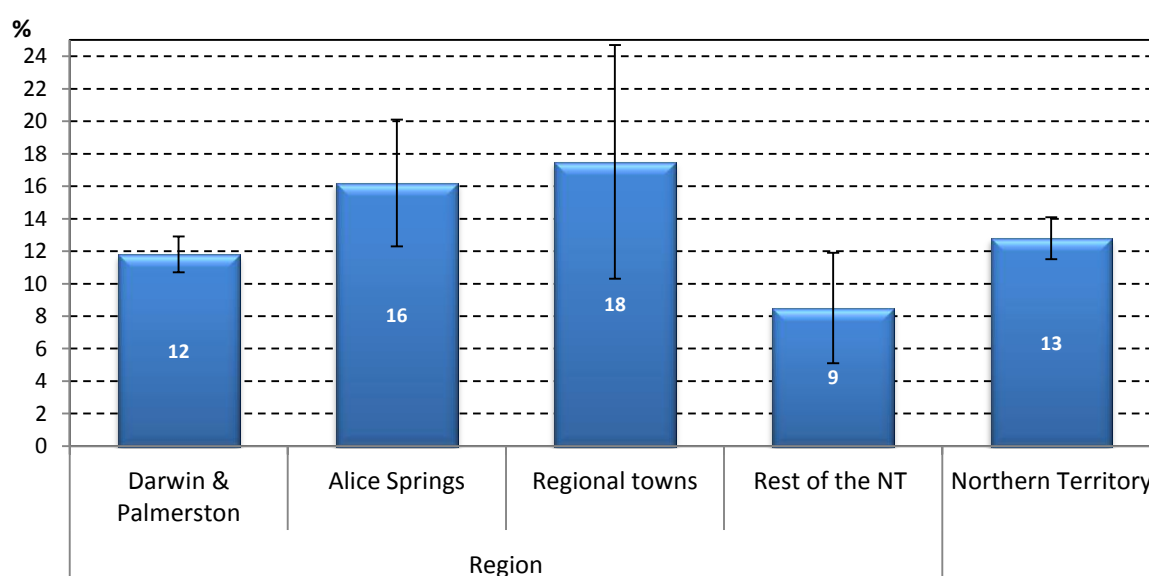


**Figure 96:** Distance from home to regular EGM venue by age, EGM players with regular venue

## 9.6 EGMs as highest spend gambling activity

### 9.6.1 Characteristics of gamblers nominating EGMs as highest spend

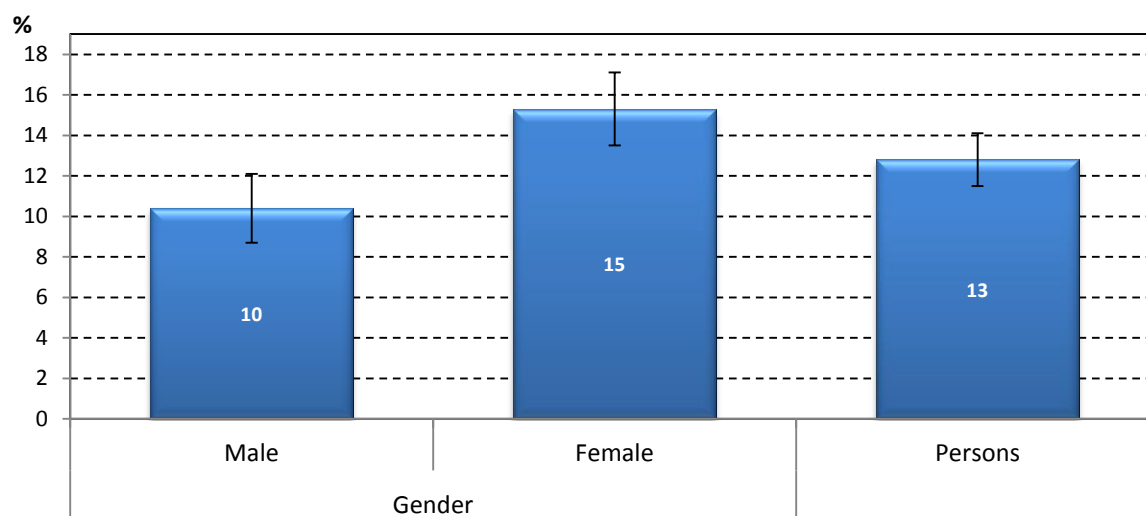
Thirteen percent of gamblers across the NT nominated EGMs as the gambling activity they spent the most money on in the year before the survey (Figure 97), while 42% of EGM gamblers nominated EGMs as their highest spending activity. Across regions, there was variation in nominating EGMs as the highest spend activity, but this association was not statistically significant. EGM gamblers living in Regional Towns (18%) and Alice Springs (16%) had a higher percentage of gamblers nominating EGMs as their highest spend activity, compared with Darwin/Palmerston (12%) and the Rest of the NT (9%).



**Figure 97:** EGMs as highest spend gambling activity by region, All gamblers

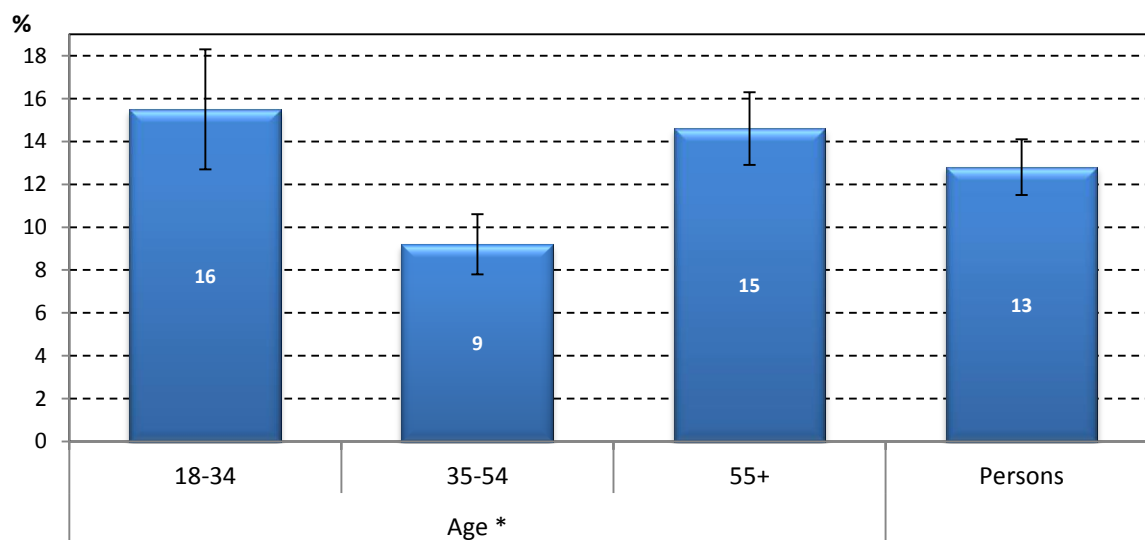
Notes: Caution advised interpreting some estimates in this figure due to large relative standard errors

Figure 98 shows that women (15%) were more likely to nominate EGMs as their highest spend gambling activity compared with men (10%), though this association was marginally non-significant ( $p=0.054$ ).



**Figure 98:** EGMs as highest spend gambling activity by gender, All gamblers

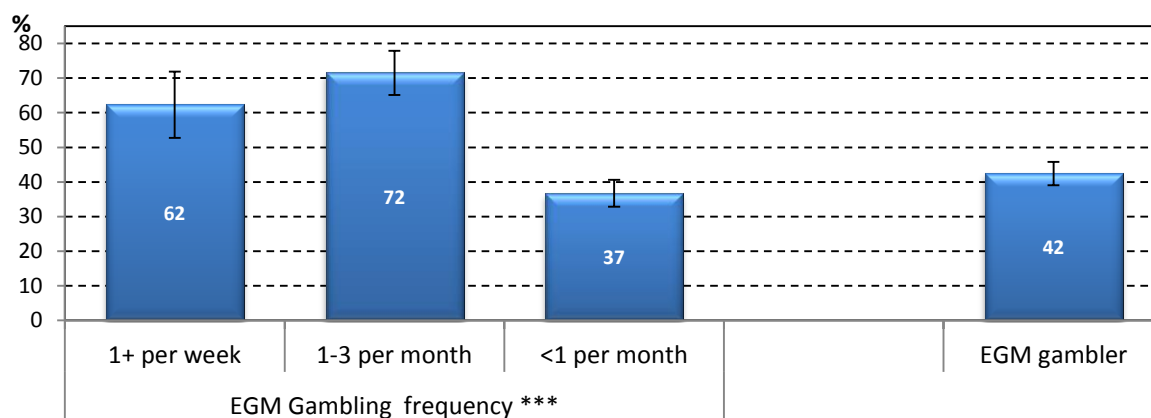
There was a significant association between age and nominating EGMs as the gamblers highest spend activity (Figure 99). Gamblers aged 35 to 54 years were less likely to nominate EGMs as their highest spend activity, compared with younger and older gamblers.



**Figure 99:** EGMs as highest spend gambling activity by age, All gamblers

Significant association between EGM highest spend and age: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

There was a significant association between frequency of EGM gambling and nominating EGMs as the gamblers highest spend activity (Figure 100). Across all EGM gamblers, 42% nominated EGMs as their highest spend activity. Weekly (62%) and monthly (72%) EGM gamblers were more likely than less than monthly (37%) EGM gamblers to nominate EGMs as their highest spend activity.

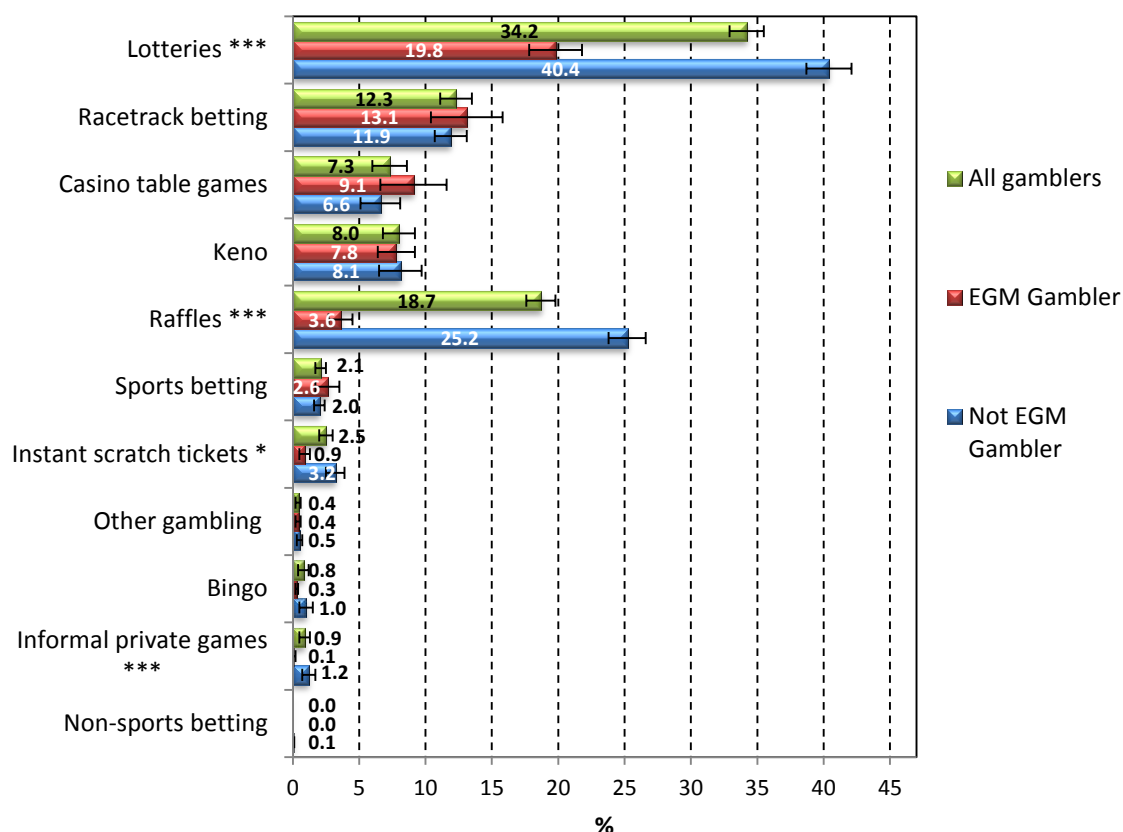


**Figure 100: EGMs as highest spend gambling activity by EGM frequency of play, EGM gamblers**

Significant association between EGM frequency and EGM highest spend:

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Figure 101 graphs the distribution of gamblers highest spend activity by whether they were an EGM gambler or not. There was a significant difference between EGM gamblers and non-EGM gamblers in the distribution of their highest spend activity. EGM gamblers were statistically less likely than non-EGM gamblers to have a highest spend activity for lotteries (20% *cf.* 40%), instant scratch tickets (0.9% *cf.* 3.2%), raffles (4% *cf.* 25%), and informal private games (0.1% *cf.* 1.2%).



**Figure 101:** Distribution of highest spend activity of whether gambles on EGMs, EGM gamblers whose highest spend was not EGMs

Significant association between EGM player & highest spend activity: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

#### 9.6.2 Weekly expenditure for EGM highest spend gambling activity

Table 55 shows the distribution of EGM weekly expenditure quartiles and the median by region. There was significant variation between regions, with Darwin/Palmerston most closely resembling the NT expenditure quartiles distribution. The Rest of the NT stands out, in having the highest median EGM expenditure of \$34.62, compared with other regions ranging between \$2.88 and \$4.81.

**Table 55:** EGM weekly expenditure quartiles and median EGM expenditure (IQR) by region, gamblers whose highest spend activity was EGMs

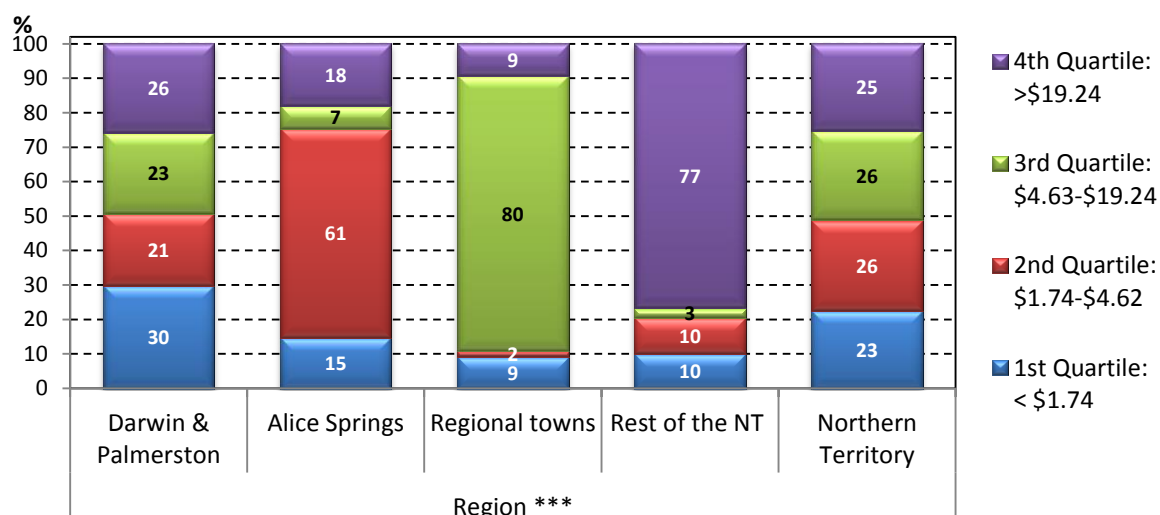
	Region ***				Northern Territory % (SE)
	Darwin & Palmerston % (SE)	Alice Springs % (SE)	Regional Towns % (SE)	Rest of NT % (SE)	
1st Quartile: < \$1.74	29.8 (4.7)	14.8 (6.3)	9.3 (6.5)	10.2 (7.4)	22.5 (3.6)
2nd Quartile: \$1.74-\$4.62	21.0 (4.1)	60.6 (10.3)	1.6 (1.2)	10.4 (5.4)	26.3 (4.4)
3rd Quartile: \$4.63-\$19.24	23.4 (4.1)	6.7 (4.9)	79.8 (11.8)	2.7 (2.0)	26.0 (5.5)
4th Quartile: >\$19.24	25.9 (4.1)	18.0 (7.5)	9.3 (7.4)	76.7 (12.2)	25.2 (3.9)
Median weekly spend	\$4.62	\$2.88	\$4.81	\$34.62	\$4.81
(IQR) <sup>1</sup>	(0.96-20.77)	(1.92-4.62)	(4.81-11.54)	(27.69-46.15)	(1.92-20.00)
Population (N)	10,017	3,734	2,313	1,122	17,185

Significant association between region and EGM spend: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

<sup>1</sup> IQR = Inter-quartile range



Darwin/Palmerston were over-represented in the lowest spend quartile of EGM highest spend gamblers (Figure 102). The high median in the Rest of NT is also reflected in the 77% of EGM highest spend gamblers in this region being in the top quartile of EGM weekly expenditure. Regional Towns were over-represented in the 3<sup>rd</sup> quartile of EGM weekly gambling expenditure, and under-represented in all other quartiles. Alice Springs EGM highest spend gamblers were over-represented in the 2<sup>nd</sup> quartile (61%).



**Figure 102:** EGM weekly expenditure quartiles by region, gamblers whose highest spend activity was EGMs

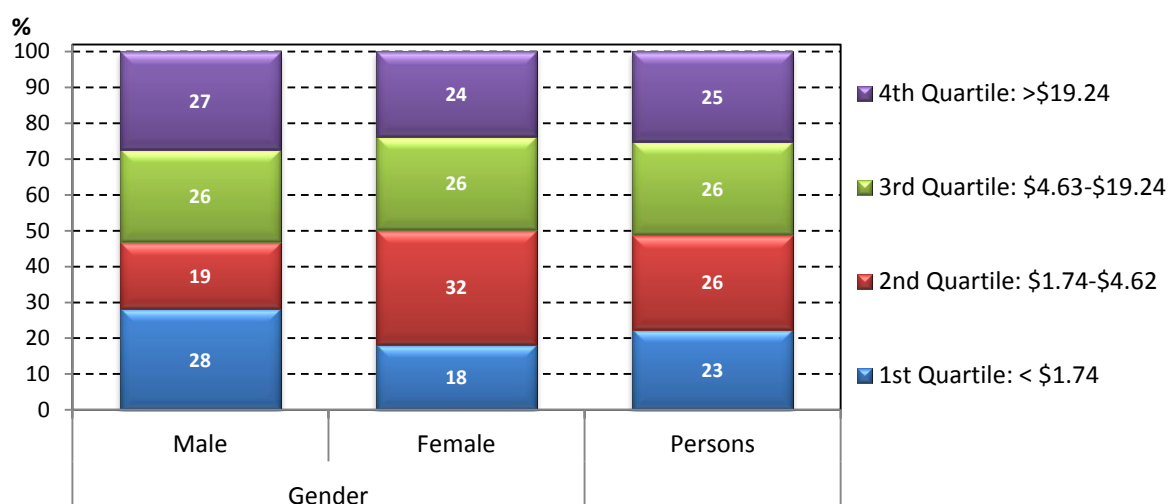
Significant association between region and EGM spend: \*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05

The association between gender and EGM weekly expenditure quartiles was not significant (Table 56). The median EGM weekly spend for men was the same as the overall median at \$4.81, while women's median spend was slightly lower at \$4.61.

**Table 56:** EGM weekly expenditure quartiles and median EGM expenditure (IQR) by gender, gamblers whose highest spend activity was EGMs

	Gender		Persons % (SE)
	Male % (SE)	Female % (SE)	
1st Quartile: < \$1.74	28.2 (7.0)	18.2 (3.9)	22.5 (3.6)
2nd Quartile: \$1.74-\$4.62	18.7 (6.5)	32.0 (5.8)	26.3 (4.4)
3rd Quartile: \$4.63-\$19.24	25.8 (10.2)	26.1 (5.8)	26.0 (5.5)
4th Quartile: > \$19.24	27.3 (7.0)	23.7 (4.5)	25.2 (3.9)
Median weekly spend (IQR)	\$4.81 (1.35-23.08)	\$4.62 (1.92-19.23)	\$4.81 (1.92-20.00)
Population (N)	7,326	9,859	17,185

Figure 103 shows the distribution of EGM highest spend gamblers weekly expenditure quartiles by gender. There was no statistical difference between men and women, though men were slightly under-represented in the 3<sup>rd</sup> quartile, and women were slightly over-represented in this quartile, and under-represented in the lowest spend quartile.



**Figure 103:** EGM weekly expenditure quartiles by gender, gamblers whose highest spend activity was EGMs

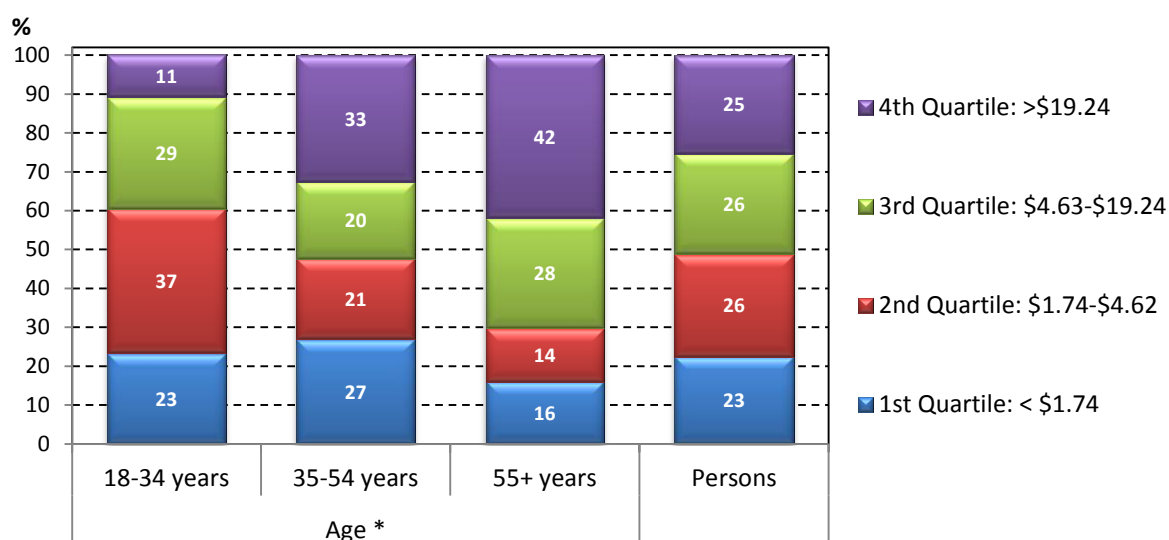
Table 57 shows the distribution of weekly EGM expenditure by age and the median spend for each age group. There were significant differences across age groups in weekly EGM spend, with 18-34 years having the lowest weekly median spend at \$3.85, followed by 35-54 years at \$4.81 and then gamblers 55 years and over at \$13.85.

**Table 57:** EGM weekly expenditure quartiles and median EGM expenditure (IQR) by age, gamblers whose highest spend activity was EGMs

	Age *			Persons % (SE)
	18-34 years % (SE)	35-54 years % (SE)	55+ years % (SE)	
1st Quartile: < \$1.74	23.4 (6.7)	27.0 (6.6)	16.0 (3.3)	22.5 (3.6)
2nd Quartile: \$1.74-\$4.62	37.1 (8.3)	20.8 (7.5)	13.8 (4.5)	26.3 (4.4)
3rd Quartile: \$4.63-\$19.24	28.7 (10.5)	19.6 (6.2)	28.3 (6.4)	26.0 (5.5)
4th Quartile: > \$19.24	10.9 (4.6)	32.6 (8.1)	41.9 (6.6)	25.2 (3.9)
Median weekly spend	\$3.85	\$4.81	\$13.85	\$4.81
(IQR)	(1.92-6.92)	(1.35-27.69)	(2.40-46.15)	(1.92-20)
Population (N)	7,751	4,891	4,543	17,185

Significant association between age and EGM spend: \*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05

Figure 104 graphs the significant association between EGM weekly expenditure by age. The percentage of EGM gamblers in the highest spend quartile increased from younger (11%) to older (42%) EGM highest spend gamblers. The reverse of this pattern was present in the bottom two quartiles, with 18-34 years having a greater share (23% and 37%) in these quartiles, decreasing to 27% and 21% for gamblers aged 35-54 years, while those 55 years and over had 14% and 16% in the bottom two lowest spend quartiles respectively.



**Figure 104:** EGM weekly expenditure quartiles by age, gamblers whose highest spend activity was EGMs

Significant association between age and EGM spend: \*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05

Unsurprisingly, there was a significant association between EGM frequency of gambling and weekly spend (Table 58). Median weekly EGM expenditure amongst those who gambled one or more times per week was \$150, dropping to \$23 for those who gambled one to three times per month, and dropping again to \$2.88 for those playing EGMs less than monthly.

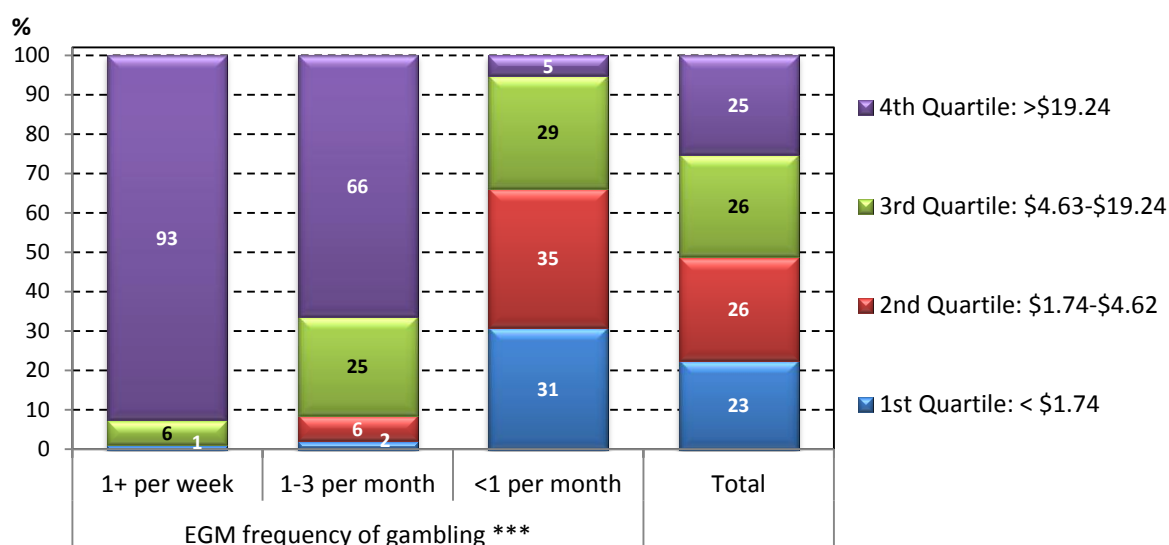
**Table 58:** EGM weekly expenditure quartiles and median EGM expenditure (IQR) by EGM frequency of gambling, gamblers whose highest spend activity was EGMs

	EGM frequency of gambling ***			Total % (SE)
	1+ per week % (SE)	1-3 per month % (SE)	<1 per month % (SE)	
1st Quartile: < \$1.74	1.1 (1.1)	2.1 (2.1)	30.9 (5.2)	22.5 (3.6)
2nd Quartile: \$1.74-\$4.62	0.0 (0.0)	6.4 (3.0)	35.2 (6.0)	26.3 (4.4)
3rd Quartile: \$4.63-\$19.24	6.3 (4.3)	25.2 (11.3)	28.7 (6.9)	26.0 (5.5)
4th Quartile: >\$19.24	92.7 (4.5)	66.3 (10.9)	5.2 (3.0)	25.2 (3.9)
Median weekly spend	\$150	\$23.08	\$2.88	\$4.81
(IQR)	(55.38-400.00)	(13.85-43.27)	(0.96-4.81)	(1.92-20)
Population (N)	1,556	3,420	12,208	17,185

Significant association between EGM frequency of play and EGM spend:

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05

Figure 105 graphs the distribution of EGM weekly expenditure quartiles by EGM frequency of gambling. This association was highly significant, with 93% of weekly EGM gamblers in the highest spend quartile, compared with 66% of monthly and 5% of less than monthly EGM gamblers.



**Figure 105: EGM weekly expenditure quartiles by EGM frequency of gambling, gamblers whose highest spend activity was EGMs**

Significant association between EGM frequency of play and EGM spend:

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Table 60 reports total EGM spend for EGM highest spend gamblers for EGM frequency of gambling by socio-demographic factors and problem gambling risk. It also includes population, EGM spend per person and the percentage share of EGM spending by weekly gamblers.

Approximately \$687,000 was spent on EGM by 17,185 gamblers whose highest spend was EGMs, which equated to \$40 per person per week. Across the NT, weekly EGM players for which EGMs was their highest spend activity, accounted for 73% of the total EGM spending by these gamblers. EGM highest spend gamblers living in Darwin/Palmerston spent \$54 per person, compared with \$41 per person per week in the Rest of NT, \$18 per person per week in Regional Towns and \$15 per person per week in Alice Springs. While Alice Springs EGM spend per person was low, weekly EGM gamblers accounted for 60% of total EGM spend, compared with 80% in Darwin/Palmerston, 33% in Regional Towns and 30% in the Rest of NT. Men (\$45 per person), spent slightly more than women (\$36 per person), and men's weekly EGM gamblers share of total EGM spend was 78%, compared with 69% for female weekly EGM gamblers.

EGM highest spend gamblers 35 years and over spent between \$51 and \$53 per person per week on EGM, compared with \$25 per person per week for those under 35 years. Across age groups, there was little variation in the percentage share of weekly EGM gamblers of total spend, ranging from 72% for EGM gamblers 35 years and over to 77% for those under 35 years.

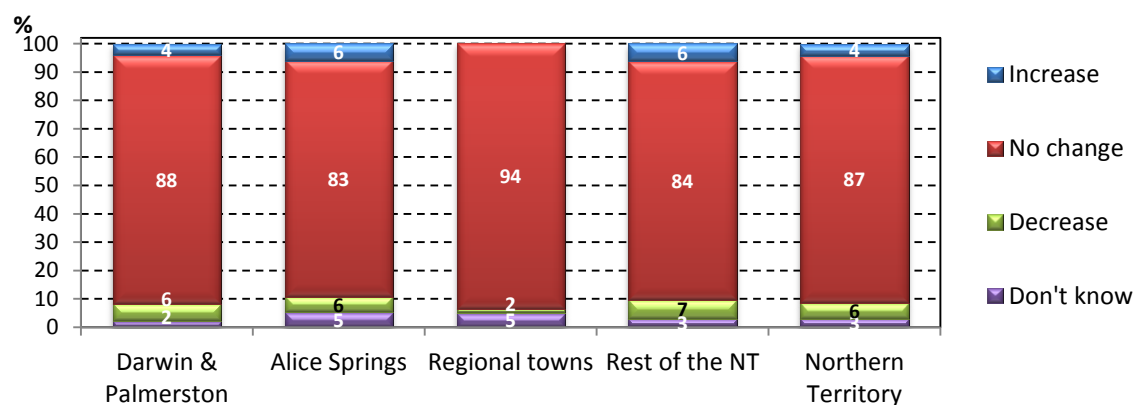
EGM highest spend gamblers who were classified as problem gamblers spent on average \$215 per person per week, while those classified as moderate risk spent \$133 per person per week, and low risk \$41 per person per week and no risk \$10 per person per week. For weekly EGM gamblers, moderate risk gamblers had the highest share of total spend at 90%, followed by problem gamblers at 79%, low risk gamblers 71%, and no risk gamblers at 32%.

**Table 59:** EGM frequency of gambling by socio-demographic factors, total EGM spend per week, population and spend per person per week, EGM highest spend activity

	EGM frequency of gambling				Population N	EGM weekly spend per person \$	Weekly EGM gamblers share %
	1+ per week \$	1-3 per month \$	<1 per month \$	Total \$			
Northern Territory	503,712	119,885	63,269	<b>686,867</b>	17,185	40	73
Regions							
Darwin & Palmerston	442,771	68,443	32,552	<b>543,766</b>	10,017	54	81
Alice Springs	33,297	13,041	8,889	<b>55,226</b>	3,734	15	60
Regional Towns	14,104	19,453	8,864	<b>42,421</b>	2,313	18	33
Rest of the NT	13,541	18,948	12,964	<b>45,453</b>	1,122	41	30
Gender							
Males	256,696	39,132	32,628	<b>328,457</b>	7,326	45	78
Females	247,016	80,753	30,641	<b>358,410</b>	9,859	36	69
Age							
18-34 years	151,388	25,606	20,088	<b>197,082</b>	7,751	25	77
35-54 years	177,313	40,962	29,385	<b>247,661</b>	4,891	51	72
55+ years	175,011	53,316	13,796	<b>242,124</b>	4,543	53	72
PGSI							
Problem gambler	163,708	40,672	1,716	<b>206,096</b>	959	215	79
Moderate risk gambler	206,480	17,225	5,152	<b>228,856</b>	1,721	133	90
Low risk gambler	96,831	27,062	12,345	<b>136,238</b>	3,295	41	71
No risk	36,694	34,927	44,056	<b>115,677</b>	11,211	10	32

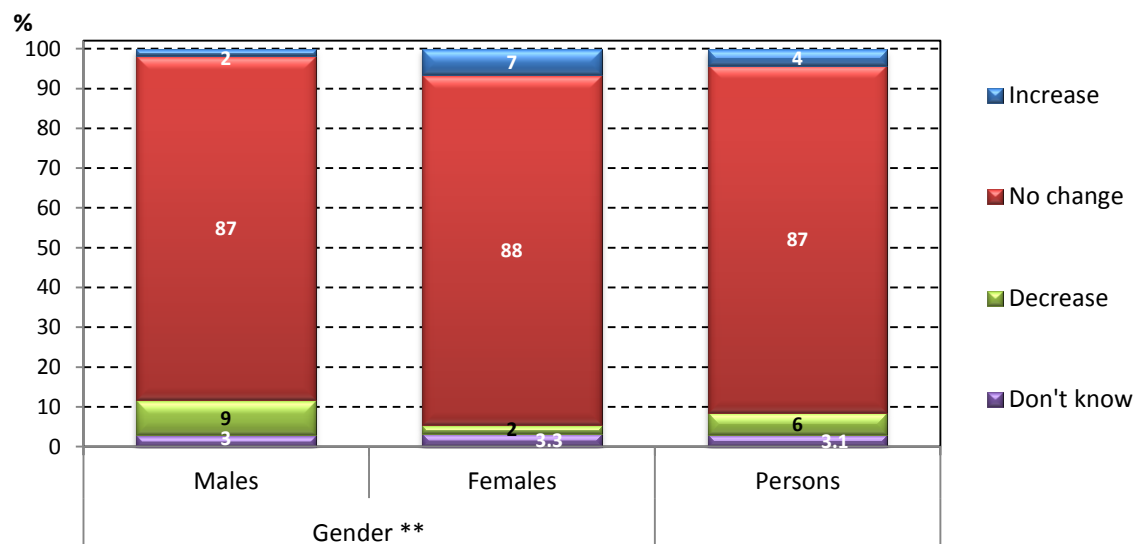
## 9.7 In-venue regulation and EGM gambling behaviour

The following three figures look at whether the 2009 in-venue smoking ban changed how much EGM players usually spend. Figure 106 shows that 87% of EGM players across the NT said the smoking ban did not affect how much they spend. The association between region and change in spend because of the smoking ban was not significant, though there was variation across regions, with EGM players from Regional Towns more likely to say that it made no change in how much they spent on EGMs.



**Figure 106:** Has the ban on smoking in gaming areas changed how much you spend on EGMs by region, EGM players

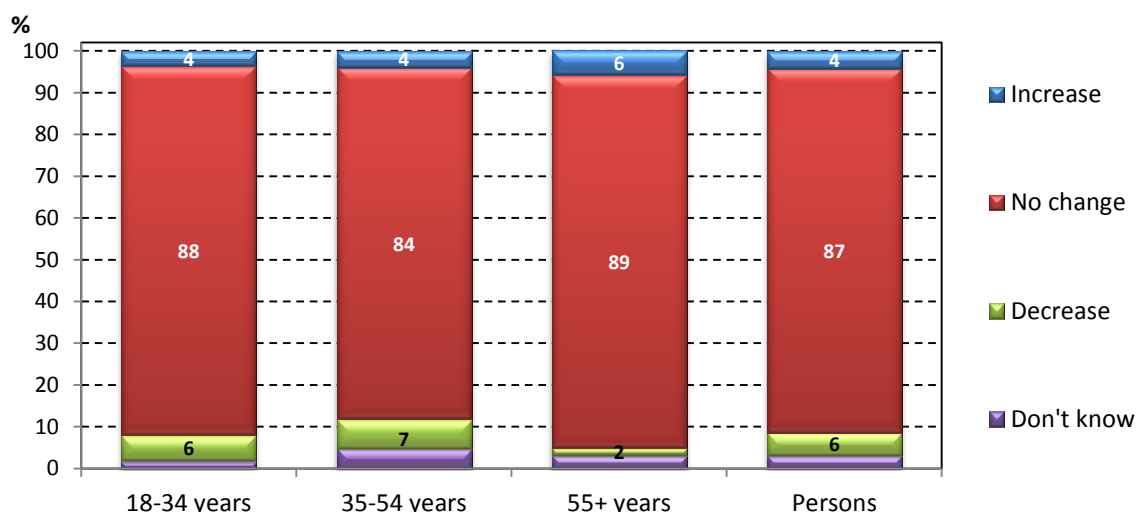
There was a significant difference ( $p < 0.01$ ) between men and women in how they answered the smoking ban and EGM spend question (Figure 107). Nine percent of men compared with 2% of women said that the smoking ban led to a decrease in how much they spend on EGMs, while conversely, only 2% of men said that it led to an increase, compared with 7% of women.



**Figure 107:** Has the ban on smoking in gaming areas changed how much you spend on EGMs by gender, EGM players

Significant association between gender and smoking ban EGM spend: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

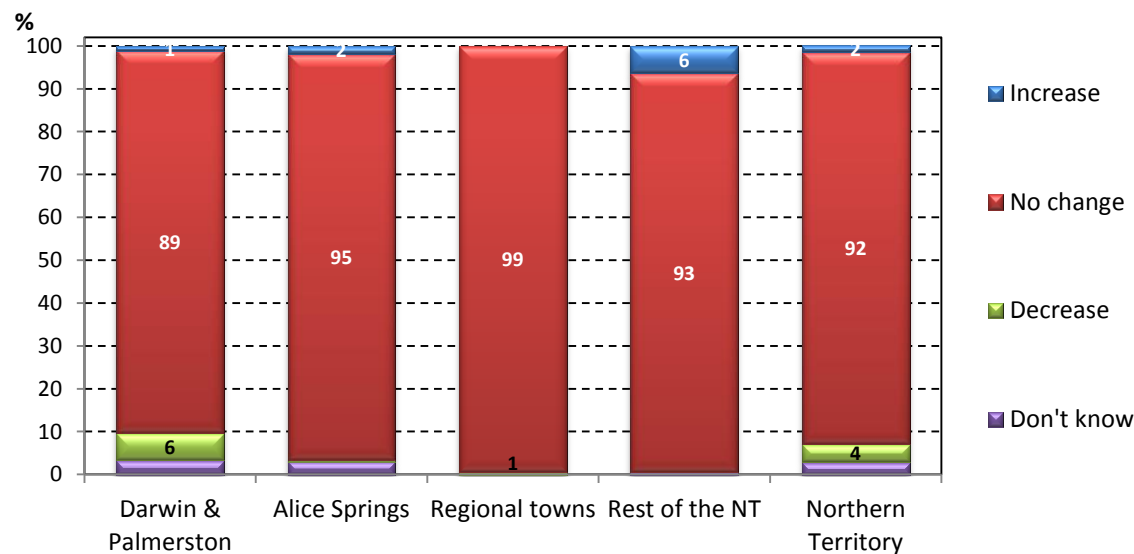
Figure 108 shows the association between age and the effect of the smoking ban on EGM spend. There was some variation between age groups, but this association was not significant. The main difference was that older EGM players were less likely to say that the bans led to a decrease compared with players less than 55 years.



**Figure 108:** Has the ban on smoking in gaming areas changed how much you spend on EGMs by region, EGM players

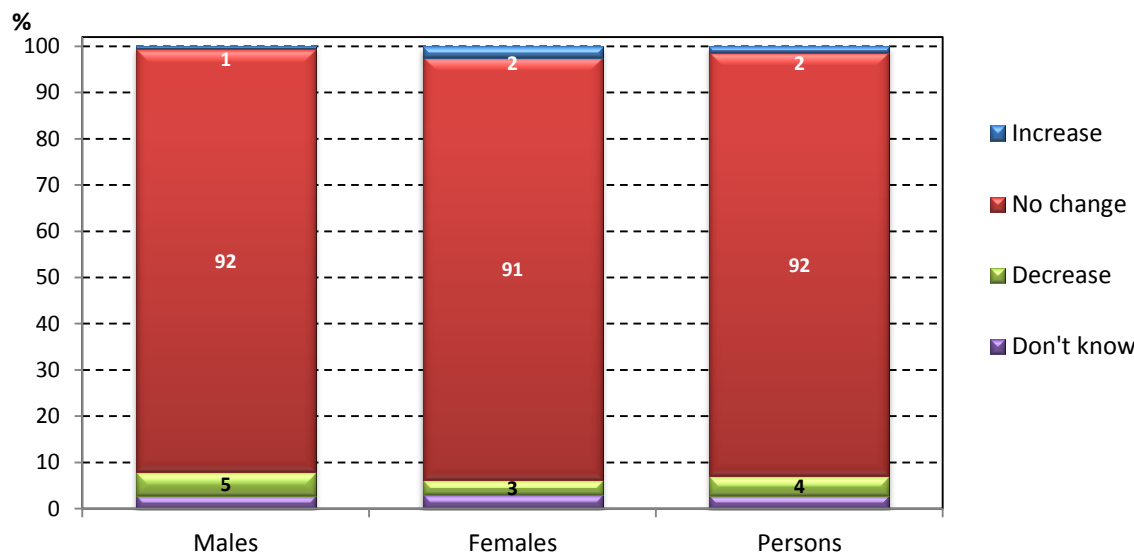
Across the NT, 92% of EGM players said that putting the ATM out of view of the gaming area did not affect how much they spent playing (Figure 109). There was

some variation across regions, but the association with region was not significant. Similar to smoking ban question, a larger percentage of EGM players in Regional Towns (99%) said the policy made no change to their EGM spending patterns.



**Figure 109:** Has moving the ATM out of sight of the gaming area changed how much you spend on EGMs by region, EGM players

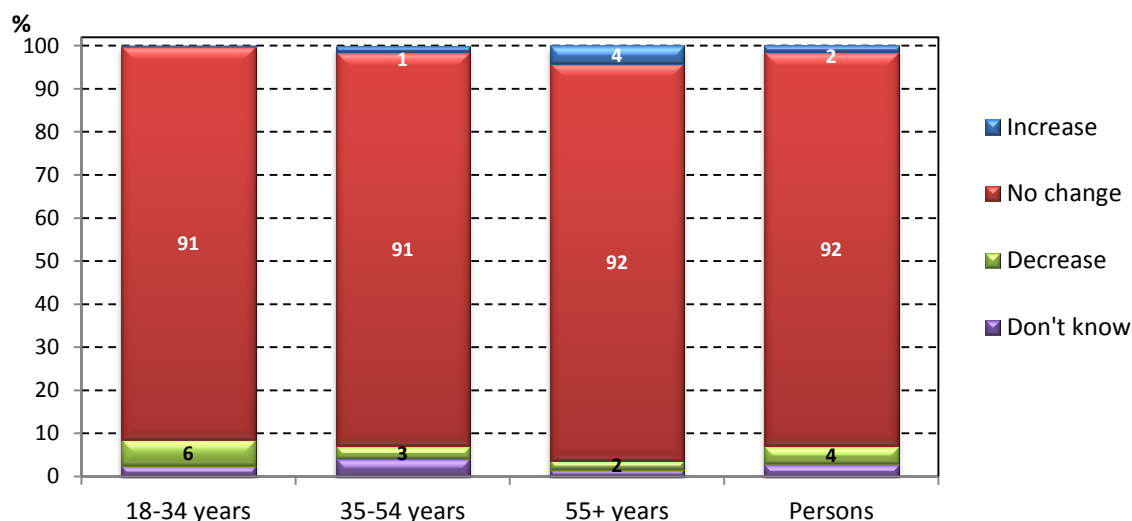
There was no significant difference between men and women in EGM spending patterns associated with the ATM policy change (Figure 110), though 5% of men said it led to a decrease in spending, compared with 3% of women.



**Figure 110:** Has moving the ATM out of sight of the gaming area changed how much you spend on EGMs by gender, EGM players

The association between age and change in spending associated with the policy change of placing the ATM out of sight was marginally non-significant (Figure 111). Younger EGM players were slightly more likely to say they spent less because of the

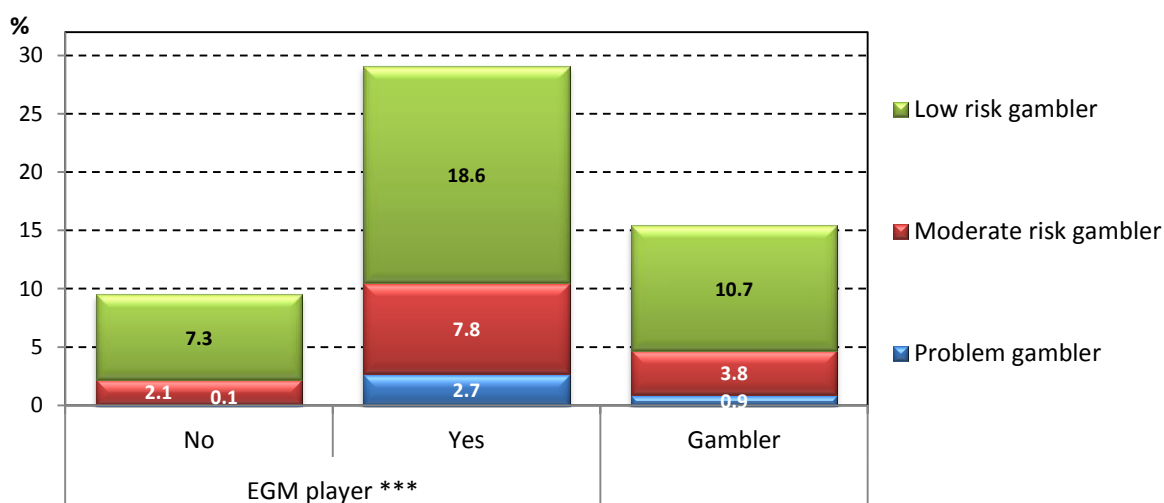
ATM policy change, while older players were more likely to say they increased how much they spent on EGMs.



**Figure 111:** Has moving the ATM out of sight of the gaming area changed how much you spend on EGMs by age, EGM players

### 9.8 EGM play and problem gambling risk

Figure 112 graphs PGSI estimates for EGM players and non-EGM players (but gamblers). This association was highly significant ( $p < 0.001$ ), with EGM players over-represented in all categories of problem gambling risk. EGM players were 27 times more likely to be problem gamblers, 3.7 times more likely to be moderate risk gamblers, and 2.5 times for likely to be low-risk gamblers, compared with non-EGM gamblers. EGM players were more than three times likely to be at-risk gamblers.



**Figure 112:** PGSI by EGM player, all gamblers

Significant association between EGM play and PGSI: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Table 60 presents the counts of people for the data in Figure 112. EGM players make up 30% of all gamblers, but are over-represented across all problem gambling risk categories (3.1 times for problem gamblers, 2 times for moderate risk



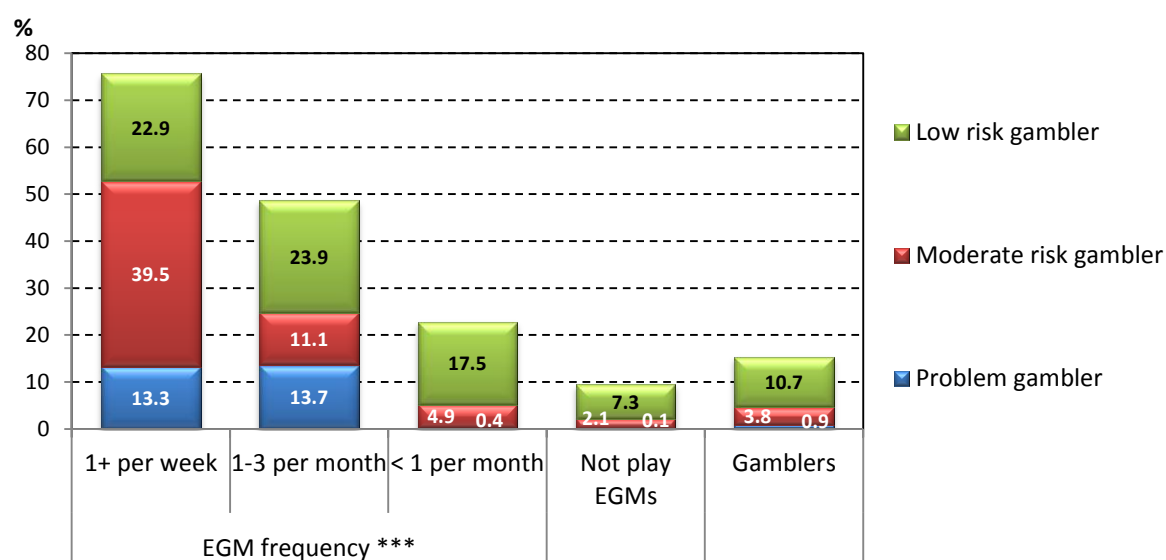
gamblers and 1.7 times for low risk gamblers), and under-represented amongst no risk gamblers.

**Table 60:** PGSI by EGM player and percentage EGM player, all gamblers

	Not EGM player N	EGM player N	All gamblers N	% EGM gambler	Rate ratio <sup>¥</sup>
Problem gambler	95	1,111	1,206	92.1	3.1
Moderate risk gambler	1,972	3,157	5,128	61.6	2.0
Low risk gambler	6,835	7,548	14,383	52.5	1.7
Non-risk gambler	85,052	28,755	113,807	25.3	0.8
<b>Total</b>	<b>93,953</b>	<b>40,571</b>	<b>134,524</b>	<b>30.2</b>	<b>1.0</b>

¥ = Ratio of % EGM gamblers of problem gambling risk category divided by total %

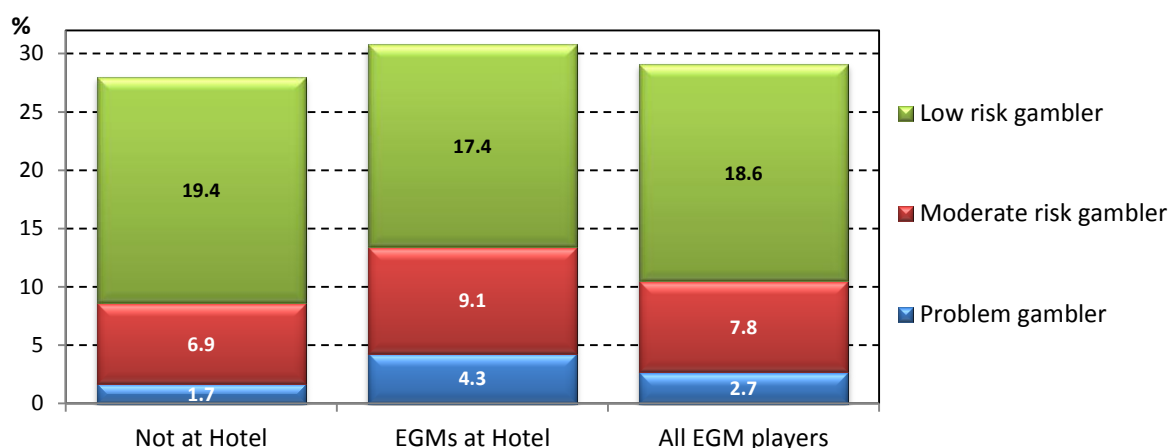
Figure 113 shows that an increase in frequency of playing EGMs, is significantly associated with an increase in problem gambling risk, with 13% of weekly EGM gamblers classified as problem gamblers, 40% as moderate risk gamblers and 23% as low risk gamblers. Problem gambling risk was also higher amongst monthly EGM gamblers, with 14% problem gamblers, 11% moderate risk gamblers and 24% low risk gamblers. Therefore, EGM gamblers compared with all gamblers had higher problem gambling risk across all frequency of gambling categories, except for problem gamblers for less than monthly EGM gamblers.



**Figure 113:** PGSI by frequency of EGM play, all gamblers

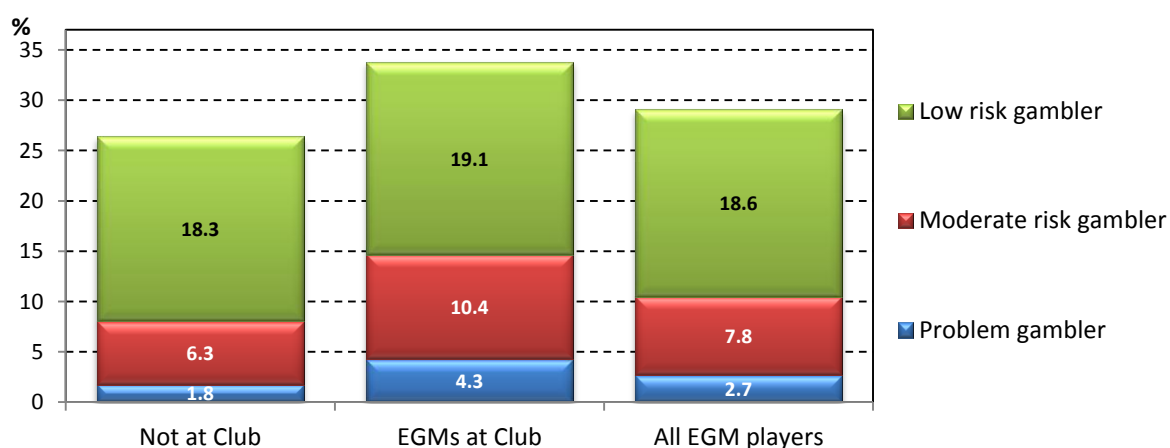
Significant association between EGM frequency of play and PGSI: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

The next five figures show where people played EGMs and problem gambling risk. of the 40.3% of EGM gamblers who played EGMs in a hotel there was a higher prevalence of problem gamblers (4.3% cf. 1.7%), though this association was not statistically significant (Figure 114).



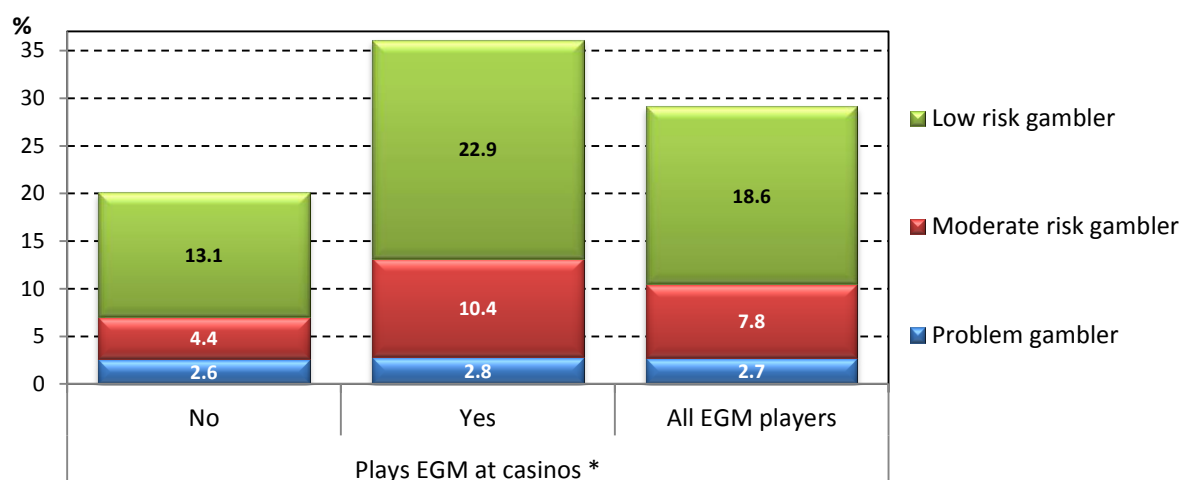
**Figure 114:** PGSI by plays EGMs at a Hotel, EGM players

Of the 36% of EGM gamblers who played EGMs in clubs, there was no statistically significant association with problem gambling risk (Figure 115), and problem gambling risk showed a similar distribution to that observed for EGM players in hotels.



**Figure 115:** PGSI by plays EGMs at a Club, EGM players

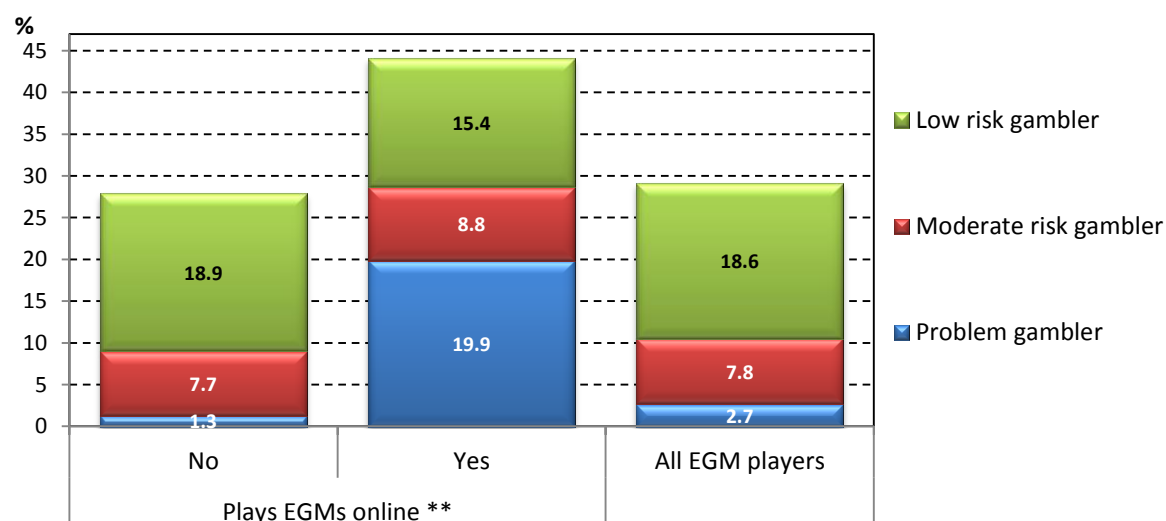
Playing EGMs in casinos was significantly associated with problem gambling risk amongst the 56% of EGM gamblers who played in casinos (Figure 116). Specifically, there was no difference in problem gambling prevalence between casino and non-casino EGM players, but playing at the casinos was associated with an over-representation in moderate and low risk gambler categories compared with EGM players who did not play in the casino.



**Figure 116: PGSI by plays EGMs at a Casino, EGM players**

Significant association between EGM play at casinos and PGSI: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

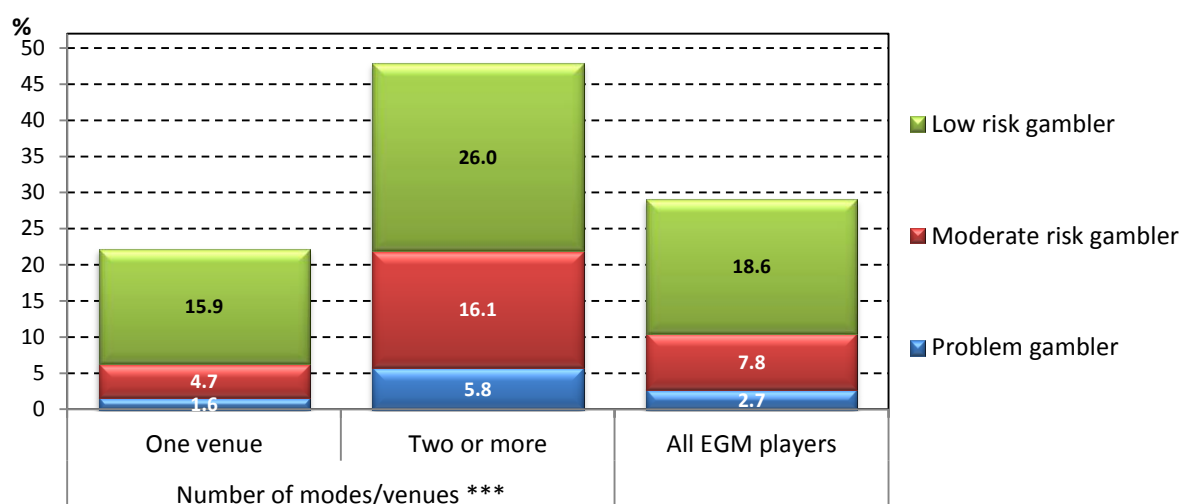
While only a small percentage of EGM players gambled online (7.8%), those who did were significantly more likely to be problem gamblers (Figure 117). Specifically, they were 15 times more likely to be problem gamblers (20% cf. 1.3%), but there was little difference in the moderate and low risk gambler groups.



**Figure 117: PGSI by plays EGMs at a Online, EGM players**

Significant association between plays EGMs online and PGSI: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

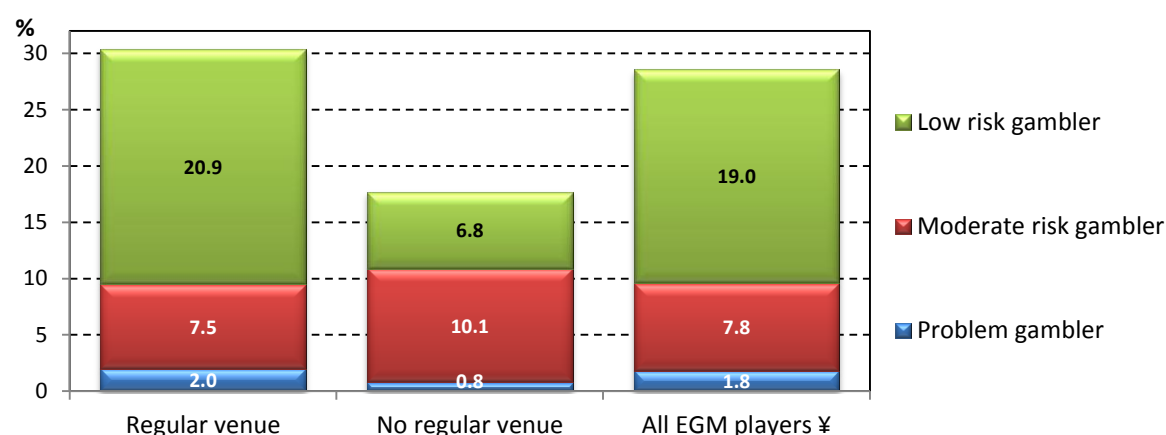
Figure 118 shows the relationship between the number of different places where people played EGMs and problem gambling risk. This association was highly significant, with EGM players who play in two or more venues compared with one venue, 3.6 times more likely to be problem gamblers, 3.4 times more likely to be moderate risk gamblers and 1.6 times more likely to be low risk gamblers.



**Figure 118: PGSI by number of modes/venues where plays EGMs, EGM players**

Significant association between plays EGMs online and PGSI: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

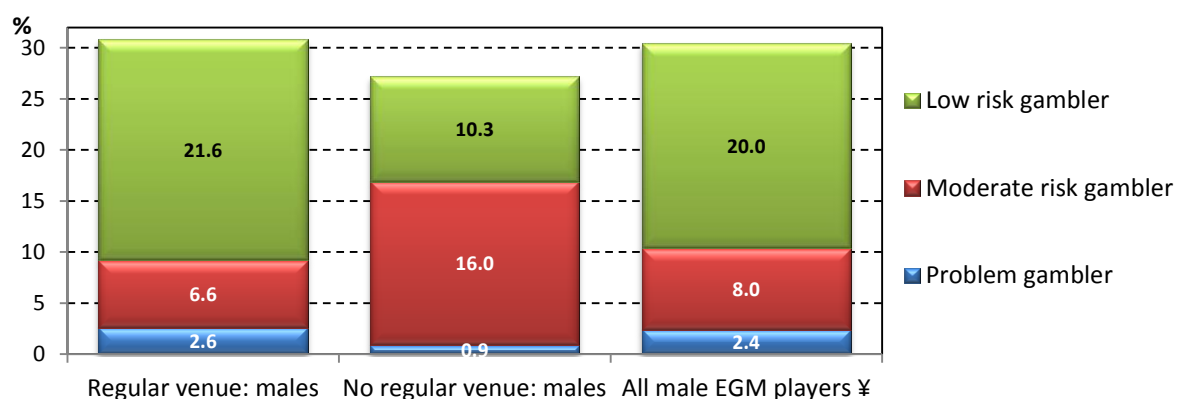
The next three figures show the relationship between having a regular EGM venue and problem gambling risk for all EGM players and gender. The association between regular EGM venue and the PGSI was not significant, though there was variation on some PGSI categories, but with large standard errors (not shown) around estimates (Figure 119).



**Figure 119: PGSI by has a regular venue where plays EGMs, all EGM players**

NOTES: ¥ Excludes EGM online only players

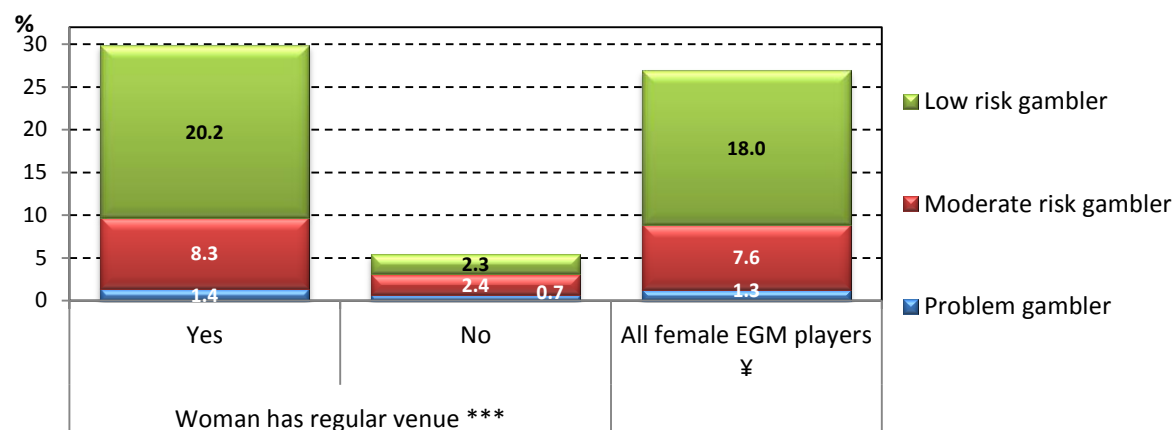
Figure 120 shows that there was a non-significant association between the PGSI and having a regular EGM venue for males, though a higher percentage of male regular venue EGM players were problem gamblers (2.6%) compared with non-regular venue EGM players (0.9%).



**Figure 120:** PGSI by has a regular venue where plays EGMs, male EGM players

NOTES: ¥ Excludes EGM online only players

The association between regular venue and the PGSI for women was statistically significant (Figure 121). Female EGM players with a regular venue compared with no regular venue were two times more likely to be a problem gambler (1.4% cf. 0.7%), 3.5 times for moderate risk gambler (8.3% cf. 2.4%), and 8.8 times for low risk gamblers (20.2% cf. 2.3%). The consistent association between having a regular venue and problem gambling risk for females is in contrast to that seen for males.



**Figure 121:** PGSI by has a regular venue where plays EGMs, female EGM players

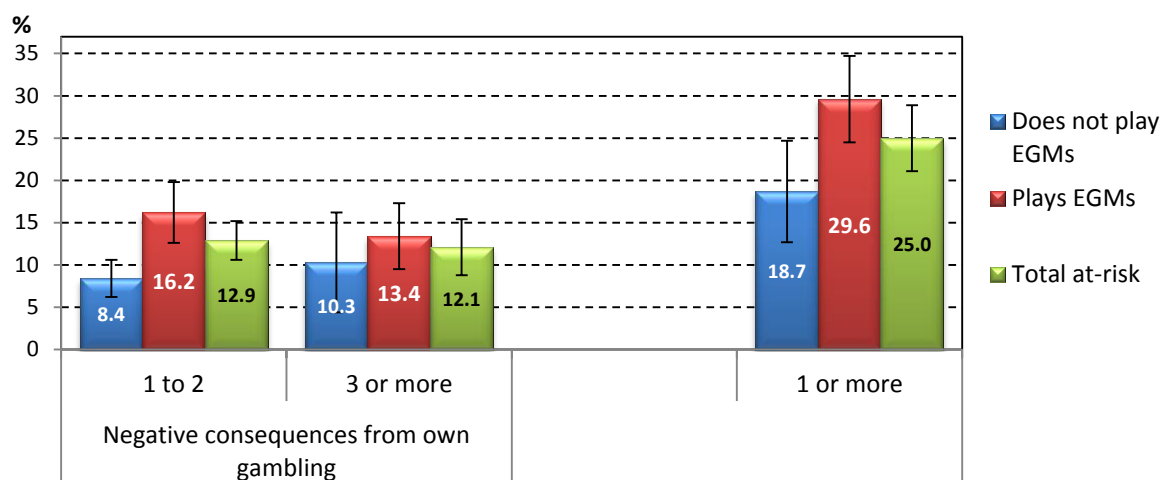
NOTES: ¥ Excludes EGM online only players

Significant association between regular EGM venue and PGSI: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

## 9.9 EGM players and harm from their own or another person's gambling

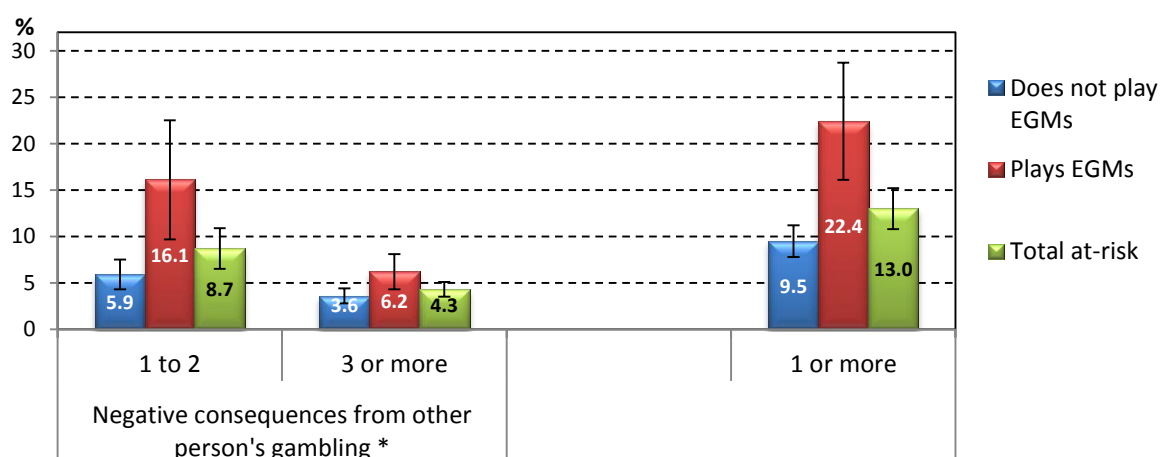
EGM gamblers are at a higher risk of problem gambling and negative consequences associated. From the previous section, we know that 29% (11,815 people) of EGM gamblers are at-risk problem gamblers, as classified by the PGSI, and the association between EGM play and problem gambling was highly significant. Figure 122 shows whether these at-risk EGM players identified additional negative consequences because of their own gambling compared with non-EGM gamblers. Around 30% of at-risk EGM gamblers identified negative consequences from their own gambling compared with 19% amongst non-EGM gamblers, though this association was not significant. Breaking this up, 16% of EGM gamblers identified one or two negative consequences and a further 13% three or more,

compared with 8% of non-EGM gamblers identifying one or two and 10% three or more negative consequences.



**Figure 122:** EGM gamblers by negative consequences of their own gambling, at-risk gamblers

Figure 123 shows the relationship between gambling on EGMs and experiencing negative consequences from another person's gambling. This association was significant, with EGM gamblers (22%) more likely to be negatively affected by another person's gambling, compared with non-EGM gamblers (10%). EGM gamblers were more likely to experience one or two negative consequences compared with non-EGM gamblers (16% cf. 6%) and three or more negative consequences (6% cf. 4%). The types of negative consequences experienced because of another person's gambling (not shown) differed significantly between EGM gamblers and non-EGM gamblers for ran out of money for bills (10% cf. 2.4%), raided savings account/funds (10% cf. 3%), sold or hocked possessions (2% cf. 0.6%), physical or verbal violence towards you (3.6% cf. 1.2%), and did something outside the law (1.6% cf. 0.1%).



**Figure 123:** EGM gamblers by negative consequences of their own gambling, at-risk gamblers

Significant association between negative consequences & EGM play: \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

## 10 ELECTRONIC GAMING MACHINES PLAYER LOSS

### 10.1 Background

This chapter presents player losses (also known as player expenditure) data obtained from the NTG Department of Business. Changes in EGM player loss can reflect policy changes, consumer preferences, or changes in the number of venues and machines in venues. There were four changes to policy and regulation over the period 2003/4 to 2014/15 that may have affected player losses and the number of EGMs operating in the NT:

- Smoking ban in all venues started from 1 January 2010.
- Note acceptors allowed in community venues (hotels and clubs) from 28 May 2013, bringing them into line with the two casinos, which have always had note acceptors, allowing players put in up to \$999 in \$20, \$50 or \$100 notes.
- Previous caps of 10 EGMs per hotel and 45 EGMs per club were lifted in July 2015 to allow hotels up to 20 EGMs and clubs up to 65 EGMs.
- Minimum percentage return to player was amended on 21 September 2015 for casinos from 88% to 85%, which brought them into line with community venues.

#### 10.1.1 Chapter contents

The chapter presents trends in number EGMs, number of venues, player loss, player loss per machine, and percentage return to player for different venue types. Trends are reported for unadjusted and entertainment CPI adjusted (to 2014/15 dollar values) data, with entertainment CPI adjusted data also known as 'real' dollar values (i.e. pegged to the most recent year of data). These may differ slightly to other published data, which uses regular CPI to adjust to the most current year.

### 10.2 Chapter highlights

- The number of EGMs in the NT peaked in 2010/11, and since then has been relatively stable at around 2,200 machines, which were spread mostly evenly between the casinos (48%) and community (clubs and hotels) venues (52%).
- The number of venues with EGMs has declined from a high of 80 in 2008/9 to 70 in 2014/15, the lowest number since 2003/4.
- Real EGM player losses in the casinos have been declining since 2007/8 (\$113 million) and in 2014/15 were \$79 million. However, in hotels and clubs, from a peak in 2008/9 (\$96 million), real player losses declined to \$64 million in 2012/13, before increasing by more than 27% over two years to \$83 million, with hotels and clubs now having a greater share of EGM player losses than the two casinos for the first time in the NT.
- Real EGM player loss per machine peaked in 2007/8 for the two casinos (\$136,000 per machine) and for community venues (\$83,000), with player losses in hotels and clubs declining to \$59,000 per machine in 2011/12 before increasing steadily and reaching \$74,000 per machine in 2014/15, which was just less than the casinos at \$75,000 per machine.
- Player returns ( $[100\% - \text{player losses/machine turnover}] \times 100$ ) in the casinos were relatively stable and varied between 91.1% and 91.9% over the period, in contrast with community venues, where player returns have been steadily increasing from 88.6% in 2003/4 to 90.5% in 2014/15, and appear to be converging with EGM player returns in the casinos.

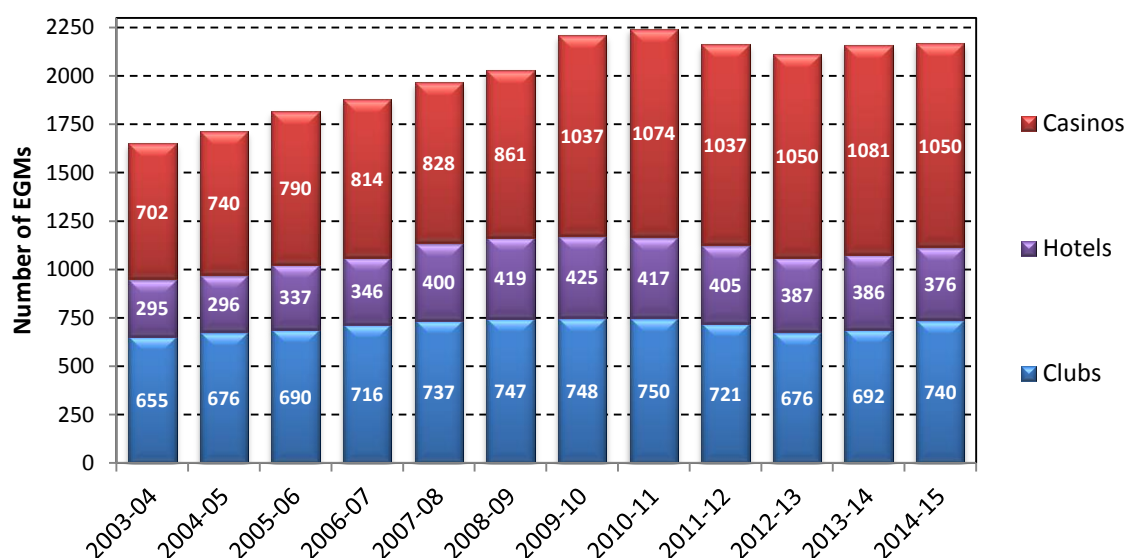
### 10.3 Casinos, hotels and clubs player loss and EGM numbers

Table 61 shows the number of EGMs and player loss for the two casinos combined, and for hotels and clubs combined. Since 2009/10 the total number of EGMs in the NT has been relatively stable at around 2,200 machines, with machines evenly spread between the community venues (i.e. hotels and clubs) and the two casinos.

**Table 61:** Number of EGMs and unadjusted player loss by venue, 2003/4 to 2014/15

	Casinos Number of EGMs	Hotels & Clubs Number of EGMs	Casinos Player loss (\$)	Hotels & Clubs Player loss (\$)	Total player loss (\$)
2003/04	702	950	\$59,086,691	\$45,000,354	\$100,051,980
2004/05	740	972	\$65,868,373	\$49,861,432	\$111,458,867
2005/06	790	1,027	\$74,747,916	\$56,833,630	\$123,716,768
2006/07	814	1,062	\$79,727,167	\$63,705,628	\$137,590,133
2007/08	828	1,138	\$85,788,583	\$72,063,598	\$152,683,671
2008/09	861	1,166	\$91,583,934	\$78,665,192	\$162,349,953
2009/10	1,037	1,172	\$87,126,562	\$69,581,833	\$171,216,429
2010/11	1,074	1,167	\$80,437,456	\$62,549,616	\$144,401,762
2011/12	1,037	1,125	\$81,378,844	\$62,673,592	\$141,711,552
2012/13	1,050	1,062	\$80,900,227	\$61,135,424	\$143,818,678
2013/14	1,081	1,078	\$81,271,025	\$68,838,209	\$144,019,774
2014/15	1,050	1,116	\$79,099,924	\$82,629,460	\$157,111,766

Figure 124 shows the number of EGMs and the type of venue they were located in from 2003/4 to 2014/15, while Figure 125 shows the percentage of EGMs by venue type. The number of EGMs in the NT increased from 2003/4 to 2010/11 at which time it peaked at 2,241 machines. Since 2010/11 the number of EGMs across the NT has remained steady between 2,100 and 2,160. The number of EGMs in clubs and hotels declined from 2010/11, with EGM numbers peaking for hotels in 2009/10.

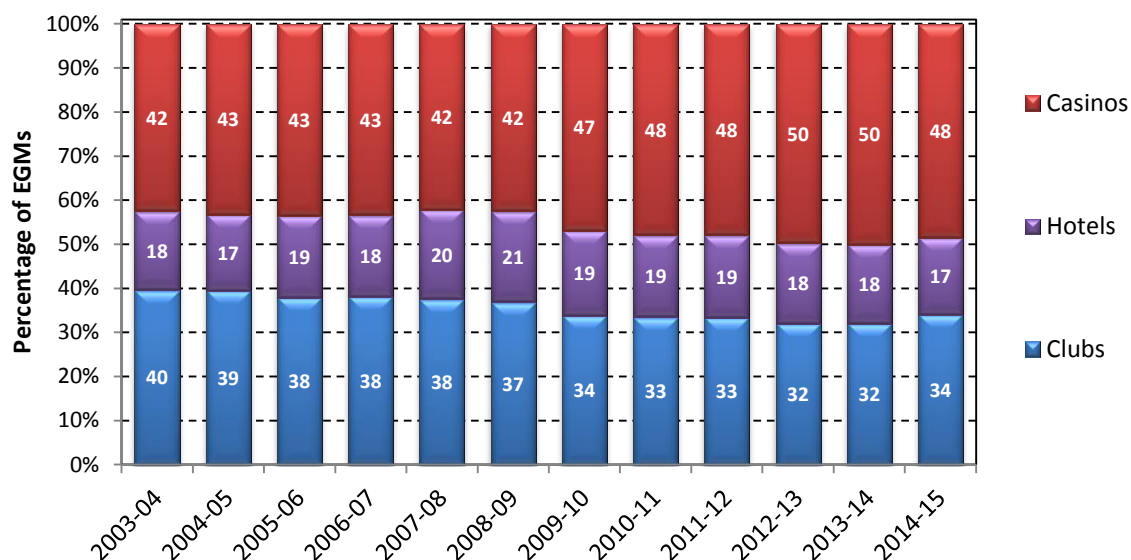


**Figure 124:** Number of EGMs by venue type, 2003/04 to 2014/15

Figure 125 shows that the two casinos increased their share of EGMs over the 2003/4 to 2014/15 period, and controlled between 48% and 50% of all EGMs in the NT from 2010/11 to 2014/15. Hotels had an increasing share of total EGMs from

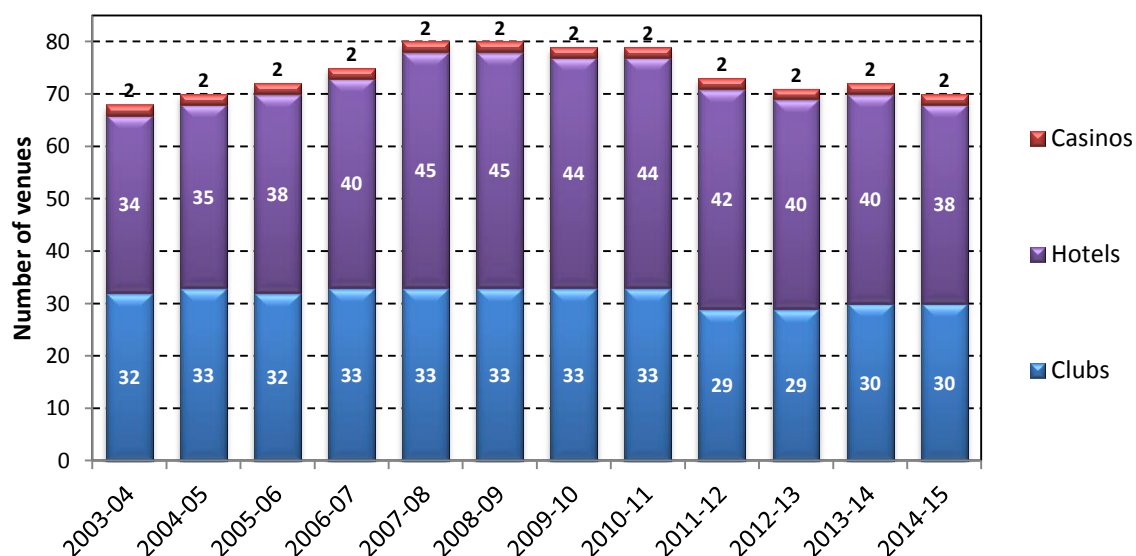


2003/4 (18%) to 2008/9 (21%), followed by a decreasing share through to 2014/15 (17%). Forty percent of EGMs were located in clubs in 2003/4, and this share declined through to 2013/14 when clubs had 32% of EGMs, before increasing in 2014/15 to 34%.



**Figure 125:** Percentage of EGMs by venue type, 2003/04 to 2014/15

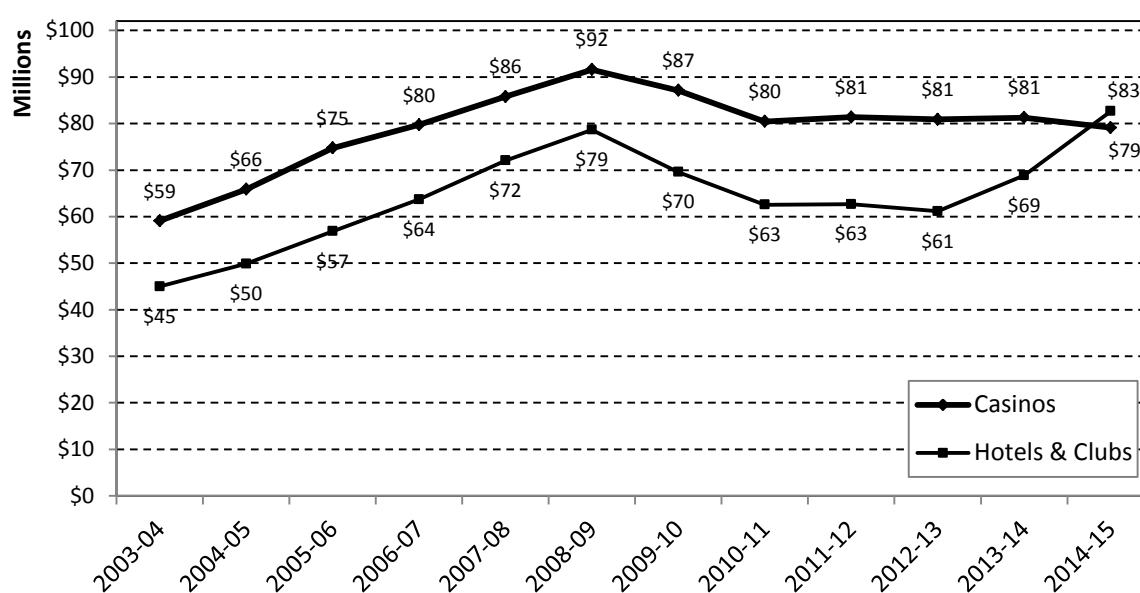
Figure 126 shows the number of venues by venue type. There have only been two casinos located in the NT over the period (Alice Springs and Darwin). The number of hotels increased from 34 in 2003/4 and peaked in 2007/8 to 2008/9 at 45 venues, before declining to 38 venues in 2014/15. The number of clubs has remained relatively stable over the 2003/4 to 2014/15 period, ranging from 29 to 33, though since 2010/11 there has been a drop from 33 to 30 club venues.



**Figure 126:** Number of venues by venue type, 2003/04 to 2014/15

Figure 127 shows that there has been increasing player losses in both community venues and the casinos up until the 2008/09 financial year. This increase in growth to some degree simply reflects the increasing numbers of EGMs available, but is also a function of a venue's player loss per machine. The smoking ban officially started in 2009, though some venues had already begun to go smoke free prior to this date, and this policy change has had a large impact on player losses. Player losses for community venues and the casinos declined from 2008/9 to 2009/10, which likely reflects a reduction in spend by EGM players who smoke. Therefore, while increasing EGM numbers contributed to increasing overall player losses as EGM numbers increased until 2010/11 and then plateaued, the smoking ban had a significant impact on unadjusted EGM player losses.

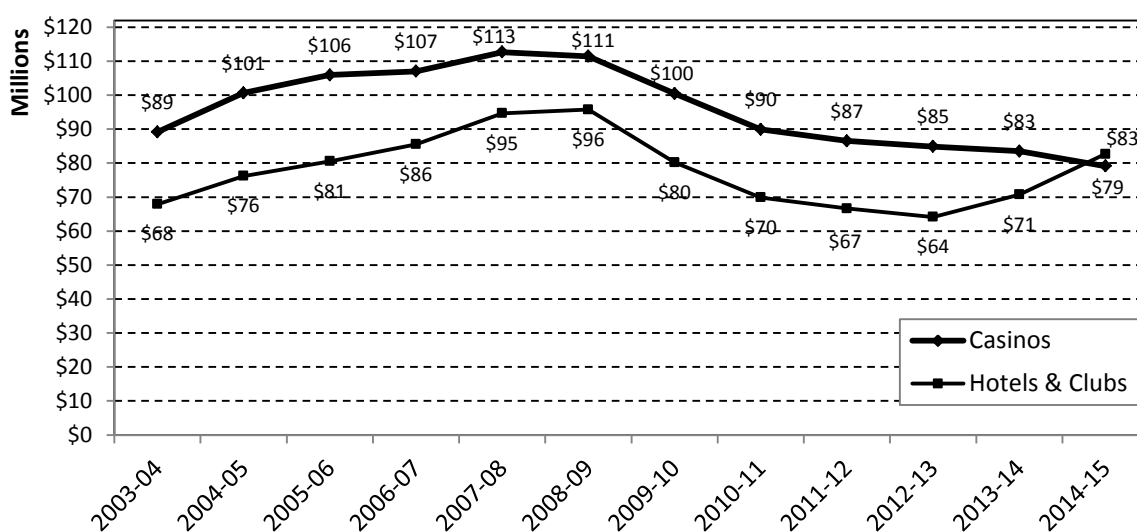
Different trends in player losses were observable between the casinos and community venues. For casinos, there are steadily increasing player losses from 2003/4 to 2008/9, followed by decreasing player losses from 2008/9 to 2010/11, and then a levelling out period from 2010/11 to 2014/15. The first two trends that were present for casino player losses were also present for community venues (increasing to 2008/9, and then decreasing to 2010/11). However, player losses began to increase again from 2012/13 to 2014/15 in community venues, and in 2014/15, for the first time in the NT, community venues accrued (\$83 million) more player losses than casinos (\$79 million). This increase is likely attributable to the policy change that allowed community venues to install not acceptors on their EGMs, though to make conclusive attribution, data at the machine level would be required, or at least the proportion of EGMs in a venue that had note acceptors.



**Figure 127:** Unadjusted player loss by venue type, 2003/04 to 2014/15

Figure 128 shows player loss trends for the casinos and community venues, but this time the data is adjusted using the entertainment CPI to reflect 2014/15 dollar values. This changes the trends observed for both community venues and the casinos. The upward trend in player losses for casinos now peaks in 2007/8 (one year before unadjusted), and then declines every year from then until 2014/15. For community venues, the increasing trend still peaks in 2008/9, and then declines through to 2012/13, before increasing again, as with the unadjusted data.

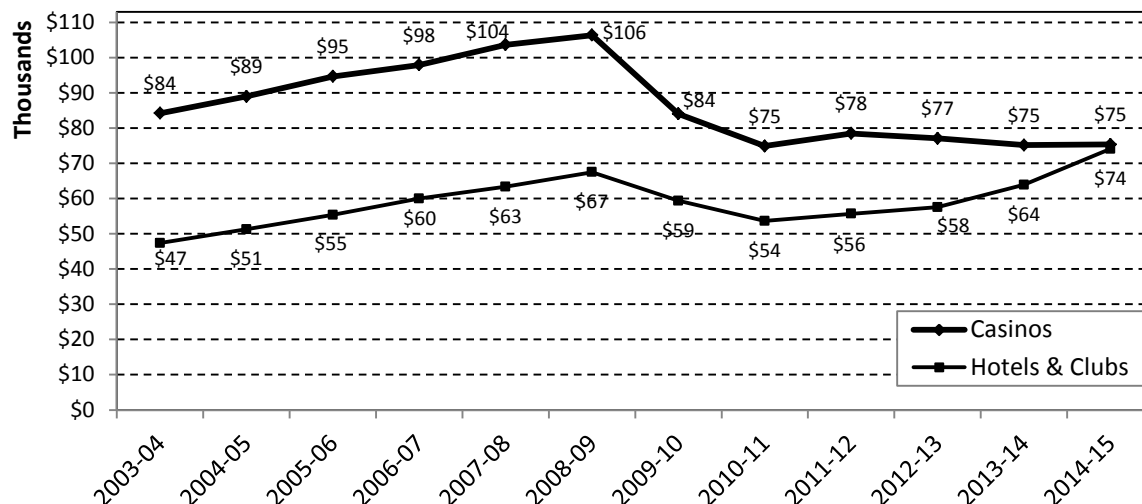
So, real player losses from casinos declined 1% from 2007/8 to 2008/9, declined 10% from 2008/9 to 2009/10, declined 11% from 2009/10 to 2010/11, and from 2011/12 to 2014/15 there were percentage decreases ranging from 2% to 5%. In community venues, the hit on player losses from the smoking ban was larger than casinos. In community venues, there was an initial decline of 16.2% from 2008/9 to 2009/10, followed by a 13% decline from 2009/10 to 2010/11, then declines of 5% and 4% from 2010/11 to 2011/12 and 2011/12 to 2012/13 respectively, before an increase of 10% and 17% in the final two time periods respectively. In 2014/15 dollar values, community venues had regained much of the player losses from 2009/10 incurred by the smoking ban, with the 2014/15 player loss being similar to that one year after the smoking ban. Casino EGM player losses in real dollars are lower now than at any point over the last 12 years, while in community venues they are similar to 2005-2007 player losses.



**Figure 128:** Entertainment CPI adjusted player loss by venue type, 2003/04 to 2014/15

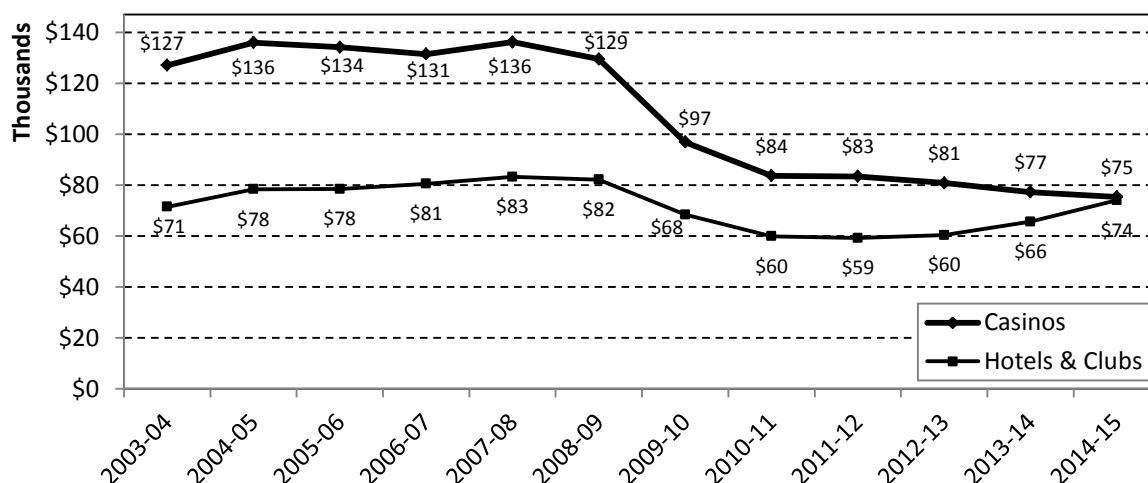
#### 10.4 Casinos, hotels and clubs player losses per EGM

In addition to total player loss, it is instructive to look at player loss per machine across venues. Figure 129 shows player loss per machine for community venues and the casinos from 2003/4 to 2014/15. Player losses per machine follows a similar trend to that observed for total player losses, but with larger changes in trends. For example, player losses in casinos increase steadily from 2003/4 to 2008/9, before declining 21% from \$106,000 to \$84,000 per machine between 2008/9 and 2009/10. Casinos player loss per machine declined 11% from \$84,000 to \$75,000 between 2009/10 to 2010/11, before increasing 5% and then declining slightly over the last three years up to 2014/15. Community venues player loss per machine followed a similar trend to casinos, until 2011/12. However, community venues had much lower player loss per machine than the casinos ranging from 37% to 44% lower from 2003/4 to 2008/9, at which time the difference in player loss per machine between community venues and the casinos began to converge. In fact, since 2012/13 player loss per machine in community venues has increased 27%, while over the same time in casinos there was a 2% decline in player loss per machine.



**Figure 129:** Unadjusted player loss per machine by venue type, 2003/04 to 2014/15

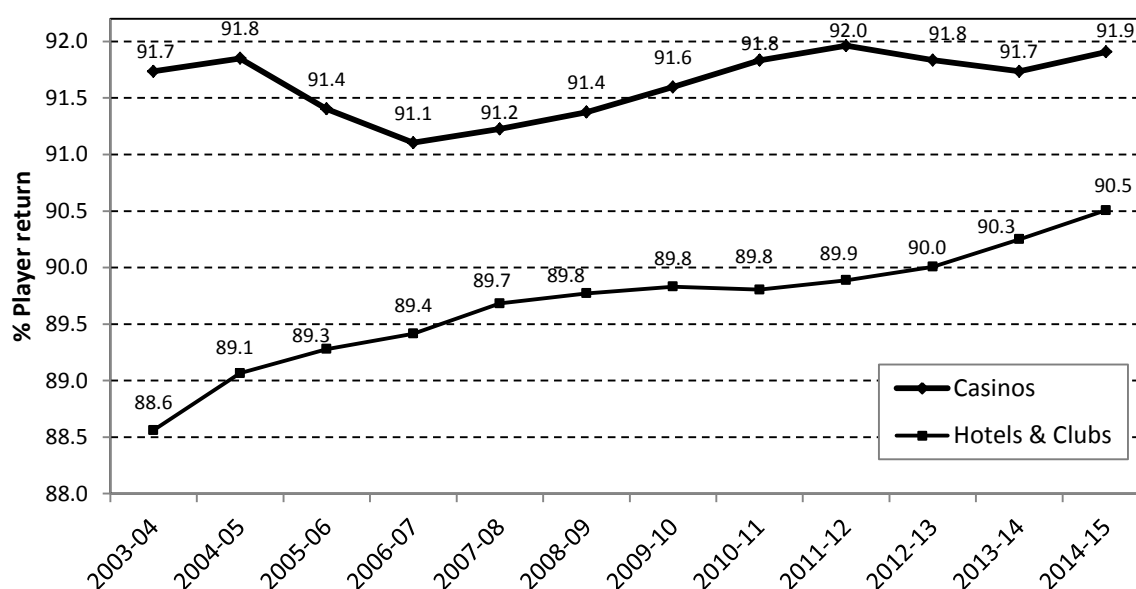
Figure 130 shows the trend in player loss per machine adjusted to 2014/15 dollar values for community venues and the casinos. As with unadjusted player loss per machine, there was a steady closing of the gap between casinos and community venues, and this closing of the gap occurring more rapidly after the smoking ban, before reaching virtual parity in 2014/15. For casinos, player loss per machine was relatively steady from 2003/4 to 2008/9, ranging from \$127,000 per machine to \$136,000 per machine. The drop in player loss per machine in casinos of 25% in the first year after the smoking ban, and a further drop of 14% from 2009/10 to 2010/11 was larger than the unadjusted data, and continued with per annum changes between -0.3% and -5% from 2011/12 to 2014/15. Community venues experienced a drop in player loss per machine of 17% and 12% in the two years following the smoking ban, before steadying and then increasing 9% from 2012/13 to 2013/14 and 13% from 2013/14 to 2014/15.



**Figure 130:** CPI adjusted player loss per machine by venue type, 2003/04 to 2014/15

### 10.5 Percentage player returns for casinos and hotels and clubs

Figure 131 shows the trend in percentage player return, which is calculated by dividing player losses by the amount of money that is put into EGMs and converting this to a percentage. Legislation stipulates that player returns should be no lower than 85%. The casinos EGMs, on average, gave a higher percentage player return than community venues, though this narrowed from a 3.2% difference in 2003/4 to a 1.4% difference in 2014/15. Casino player returns dropped from 91.7% in 2003/4 to 91.1% in 2006/7, before increasing steadily to 92% in 2011/12, and then stabilising again until 2014/15 with returns to players between 92% and 91.7%, similar to returns seen in 2003/4. Community venues on the other hand have steadily increased player returns from 86.6% to 90.5% between 2003/4 and 2014/15, representing a 4.5% increase over this time.



**Figure 131:** Percentage player return by venue type, 2003/04 to 2014/15



## 11 CONCLUSIONS AND FUTURE RESEARCH

### 11.1 Conclusions

The state of gambling in the Northern Territory has changed considerably since the 2005 Gambling Prevalence Survey. The following summarises key findings from this report.

- Annual participation decreased significantly since 2005 for all activities except racetrack and sports betting, which increased significantly, and casino table games and keno, which increased non-significantly.
- Frequency of gambling (generally weekly and monthly) has decreased significantly across all types of gambling activities, except, racetrack betting.
- In the NT adult population, prevalence of problem gambling, moderate risk and low risk gambling was 0.68% (up to 0.90%), 2.90% (up to 4.09%) and 8.13% (up to 9.02%) respectively, which equates to 1,206 problem gamblers, 5128 moderate risk gamblers and 14,383 low risk gamblers.
  - 2015 results were not directly comparable to the 2005 survey, because the older survey used a 'regular' gambler category that filtered who would receive the PGSI.
  - To assess the bias caused by the 2005 'regular' gambler filter in PGSI estimates, a 'regular' gambler filter applied to the 2015 PGSI estimates. It was found that if the PGSI is only administered to regular gamblers compared with all gamblers, then problem gambling was under-estimated by 1.6 times, moderate risk gambling by 3.4 times and low risk gambling by 6.3 times.
- Problem and moderate risk gamblers were over-represented amongst gamblers who nominated EGMs (16% and 19%) and sports betting (10% and 22%) as their highest spend activity were more likely to be problem and moderate risk gamblers, compared with all gamblers (4.7% and 10.7%).
- More than 23,000 Territorians experienced negative consequences because of another person's gambling, representing 13% of the adult population.
  - Experiencing negative consequences from another person's gambling was higher for Indigenous respondents (28%), single parent households (32%), group households (24%), those with gross annual income of \$70,000 to \$99,999 (22%), smokers who smoked more than 10 cigarettes per day (37%) and those who ran out of money for essential in the last year (48%).
  - The most common negative consequences experienced because of another person's gambling were raiding savings (6%), friend relationship problems (6%), feeling stress/anxiety/depression (5%), run out of money for bills (5%), family relationship problems (5%), borrowing from family/friends (4%), run out of money for food (2%), run out of money for rent/mortgage (2%).
- The majority community opinion indicates a preference for a decrease in EGM numbers in both hotels (50%) and clubs (53%), but less so for casinos (41%), and this opinion was more common amongst weekly EGM players.
- Real player losses in casino EGMs have decreased from a high in 2007/8 of \$113 million to \$79 million. Real player losses in the hotel and club EGMs have decreased from a high in 2008/9 of \$96 million to \$83 million, and now account for greater share of EGM player losses.

- Similar to real player loss, hotel and club player loss per machine (\$74,000) is now similar to that observed in the casino (\$75,000) for the first time since EGMs have been in community venues.

## 11.2 Future research

This report contains a broad-brush look at the 2015 Gambling Prevalence and Wellbeing Survey data. Statistical testing was mostly done at the simplest level (i.e. looking at associations between only two variables), and consequently, limited conclusions can be drawn from these analyses. For example, a number of factors were significantly associated with negative consequences from someone else's gambling; however, until multivariable models are developed, we are unable to determine which variable are associated with negative consequences, while controlling for other significant predictors.

While not being comprehensive, the following dot points summarise pieces of research that are still required.

- *Understanding the bias in using a 'regular' gambler category in gambling prevalence surveys:* Quantify the bias in PGSI risk category estimates by age and gender through comparing PGSI estimates for 'regular' and 'all' gamblers. Calculate multiplicative factors that can be applied to PGSI estimates from past surveys that used the 'regular' gambler filter prior to screening for problem gambling risk.
- *What negative consequences do at-risk gamblers experience?* An analysis of how at-risk gamblers answered individual PGSI questions and the types of negative consequences they identified.
- *Factor structure of the Gambling Motivation and Expectancies Scale (GOES):* Carry out a factor analysis of the 18 GOES items to determine the factor structure and dimensionality of the scale.
- *Do different motivations to gamble affect problem gambling risk and harms experienced?* An analysis of the GOES and its relationship to gambling preferences, problem gambling risk, and other socio-demographic, socioeconomic, and health risk factors.
- *Associations between negative consequences experienced because of another person's gambling:* Analysis of the types of negative consequences people are experiencing because of another person's gambling and their relationship to the person whose gambling was causing them to experience negative consequences.
- *What are the characteristics of people who experience harms from another person's gambling?* Develop a multivariable adjusted model for negative consequences from another person's gambling that includes socio-demographic, socioeconomic, and health risk factors, along with motivations for gambling, activity preferences and frequency of gambling by activity.
- *Problem gambling risk and negative consequences from gambling in the Indigenous population of the Northern Territory:* The significantly higher levels of problem gambling risk and harms experienced from another person's gambling amongst the Indigenous sample require more detailed analyses to better understand the extent of harm from gambling in this population.



- *Does venue size and location predict EGM player losses in community venues in the Northern Territory?* Further analysis of the EGM player loss data for hotels and clubs to identify the effect of venue size (i.e. number of EGMs) and location on player losses and player losses per machine.



# Northern Territory Gambling Prevalence Survey 2015

## Methodology Report

September 2016

*- Prepared for -*

Menzies School of Health at Charles Darwin University

*- Prepared by -*

**Roy Morgan Research**

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### **1. INTRODUCTION**

#### **1.1 Background**

Roy Morgan Research was commissioned by the Menzies School of Health at Charles Darwin University (Menzies) to conduct a telephone survey to help determine the prevalence of gambling in the Northern Territory in 2015. Roy Morgan Research had conducted previous gambling research for Charles Darwin University in the Northern Territory in 2005.

#### **1.2 Research objectives**

The overall purpose of the 2015 study was to provide an up-to-date measure of gambling prevalence in the key locations in NT in order to inform Government and welfare agencies' policies and strategies for the future.

NT residents aged 18 and over were in-scope for the survey. All respondents were to be administered at least a 'short' interview, including the Canadian Problem Gambling Severity Index (PGSI) for all gamblers. A sub-sample of respondents were to be allocated to the 'long' survey, based on their gambling behaviour.

#### **1.3 Methodology**

The survey was conducted as a Computer Assisted Telephone Interviewing (CATI) survey, with a final sample of 4,945 Northern Territory adults aged 18 or over.

The survey used a random digit dialling sample frame for landline interviewing, and a combination of three lists for mobile sampling.

A pilot was conducted from 8-12 October 2015. Fieldwork for the main study took place over nine weeks, between October 19 and December 23, 2015.

## **2. SAMPLING**

### **2.1 Sampling frames**

For the survey a dual sampling frame approach was used. The landline sample frame used was the Random Digit Dialling (RDD) sample frame developed and maintained by Roy Morgan Research. Refer to Appendix A for an explanation of the RDD process. Mobile sample was obtained from three sources detailed below.

Landline RDD sampling frames offer the benefit of including unlisted landline numbers – both those that are deliberately 'silent' and those that have been recently connected. Renters, recent movers, and people living in newly developed areas are included in an RDD sample.

While landline RDD sample includes unlisted landline numbers, it does not account for the growing proportion of households without a landline/fixed telephone line, i.e. 'mobile only' households. This issue is particularly (but not only) relevant to the representativeness of young adults.

The challenge with including mobile sample for an NT survey (as with any survey of a small regional sub-population) is that mobile numbers are not geographically linked, and therefore an RDD approach would be cost prohibitive (as over 98% of all numbers would turn out to be in parts of Australia other than the NT). Therefore, for this component of the sample frame, various sample lists were used, comprising mobile numbers known to be in the NT.

Mobile sample was obtained from three sources:

- 1) Past respondents to Roy Morgan Research Single Source (a nationally representative syndicated survey based on stratified random address-based sampling) who lived in the NT and had given a mobile number and had agreed they could be recontacted. Approximately 1,800 mobile numbers were available and loaded from this source.
- 2) Mobile numbers listed in the most recent version of the Northern Territory White Pages. Approximately 2,000 mobile numbers were available and loaded from this source.
- 3) Accountable List Brokers (an independent sample broker suggested by Menzies.) Approximately 6,000 mobile numbers attempted were from this source.

Prior to loading, de-duplication steps were undertaken between these three sources, as some numbers existed in more than one of the lists.

This approach (RDD sampling of landlines, and random sampling of mobiles from available lists) sought to achieve a broad cross-section of the population within the overall sample frame, including households:

- with silent numbers;
- with new numbers not yet recorded in phone listings;

- which were solely mobile phone households with no landline number.

By conducting the survey via CATI people living in households without either a landline or a mobile phone were, in effect, excluded from the survey. In the case of the NT, this means that Indigenous people living in remote communities are relatively unlikely to be within the coverage of the sample frame.

Within the landline sampling frame, broadly population-proportional quotas were initially set for by the following geographical regions:

- Darwin/Palmerston
- Alice Springs
- Katherine
- Tennant Creek
- Nhulunbuy
- Rest of NT

The quotas for the landline RDD sample was initially set to align the number of interviews conducted in each geographic stratum with population proportions, with some adjustments for the fact that a significant proportion of the population of the "Rest of NT" stratum was not likely to be contactable by telephone. As part of the survey, the postcode of each respondent was also collected to check that they were being allocated to the correct area.

In mid-November, Menzies decided to increase the size of the landline target sample from  $n=4,000$  to  $n=5,000$ . At the same time, it was recognised that this target may not be achievable, as all available landline sample had already been loaded into the survey sample. Roy Morgan Research agreed to attempt to achieve 5,000 interviews, if possible, including conducting an update of the sample seeding process for the NT RDD sample frame. This process added a significant number of new numbers, however only a small proportion of these turned out to be working residential numbers. Roy Morgan Research continued to advise that the available sample may not support this target.

The initial target for mobile interviews had been tentatively set at  $n=250$ . At the time of discussing the overall increase in sample it was also agreed between Menzies and Roy Morgan Research to explore cost-effective options for increasing the sample achieved from mobile numbers, in order to achieve as close to 5,000 interviews in total. It was on this basis that the three different sources of mobile sample were agreed upon.

## **2.2 Selection of respondent**

For the mobile sample, the interview was conducted with the person who answered the phone, as long as they were aged 18 years or over.

For the landline RDD sample, a 'last birthday' approach was used to select the respondent within the household. Fieldwork commenced with the approach of asking to speak to the person with the most recent birthday. Reflecting the relative differences in contact and response rates for males and females, this approach was obtaining noticeably too many females and too few males. On 12 November (about mid-way through fieldwork) it was discussed and agreed between Roy Morgan Research and Menzies to switch to one of the other standard implementations of the birthday method, whereby the interviewer initially asks to

speak to the male with the most recent birthday, but switches to ask for the female with the most recent birthday if there are no males in the household.

At the same time it was agreed to set territory-wide age/sex quotas in order that the overall sample did not become too disproportionate on these dimensions.

No respondent substitution was permitted.

### 2.3 Sample breakdown

Details of the total sample attempted by phone type are shown below in Table 1.

**Table 1:** Breakdown of sample attempted by Sample Type

Sample Type	Amount of Sample Attempted
Landline Sample	148,288
Mobile Sample	9,482

The final overall age/gender breakdown of the achieved sample is shown in the following table.

**Table 2:** Age by Gender – unweighted – Total respondents

		Gender		Total
		Male	Female	
Age -	18-34	317	450	767
	35-49	634	1,004	1,638
	50-64	869	853	1,722
	65+	426	392	818
Total		2,246	2,699	4,945

The breakdown of the achieved sample by Indigenous status is shown in the following table.

**Table 3:** Indigenous status– unweighted – Total respondents

Indigenous status	Respondents
Aboriginal / Torres Strait Islander	267
Non-Indigenous	4,678
Total	4,945

The breakdown of the achieved sample by region is shown in the following table.

**Table 4:** Region– unweighted – Total respondents

Region	Respondents
Darwin / Palmerston	3,289
Alice Springs	857
Katherine	247
Tennant Creek	59
Nhulunbuy	78
Rest of NT	415
Total	4,945

The questionnaire was programmed to randomly select one in four 'non-problem gamblers' and one in four 'non-gamblers' as defined by their CPGI/PGSI scores, and allocate this sub-sample to receive the full questionnaire, along with 100% of those defined as 'problem gamblers', 'low-risk gamblers' and 'moderate-risk gamblers'.

The following table shows the unweighted number of respondents by gambling type and by whether they were administered the 'short' or 'long' interview.

**Table 5:** Gambling type by short/long interview– unweighted – Total respondents

Gambling type	Long interviews	Short interviews	Total interviews
Non gamblers	332	848	1,180
Non Problem gamblers	806	2,551	3,357
Low risk gamblers	290	0	290
Moderate risk gamblers	93	0	93
Problem gamblers	25	0	25
Total	1,546	3,399	4,945

### 3. QUESTIONNAIRE DESIGN AND PILOT TESTING

#### 3.1 Questionnaire design

The questionnaire was developed and provided by Menzies based to some extent on the survey conducted in 2005. Roy Morgan Research worked with Menzies to refine the questionnaire. Demographic questions asked of respondents included the following: sex, age, location, language(s) spoken at home, household size & status, education, occupation/work status, and income.

The questionnaire was also subjected to the customary questionnaire checking procedures as part of Roy Morgan Research's Quality Assurance program certified to AS/NZS ISO 9001 and AS/ISO 20252.

A copy of the final questionnaire is provided in Appendix C.

#### 3.2 Pilot testing

The survey was piloted from 8-12 October 2015. Review of the data indicated all questionnaire routing appeared to be working as expected. An SPSS file of the pilot data was provided to Menzies.

Based on interviewer feedback from the pilot, some changes were made to the introductory text after consultation with Menzies. In particular, the reference to problem gambling was removed, as interviewers reported that it appeared to discourage response from people who considered they did not have a problem

with gambling, despite attempts to convince them that the research was trying to capture the opinions of a cross section of the community. For similar reasons, the pilot introduction's reference to 'helping vulnerable segments of the population' was removed for the main survey. Pilot interviewers also provided feedback in relation to a few questions, which appeared confusing or worded awkwardly. These were updated for the main survey in consultation with Menzies. In addition, it was agreed to remove a small number of open-ended questions that were infrequently asked.

Based on Menzies review of the pilot database some minor changes were made to the way the data was proposed to be collected and provided for the main survey.

The questionnaire also included a request to respondents to provide their consent and additional contact details in case there was a need for any follow-up research.

#### **4. FIELDWORK**

The main survey was in field for a total of nine weeks. Interviews commenced on Monday, October 19, 2015 and concluded on Wednesday, December 23, 2015.

Interviews were primarily conducted in the evenings and weekends. Field reports were provided to Menzies every few days.

##### **4.1 Interviewer Management**

###### *4.1.1 CATI Interviewer Selection and Training*

In total, 61 interviewers worked on the survey. All of these interviewers had undergone Roy Morgan Research's multistage training program. This training includes:

- Company background and information
- Field methodology
- Questioning techniques
- Asking and answering questions
- Practicing difficult questions
- Practice survey completion
- Assessments of surveys
- Refusal conversion techniques

Roy Morgan Research believes that the quality of interviewing is vital to achieve successful research. Roy Morgan Research does not sub-contract to field companies to conduct interviews as we have our own fully integrated facilities and interviewing teams.

Interviewers working on this project also participated in a briefing session specifically for this project, conducted by the project team and field supervisors. Details of the interviewer briefing are provided in Appendix B.

###### *4.1.2 CATI Interviewer Supervision and Auditing*

Roy Morgan Research interviewers work under very strict controls and understand the need for adherence to all specified contact, call-back and reporting procedures. CATI interviewing is supervised and a minimum of 10% of interviews are



audited. Our auditing system enables the supervisor to monitor live interviews and therefore assure our quality and authenticity of interviews. The auditing of an interview means that at least part of the interview is observed and listened to by the supervisor. Auditing includes monitoring all stages of interviewing, such as the conduct of an interview as well as refusals and how interviewers assign non-contact records.

We provide a ratio of one supervisor to 12 interviewers. As well as supervising interviewers, the supervisors deal with issues raised by respondents that could not be adequately addressed by interviewers. For every telephone survey:

- There are supervisors present for all shifts to oversee interviewers; and
- Supervisors randomly listen in on phone calls to ensure interviews are being conducted correctly.

Where respondents require clarification of the intent of the study, they are referred to a supervisor or the researcher for further explanation. When required, field queries and issues are logged via CATI debrief forms or emails to the researcher. The required action is noted and the researcher follows the issue up immediately.

#### **4.2 Briefing**

Before commencing work on the survey, interviewers participated in a survey-specific briefing session. The initial briefing session was conducted by the Project Director and Project Manager. Subsequent briefing sessions were conducted by the Field Manager and supervisor. The following key points were highlighted in the briefing session:

- Importance of the survey and how to introduce it.
- The town or suburb respondents were in was important to accurately quota the survey.
- Accurately collecting the data on the amount respondents spent on gambling activities
- The importance of statements that relate to time periods (e.g. "Thinking about the past 12 months...")
- Helplines for respondents

The interviewer briefing notes are provided in Appendix B.

#### **4.3 Number of calls made to complete an interview**

Over 330,000 calls were made during the fieldwork period. The approach applied to the survey was to attempt up to 5 calls to a number in order to seek to establish contact, then if contact was established, up to 5 more calls to obtain an interview, unless at any point a final outcome was achieved earlier (for example, about half of the landline sample was identified on the first call as not being a connected number, and another 14% of the landline sample had other types of final outcomes on the first call).

For both the landline and the mobile sample, the majority of completed interviews were achieved within 3 call attempts (Landline 89% and Mobile 80%) as shown in the following table.

**Table 6:** Number of calls made to obtain successful interview by Sample Type

Number of calls needed	Interviews from Landline RDD Sample	Interviews from Mobile Sample
	%	%
<b>1</b>	51.9	44.1
<b>2</b>	25.0	23.9
<b>3</b>	12.1	12.0
<b>4</b>	6.4	6.8
<b>5</b>	3.0	3.7
<b>6</b>	1.1	3.5
<b>7</b>	0.3	2.3
<b>8</b>	0.2	1.9
<b>9</b>	0	1.5
<b>10</b>	0	0.3
<b>TOTAL</b>	<b>100</b>	<b>100</b>

Base: Completed interviews for each sample type

#### 4.4 Response Rates

As part of Roy Morgan Research's multistage interviewer training program, interviewers are thoroughly trained in maximizing response rate. Strategies employed to minimize cases of non-contact and non-response included:

- Emphasising the importance of the survey;
- Having interviewers arrange appointments at suitable times for the respondent; and
- Re-assuring respondents about the confidentiality of their responses.

To maximise the response rates, Roy Morgan Research interviewers attempted up to 5 telephone calls at different times on different days to try to establish contact with the household or mobile user.

Furthermore, up to five (and in some cases more) attempts were made to complete an interview with the selected respondent, once contact had been made.

During fieldwork, detailed breakdowns of the number and type of refusal and termination were provided to Menzies. Menzies provided feedback on this with the aim of fine-tuning the interviewing practices so as to minimize refusals, maximise the consent rate and fine-tune the usage of various categories of reasons for refusal. Roy Morgan Research's field managers and supervisors took account of this feedback and rebriefed and closely monitored interviewers, as appropriate.

As part of this close monitoring of refusal rates, it was agreed with Menzies after approximately one week of interviewing to make some changes to the introductory text in order to aim to improve consent rates. These changes – which emphasised that the survey was important and was on behalf of the NT

Government – appeared to have a positive effect, with consent rates increasing from approximately 25% to over 30%.

From the total sample of phone numbers attempted (157,770 numbers), 4,945 participants completed the survey. A detailed breakdown of the outcomes for these 157,770 numbers is provided in tables 8, 9 and 10. Overall, 3,760 interviews were completed with landline sample and 1,185 were completed with mobile sample as shown in Table 7.

**Table 7:** Number of completed interviews by Sample Type

RDD Sample type	Completes
<b>Landline</b>	3,760
<b>Mobile</b>	1,185
<b>TOTAL</b>	<b>4,945</b>

The following three tables provide a breakdown of all sample records activated for the survey. “Fresh” sample – i.e. numbers not attempted – is not shown in these tables.

Each table also provides a percentage breakdown by:

- Total sample
- Total usable numbers (i.e. excluding numbers that were disconnected, fax, modem, etc)
- Total contacts (i.e. those numbers that were answered, other than those answered by an answering machine etc)

**Table 8:** Landline RDD sample disposition

	Landline sample records	As % of sample loaded	As % of usable numbers attempted	As % of contacts made
<b>Contacts:</b>				
Completed	3,760	2.5%	5.6%	14.2%
Appointment	446	0.3%	0.7%	1.7%
Refusal	9,601	6.5%	14.3%	36.2%
Business number	8,270	5.6%	12.3%	31.1%
Termination - language problem	622	0.4%	0.9%	2.3%
Termination - hearing difficulty/incapable	561	0.4%	0.8%	2.1%
Failed screener / Quota failure / Out-of-scope	1,532	1.0%	2.3%	5.8%
Other terminations	1,758	1.2%	2.6%	6.6%
<b>Non-contacts:</b>				
No reply	34,419	23.2%	51.3%	
Engaged	1,003	0.7%	1.5%	
Answer machine	5,152	3.5%	7.7%	
<b>Unusable numbers:</b>				
Modem or fax	5,625	3.8%		
Unobtainable/not connected etc	74,838	50.5%		
Not attempted as already on 'do not call' list	701	0.5%		
<b>Total landline sample</b>	<b>148,288</b>	<b>100.0%</b>		
<b>Usable numbers attempted</b>	<b>67,124</b>		<b>100.0%</b>	
<b>Contact made</b>	<b>26,550</b>			<b>100.0%</b>

Of the total attempted **landline RDD** sample of 148,288 numbers, 50.5% turned out to be unobtainable/not connected and another 3.8% turned out to be modem or fax numbers. A small proportion (0.5%) were also unable to be attempted because checking against Roy Morgan Research's registers found that they had already requested never to be called.

Discounting unusable numbers, a total of 67,124 usable landline numbers were attempted, from which contact was made with 26,550. No replies accounted for 34,419 of the landline numbers attempted, and answering machines accounted for another 5,152.

Of the 26,550 numbers where some form of contact was made, 31.1% turned out to be business numbers and 5.8% either failed the screener questions, failed quotas or were otherwise out-of-scope. Refusals accounted for 36.2% of contacts and completed interviews accounted for 14.2% of contacts.

**Table 9:** Mobile sample disposition

	Mobile sample records	As % of sample loaded	As % of usable numbers attempted	As % of contacts made
<b>Contacts:</b>				
Completed	1,185	12.5%	14.0%	28.5%
Appointment	18	0.2%	0.2%	0.4%
Refusal	1,498	15.8%	17.6%	36.0%
Business number	124	1.3%	1.5%	3.0%
Termination - language problem	26	0.3%	0.3%	0.6%
Termination - hearing difficulty/incapable	42	0.4%	0.5%	1.0%
Failed screener / Quota failure / Out-of-scope	844	8.9%	9.9%	20.3%
Other terminations	419	4.4%	4.9%	10.1%
<b>Non-contacts:</b>				
No reply	1,529	16.1%	18.0%	
Engaged	15	0.2%	0.2%	
Answer machine/voice-mail	2,794	29.5%	32.9%	
<b>Unusable numbers:</b>				
Modem or fax	11	0.1%		
Unobtainable/not connected etc	873	9.2%		
Not attempted as already on 'do not call' list	104	1.1%		
<b>Total mobile sample</b>	<b>9,482</b>	<b>100.0%</b>		
<b>Usable numbers attempted</b>	<b>8,494</b>		<b>100.0%</b>	
<b>Contact made</b>	<b>4,156</b>			<b>100.0%</b>

Of the total attempted **mobile** sample of 9,582 numbers (from all three sources), 9.2% turned out to be unobtainable/not connected. A small proportion (1.1%) were also unable to be attempted because checking against Roy Morgan Research's registers found that they had already requested never to be called.

Discounting unusable numbers, a total of 8,494 usable mobile numbers were attempted, from which contact was made with 4,156. Answer-machines/voice-mail accounted for 2,794 of the mobile numbers attempted, and no replies accounted for another 1,529.

Of the 4,156 mobile numbers where some form of contact was made, 20.3% either failed the screener questions, failed quotas or were otherwise out-of-scope. Refusals accounted for 36.0% of contacts and completed interviews accounted for 28.5% of contacts.

**Table 10:** Overall sample disposition

	Total sample records	As % of sample loaded	As % of usable numbers attempted	As % of contacts made
<b>Contacts:</b>				
Completed	4,945	3.1%	6.5%	16.1%
Appointment	464	0.3%	0.6%	1.5%
Refusal	11,099	7.0%	14.7%	36.1%
Business number	8,394	5.3%	11.1%	27.3%
Termination - language problem	648	0.4%	0.9%	2.1%
Termination - hearing difficulty/incapable	603	0.4%	0.8%	2.0%
Failed screener / Quota failure / Out-of-scope	2,376	1.5%	3.1%	7.7%
Other terminations	2,177	1.4%	2.9%	7.1%
<b>Non-contacts:</b>				
No reply	35,948	22.8%	47.5%	
Engaged	1,018	0.6%	1.3%	
Answer machine	7,946	5.0%	10.5%	
<b>Unusable numbers:</b>				
Modem or fax	5,636	3.6%		
Unobtainable/not connected etc	75,711	48.0%		
Not attempted as already on 'do not call' list	805	0.5%		
<b>Total sample</b>	<b>157,770</b>	<b>100.0%</b>		
<b>Usable numbers attempted</b>	<b>75,618</b>		<b>100.0%</b>	
<b>Contact made</b>	<b>30,706</b>			<b>100.0%</b>

Of the total attempted sample from **all sources** (157,770 numbers), 52.1% were unusable numbers and 47.9% were usable.

Discounting unusable numbers, a total of 75,618 usable numbers were attempted, from which contact was made with 30,706 (40.2%).

Of the 30,706 numbers where some form of contact was made, 27.3% were business numbers and 7.7% either failed the screener questions, failed quotas or were otherwise out-of-scope. Refusals accounted for 36.1% of all contacts and completed interviews accounted for 16.1% of contacts. Cases that were terminated because of language problems accounted for 2.1% of contacts, while cases that were terminated because of hearing difficulties or other capability issues such as sickness, drunkenness etc accounted for 2.0% of contacts.

The overall consent rate, defined as *completes/(completes + refusals)* was 30.8%. The overall response rate defined as *completes/(in-scope contacts)* was 24.8%. (For this calculation, completes, appointments, refusals, language terminations, hearing difficulty/capacity terminations, and other terminations were included.)

#### 4.5 Interview length

Interview length varied considerably according to the extent of gambling activity that respondents took part in, and whether the respondent was randomly allocated to the long or the short interview. The average interview length was approximately 10 minutes.

#### **4.6 Fieldwork – issues arising**

There were several occasions where Menzies employees were contacted as part of the sampling process. In some of these cases, the respondent and/or the interviewer incorrectly decided that it would not be appropriate that they be included in the survey. This issue was clarified with Menzies, and it was agreed that, for this survey, there was no reason to exclude Menzies staff from the sample. Nevertheless, there were still a handful of instances where exclusions of this nature were incorrectly made. Once they were identified, attempts were made to recontact the respondent to see whether they would agree to being included. Most of these attempts were successful. (It should be noted that for many surveys a standard approach is to exclude people who work for the organisation commissioning the survey, and some interviewers and some supervisors incorrectly believed that such an approach also applied to this survey.)

### **5. ANALYSIS AND WEIGHTING**

#### **5.1 Coding**

There were two fully open-ended questions in the survey requiring code frame development and several 'other-specify' questions. Draft code frames were developed by Roy Morgan Research and approved by Menzies.

Back-coding was also undertaken of 'other-specify' responses, i.e. identifying any open-ended responses that could be back-coded to existing response options.

#### **5.2 Editing**

As the survey was conducted using CATI, data entry was automatic at the point of interviewing. The questionnaire programming had built in routing. Programming checked responses and directed interviewers to ask respondents questions that were applicable to them depending on the responses given to previous questions. As a result, there was little need to edit the data for any inconsistencies. A small number of respondents had to be edited/flagged as they had initially indicated they undertook a gambling activity but after answering the CPGI questions they indicated that they did not actually play that activity. (All these cases were non-problem gamblers with a CPGI Score of 0.) There were also several cases where post-interview back-coding of an other-specify response resulted in respondents not having an answer to a relevant subsequent question, as they had not been asked it. In such cases these respondents were allocated a 'don't know' code.

#### **5.3 Weighting**

Several options for weighting were discussed. The final weighting design was developed by Roy Morgan Research following discussions between Bruce Packard, Matthew Stevens, Tony Barnes and Sara Hare. The design takes into account the need to be able to weight both the overall sample and the sub-sample asked the long questionnaire. It also takes into account phone connectedness, age, sex, region and Indigenous status. An appropriate approach to probability weighting for this survey is also addressed.

##### *5.3.1 Probability of selection*

When using a dual sample frame approach and random respondent selection, Roy Morgan Research typically adopts a weighting design which initially adjusts for the probability of selection, then adjusts for non-response and demographic factors.

This standard approach with some adjustments, was used for this survey. The standard approach is as follows:

Let  $p$  = sampling fraction for interviews via mobile phone (number of interviews achieved divided by number of mobile phone owners).

Let  $h$  = sampling fraction for interviews via landline (number of interviews achieved divided by number of households with a landline phone).

Let  $e$  = number of persons in respondent's household eligible for the survey.

Let  $k$  = number of separate landlines (i.e. the number of different telephone numbers, not handsets for the same phone number) in respondent's household.

Let  $n$  = number of mobile phones, capable of receiving calls, owned by the respondent.

Let  $s$  = number of eligible persons sharing the mobile phone on which the respondent is contacted.

For a person living in a household with at least one landline the probability of being interviewed by landline is  $= hk/e$ . This is the same whether or not that person also has a mobile phone. For a person with a mobile, the probability of being interviewed via that mobile phone is  $pn/s$ , again irrespective of whether or not that person has a landline at home.

A mobile phone owner who also has a landline at home could be interviewed via either channel. The probability in the case of each channel is as given above. As the sampling fractions in both cases will be very small, the probability of being interviewed via both channels in the same survey is small enough to be disregarded. So the probability of being interviewed at all, i.e. via either channel, can for practical purposes be regarded as the sum of the two probabilities, or  $pn/s + hk/e$ .

To summarise, the probabilities for respondents in the three channel segments are:

landline only	$hk/e$
mobile only	$pn/s$
both	$pn/s + hk/e$

The weight to be applied to counter the biases in a dual frame sample design is therefore the reciprocal of whichever probability the respondent turns out to have.

For this survey of Northern Territory residents, this standard approach required some amendment, partly as some of the population (particularly the more remote Indigenous population) was out of the scope of a telephone survey, partly as some of the information was missing (the relevant questions were not part of the survey), and partly as information on telephone connectedness of the Northern Territory population is limited. The necessary modifications are discussed throughout this section.



### 5.3.2 *Treatment of Indigenous status in the weighting*

It was recognised by both Menzies and Roy Morgan Research that while the survey methodology was likely to produce a reasonably representative sample of non-Indigenous Territorians, it was not able to produce a representative sample of Indigenous Territorians, chiefly as a large proportion are not reachable by a telephone methodology. A weighting design that weighted the data to total Territorians would therefore have been inappropriate. The approach agreed with Menzies was to weight the non-Indigenous sample to the non-Indigenous population. The Indigenous sample was also weighted, using a slightly different approach. Just two geographical categories were used for the Indigenous sample: Darwin/Palmerston and Remainder of Territory.

### 5.3.3 *Main weighting – all non-Indigenous sample (Weight Set One)*

**Geography:** The small strata of Tennant Creek and Nhulunbuy were combined for weighting purposes.

**Age/Sex:** The age/sex categories used to monitor sampling were 18-34; 35-49; 50-64 and 65 plus. The gambling segmentation patterns by age were examined to see whether estimates of gambling prevalence and the prevalence of problem gambling would be inadvertently distorted by using these age categories for weighting purposes. There were some minor age differences apparent, with those at the younger and older extremes tending to be less involved in gambling. However, the impact of using a larger number of age bands on the overall weighted estimates of the proportion of gamblers (and type of gambler) would be very small. It was agreed with Menzies to use the four age bands 18-34; 35-49; 50-64 and 65 plus for weighting.

**Phone Connectedness:** The sampling involved an RDD landline sample frame and three lists of mobile numbers. Menzies requested that the weighting take account of phone connectedness as far as possible. Ideally this would take the form of a selection weight, but there was insufficient data collected in the survey and insufficient data for phone connectedness for all areas of the NT, or for more than a small proportion of Indigenous Territorians, to be able to take account of this in the standard Roy Morgan Research approach summarised above. A simplified form of this weighting step, applying only to the non-Indigenous sample, was adopted.

**Number of adults in household:** For the landline sample frame, just one respondent was selected per household. The main weighting included an adjustment for the probability of selection, given the household size. To avoid creating extreme individual weights, it was agreed with Menzies that a limit be set on this particular adjustment, whereby respondents from a household with 5 or more eligible adults be allocated a value of 5.

**First stage:** Probability of selection (non-Indigenous sample)

The following details the steps for the first stage of weighting of the non-Indigenous sample – adjustment for probability of selection. It also details the variations required from the standard Roy Morgan Research approach.

Let  $p$  = sampling fraction for interviews via mobile phone (number of interviews achieved divided by number of mobile phone owners). The number of non-Indigenous mobile phone owners aged 18+ in NT is not known precisely but was based on results from Roy Morgan Single Source, which only covers Darwin/Palmerston and Alice Springs. In order to improve the reliability of this estimate, Single Source data for 2013-2015 was used – giving an estimate of 92.3%.

Therefore 92.3% of NT non-Indigenous people 18+ are estimated to have a mobile. This equates to 92.3% of 138,517 = 127,851. A total of 1,114 non-Indigenous respondents were interviewed by mobile. Therefore  $p = 1,114/127,851 = 0.008713$

Let  $h$  = sampling fraction for interviews via landline (number of interviews achieved divided by number of households with a landline phone). The total number of non-Indigenous households in NT with a landline phone is also not known precisely, but was based on results from Roy Morgan Single Source for Darwin/Palmerston and Alice Springs for 2013-2015 – an estimate of 67.05%.

Therefore 67.05% of NT non-Indigenous households are estimated to have a landline. This equates to 67.05% of 57,169 = 38,332. A total of 3,564 non-Indigenous were interviewed by landline. Therefore  $h = 3,564/38,332 = 0.092977$

Let  $e$  = number of persons in respondent's household eligible for the survey. (To avoid creating extreme individual weights, it was agreed that a limit be set on this particular element, whereby respondents from a household with 5 or more eligible adults be allocated an  $e$  value of 5).

Let  $k$  = number of separate landlines (i.e. the number of different telephone numbers, not handsets for the same phone number) in respondent's household. (To avoid creating extreme individual weights, it was agreed that the value for this component for households with 3 or more landlines be set at 3.)

The standard approach would be to let  $n$  = number of mobile phones, capable of receiving calls, owned by the respondent. However, this question was not asked of respondents in this survey. The latest Roy Morgan data available showed that the proportion of adults without a mobile phone was very low (less than 8% nationally), so in this case it was reasonable to assume that  $n=1$  and effectively ignore this element of the weighting.

The standard approach would be to let  $s$  = number of eligible persons sharing the mobile phone on which the respondent is contacted. However, this question was not asked in this survey, so  $s$  was assumed to be 1.

As questions on mobile usage were not asked of landline respondents in this survey, it was not possible to identify the (very small) group of people who are landline only. In this survey, therefore, there were effectively only two groups for the purposes of this pre-weighting stage: mobile only; and anyone with a landline (i.e. all other respondents).

Taking into account all the above points with respect to the probability weighting stage, the probabilities for respondents were calculated as:

mobile only (i.e. mobile-interviewed, no landline)       $p$  (i.e. 0.008713)

all other respondents  $p + hk/e$  (i.e.  $0.008713 + 0.092977$  multiplied by number of landlines in the respondent's household divided by the number of adults in the respondent's household)  
The final result of this first weighting stage was the reciprocal of each respondent's selection probability.

**Second stage:** Non response (demographic) weighting

This second stage of weighting for non-Indigenous respondents corrected proportions of respondents across the groups within the following variables, and projected the weighted sample to the population:

- Age
- Sex
- Region

The targets used for this step were age by sex by region data derived by applying Census 2011 proportions for the non-Indigenous population to the August 2015 ABS population estimates.

(As the first weighting stage had already made broad corrections for phone connectedness, it was agreed with Menzies not to include phone-connectedness as an element of the second stage.)

Effectively in this stage the weighted sample was also scaled to match population data.

*5.3.4 Weight Set Two: Sub-Sample Adjustments, Non-Indigenous*

The questionnaire was programmed to randomly select one in four 'non-problem gamblers' and one in four 'non-gamblers' as defined by their CPGI/PGSI scores, and allocate this sub-sample to receive the full questionnaire, along with 100% of those defined as 'problem gamblers', 'low-risk gamblers' and 'moderate-risk gamblers'. Menzies requested that a second set of weights be provided to allow for this sub-sampling. Roy Morgan Research has considerable experience in this particular task – the re-weighting of a sub-sample to represent the already weighted sample.

In addition to the basic requirement of this second set of weights (i.e. to multiply the weight of each selected non-problem gambler and non-gambler by the inverse of the proportion actually selected) slight corrections to other parameters were required so that the characteristics of the overall weighted sample, using this second set of weights remained largely the same as the main weighted sample. Initial checks of the raw data show that the age, sex, region, ATSI status and phone type of the two sub-samples very closely matched the patterns for the two total samples from which they were drawn.

The second set of weights is that used for the sub-sample of one in four non-gamblers and one in four non-problem gamblers (all non-Indigenous). The agreed approach for this survey is outlined below:

For each of the two relevant groups (non-problem gamblers and non-gamblers) calculate the following figures for each of the 8 age-by-sex cells:

- a) Sum of weights for all the relevant group (e.g. sum of weights for male non-gamblers aged 18-34)
- b) Sum of weights for the sub-sampled members of the relevant group (e.g. sum of weights for male non-gamblers aged 18-34 who were selected to complete the long questionnaire)

Divide (a) by (b) for each age/sex group for each of the two relevant groups, giving 16 adjustment factors (c).

For Weight Set Two, set each respondent's weight as follows:

- For non-gamblers who were not in the sub-sample, set their weight to zero
- For non-gamblers who were selected for the sub-sample to get the long questionnaire, multiply their weight by the relevant (c) factor.
- For non-problem gamblers who were not in the sub-sample, set their weight to zero
- For non-problem gamblers who were selected for the sub-sample to get the long questionnaire, multiply their weight by the relevant (c) factor.
- All other respondents retain the same weight they have for Weight Set One.

Generally speaking, Weight Set One should be used for all analysis involving the first half of the questionnaire, and Weight Set Two should be used only for analysis involving the second half of the questionnaire (the part where the sub-sampling applied). The two weight sets will not produce identical results, but the differences should be very minor.

#### 5.3.5 *Weight Set Three: Indigenous Respondents*

There is much less available, reliable information about the phone connectedness status of Indigenous Territorians, and the proportion who are even contactable by telephone is likely to be quite low outside the main cities. Menzies requested a simple approach to weighting the Indigenous sample.

On the assumption that, despite the lack of phone connectedness, the sample may be broadly representative of the total Indigenous population, then the following approach was agreed.

Collapse the regions into just two: Darwin/Palmerston and Remainder of Territory.

Using simple age by sex by region cell weighting, weight the Indigenous respondents to the estimated Indigenous population of Darwin/Palmerston and Remainder of Territory (created from August 2015 ABS population estimates adjusted by the 2011 ABS Census figures for the proportion that are Indigenous.)

#### 5.3.6 *Weight Set Four: Sub-Sample Adjustments, Indigenous*

The fourth set of weights is that used for the sub-sample of one in four non-gamblers and one in four non-problem gamblers, as applied to Indigenous respondents. Cell sizes were too small to adopt the same approach as Weight Set Two. Rather, a simpler approach was agreed:

For each of the two relevant groups (non-problem gamblers and non-gamblers) calculate the following figures:

- a) Sum of weights for all the relevant group (e.g. sum of weights for Indigenous non-gamblers)
- b) Sum of weights for the sub-sampled members of the relevant group (e.g. sum of weights for Indigenous non-gamblers who were selected to complete the long questionnaire)

Divide (a) by (b) for each of the two relevant groups, giving 2 adjustment factors (c).

For Weight Set Four, set each Indigenous respondent's weight as follows:

- For non-gamblers who were not in the sub-sample, set their weight to zero
- For non-gamblers who were selected for the sub-sample to get the long questionnaire, multiply their weight by the relevant (c) factor.
- For non-problem gamblers who were not in the sub-sample, set their weight to zero
- For non-problem gamblers who were selected for the sub-sample to get the long questionnaire, multiply their weight by the relevant (c) factor.
- All other Indigenous respondents retain the same weight they have for Weight Set Three.

The final SPSS data file also included two additional weight sets, Weight 5 and Weight 6, which were created to simplify the task for researchers who may wish to run tables etc including both Indigenous and non-Indigenous respondents in the same table.

- Weight 5 (total sample) equals Weight 1 for all non-Indigenous respondents and equals Weight 3 for all Indigenous respondents.
- Weight 6 (sub-sample adjustment) equals Weight 2 for all non-Indigenous respondents and would equal Weight 4 for all Indigenous respondents.

## **APPENDIX RMR – A: RDD Sampling Frame Generation**

Roy Morgan Research has considerable experience in both generating and using Random Digit Dialling (RDD) sample. RDD sample provides a way of contacting the maximum number of households, including those whose telephone numbers are not listed in telephone directories.

### **General Procedure for Generating Landline RDD sample**

1. All listed residential numbers are obtained from the Electronic White Pages (EWP) and similar sources.
  - Roy Morgan Research originally seeded their landline RDD sample using the 2004 DTMS electronic white pages. Since then, Roy Morgan Research has added new listings to the seed frame approximately every one to two years.
  - By enhancing our electronic white pages regularly we believe we have the best possible base for generating landline RDD sample, minimising household selection bias.

2. The numbers are then sorted into numerical order.
3. A file of blocks is generated for all those blocks having at least one listed number in the white pages. For example if the number 0396296888 is listed in the white pages, then generate a block of 100 numbers going from 0396296800 to 0396296899.
4. Records are flagged or removed according to the business rules described below:
  - Numbers that are coded as listed in the Yellow Pages, but are not listed in the White Pages are removed from the sampling frame.
  - Any block, where all of its listed white page numbers are also listed in the yellow pages, is excluded from the sampling frame.
  - All other numbers that are listed in both the White Pages and the Yellow Pages are kept in the sampling frame and flagged as Yellow Pages numbers.
5. Initially, all 'listed' phone numbers are geo-coded. Where available, listed numbers are geo-coded based on CCD or SA1. Where CCD or SA1 are not available, listed numbers are geo-coded based on their postcode.
6. Geo-coding for unlisted numbers is assigned based on the dominant codes within each block of 100 numbers.
7. The geo-coding of phone numbers within the landline RDD sampling frame is for the purpose of apriori allocation of numbers to geographical strata. When interviewed, postcode is collected from respondents to allow each respondent to be allocated to their correct geographical stratum.

#### **Drawing/Using Landline RDD sample**

For any particular project, the landline RDD sample is randomly selected from the sampling frame within each specified stratum. Once selected, the sample is randomised before being loaded into the interviewing system.

All RDD sample selected for any particular project is run against our "do not contact" list of numbers before use. This list is used to record telephone numbers where the respondent never wants to be contacted again.

## APPENDIX B: SAMPLE CHARACTERISTICS

Variables	Unweighted % (n)	Weighted % (SE)	Population N
Northern Territory	100.0 (4,945)	100.0	176,916
Region			
Darwin & Palmerston	67.7 (3346)	60.8 (1.3)	107,512
Alice Springs	17.3 (857)	18.6 (1.0)	32,967
Regional Towns	7.8 (384)	9.8 (0.9)	17,250
Rest of NT	7.2 (358)	10.8 (1.1)	19,187
Age (years)			
18-24	3.4 (167)	8.4 (1.1)	14,892
25-34	12.1 (600)	29.8 (1.4)	52,775
35-44	21.2 (1,046)	20.0 (0.9)	35,378
45-54	25.0 (1,238)	19.3 (0.8)	34,176
55-64	21.8 (1,076)	12.8 (0.5)	22,623
65 or more	16.5 (818)	9.6 (0.4)	17,072
Gender			
Male	45.4 (2,246)	52.3 (1.1)	92,606
Female	54.6 (2,699)	47.7 (1.1)	84,310
Indigenous status			
Non-Indigenous	94.6 (4,678)	78.3 (1.7)	138,517
Indigenous	5.4 (267)	21.7 (1.7)	38,399
Main language spoken at home			
English	95.3 (4,709)	93.4 (0.9)	165,083
Not English	4.7 (231)	6.6 (0.9)	11,752
Household type			
Couple: children living at home	40.3 (1,988)	38.9 (1.3)	68,785
Couple: no children/not living at home	30.2 (1,491)	26.7 (1.1)	47,145
Single: children living at home	6.2 (306)	7.9 (1.1)	13,936
Single person	15.7 (774)	13.0 (1.0)	22,987
Group or share house	5.1 (251)	10.1 (1.0)	17,924
Other	2.6 (127)	3.4 (0.6)	5,973
Labour force status			
Full-time employed	60.2 (2,972)	66.6 (1.3)	117,688
Part-time employed	15.1 (745)	13.5 (1.0)	23,866
Unemployed (looking for work)	2.6 (126)	3.9 (0.7)	6,943
NILF	21.3 (1,053)	14.9 (0.8)	26,305
Other	0.9 (43)	1.1 (0.3)	1,937
Student status			
Full-time student	2.6 (126)	4.7 (0.8)	8,266
Part-time student	8.6 (425)	9.5 (0.8)	16,711
Not studying	88.8 (4,385)	85.9 (1.0)	151,744
Highest education			
Bachelor degree or higher	37.9 (1,864)	33.1 (1.2)	58,450
Diploma, technical Certificate III-IV	30.1 (1,481)	30.2 (1.3)	53,325
Finished Year 12 (Senior)	15.4 (760)	15.4 (0.9)	27,259
Finished Year 10 (Junior)	12.1 (597)	14.6 (1.3)	25,752
Less than Year 10	4.5 (220)	6.6 (0.8)	11,666
Gross personal income			
Less than \$30,000	11.3 (464)	10.9 (0.9)	16,408
\$30,000 - \$49,999	6.8 (280)	5.7 (0.8)	8,580
\$50,000 - \$69,999	11.6 (479)	10.9 (0.9)	16,270
\$70,000 - \$99,999	17.5 (723)	18.9 (1.2)	28,405
\$100,000 - \$119,999	24.1 (993)	26.2 (1.4)	39,306
\$120,000 or more	28.8 (1,186)	27.3 (1.3)	40,932





## APPENDIX C: SURVEY INSTRUMENT

### 2015 Northern Territory Gambling Prevalence Survey

The following to appear on every CATI screen throughout the interview

#### *Attrition risk*

We'd really appreciate you taking part. This is one of the world's few studies to explore a link between gambling and health and well-being. We hope to understand how to protect people from developing problem gambling and poor mental health as a result of gambling.

So would you please take part? It would be much appreciated (pause).

#### *Doesn't gamble*

We're just as interested in people who don't gamble, as this study is also exploring why some people prefer not to gamble and why some people do not develop gambling problems, while others do. So we need to understand the views of people who don't gamble, to compare them to people who do gamble.

The following to appear on every CATI screen throughout the interview

#### *Mental distress*

Problem gambling counselling for those affected or families (24/7) - 1800 858 858  
gamblinghelponline.org.au (Online counselling)  
Lifeline 13 11 14

#### *Respondent Anger*

Perhaps it may be useful if I get one of the study researchers to call you directly  
(If consent - Record name and number)

#### **Landline introduction – Landline sample**

Good [morning/afternoon/evening]. This is [name] from Roy Morgan Research calling on behalf of Menzies School of Health Research and the Northern Territory Community Benefit Fund. We are conducting a study into an important health and wellbeing issue in the NT.

May I speak to the person in your household, 18 years or older, with the most recent birthday.

#### **Mobile introduction – Mobile sample**

Good [morning/afternoon/evening]. This is [name] from Roy Morgan Research calling on behalf of Menzies School of Health Research. We are conducting a study

into an important health and wellbeing issue in the NT and are speaking to adults aged 18 years and older.

Is it convenient to talk now?

### **If agreed**

Thanks. Your responses are strictly confidential and the survey will take between less than 10 minutes up to 15 minutes, depending on your answers.

### **Dispositions for CATI interviews (and scope/response rate calculations)**

Busy/Engaged		Call Cycle Dead	
No Answer/No Reply		Appointment hard	
Fax/Computer/Modem		Appointment soft	
Disconnected		Call back	
Duplicate Number		Information sheet prior to call	
Answering Machine - Business		Interrupted - appointment set	
Cognitive/drunk		Too ill to participate	
Business		Survey completed	
Answering Machine-personal		Regional quotas full	
Language barrier		Answering Machine	
Away study duration		Unknown Result Code	
Operational Mobile		No one 18+	
Respondent - hard refusal		Hearing impaired	
Respondent - soft refusal		Non Northern Territory resident	
Household - hard refusal		Session - timeout	
Household - soft refusal		Record accessed > once	
Refused to continue		Disconnected by supervisor	
Final Refusal			

### **START SURVEY**

**Q1** May I just confirm you are currently living in the Northern Territory

1. Yes
2. No – thanks but this is for Northern Territory residents only. Thank you for your time.

EXIT – record disposition as non-Northern Territory resident

**Q2** May I confirm your age\_\_\_\_\_. → Go to Q3  
(998 Refused, 999 Don't know)

If under 18, I'm sorry but you do not qualify for the study. [record disposition as under 18)]

**Q2a** (If 998 in Q2 or 999 Don't know) - No worries, could you possibly then just confirm whether you fall into any of the following broad age categories?

1. <18 (Go to exit)
2. 18-24
3. 25-29

4. 30-34
  5. 35-39
  6. 40-44
  7. 45-49
  8. 50-54
  9. 55-59
  10. 60-64
  11. 65 or more
- (998 Refused, 999 Don't know)

**Q3** Record gender

1. Male
2. Female

**Q4** Are you are of Aboriginal or Torres Strait Islander origin?

1. Yes
2. No

**Q5** What is the total number of people 18 years or older who live in your household including yourself? Enter Number: \_\_\_\_\_ (max 25 - check)

**Q6** What is the total number of land telephone lines in your household? Enter Number: \_\_\_\_\_  
(min 0 allowed)

**Q7** What suburb do you live in?

Insert pull down list of Northern Territory localities (link to postcode and other geography)

Recode to weighting stratum

**\*\*We should work out weighting strata and insert in CATI program\*\***

**Pokies (electronic gaming machines)**

**Q8** Have you spent any money on pokies or gaming machines in the last 12 months?

1. Yes
2. No → Go to Q11 (horse, harness, greyhound racing)

**Q9** Did you play at a \_\_\_\_\_ [read out] [multiple response]

- a. Pub – 1 Yes, 2 No
- b. Club – 1 Yes, 2 No
- c. Casino – 1 Yes, 2 No
- d. Online – 1 Yes, 2 No
- e. Other – 1 Yes, 2 No. Specify **Q9e\_o** \_\_\_\_\_

**Q10** How often did you play the pokies overall in the last 12 months? [Enter number as per respondents base]

1. Week \_\_\_\_\_
2. Month \_\_\_\_\_
3. Year \_\_\_\_\_

**Q10a** Calculate annual pokies play

If Q10=1 then Q10a = Q10 x 52

If Q10=2 then Q10a = Q10 x 12

If Q10=3 then Q10a = Q10 x 1

### **Betting on horse or harness racing or greyhounds - excluding sweeps**

**Q11** Have you spent any money on horse, harness or greyhound races, but EXCLUDING sweeps in the last 12 months?

1. Yes
2. No → Go to Q14 (instant scratchies)

**Q12** Did you bet at a \_\_\_\_\_ [Read out] [multiple response]

- a. Racetrack – 1 Yes, 2 No
- b. TAB – 1 Yes, 2 No
- c. Pub – 1 Yes, 2 No
- d. Club – 1 Yes, 2 No
- e. Casino – 1 Yes, 2 No
- f. Phone – 1 Yes, 2 No
- g. Online – 1 Yes, 2 No
- h. Other – 1 Yes, 2 No. Specify **Q12h\_o** \_\_\_\_\_

**Q13** How often did you bet on horse, harness or greyhound races in the last 12 months? [Enter number as per respondents base]

1. Week \_\_\_\_\_
2. Month \_\_\_\_\_
3. Year \_\_\_\_\_

**Q13a** Calculate annual racetrack betting

If Q13=1 then Q13a = Q13 x 52

If Q13=2 then Q13a = Q13 x 12

If Q13=3 then Q13a = Q13 x 1

### **Instant Scratchies**

**Q14** Have you bought instant scratch tickets for yourself in the last 12 months?

1. Yes
2. No → Go to Q16 (keno)

**Q15** How often did you buy them for your own use in the last 12 months?

1. Week \_\_\_\_\_
2. Month \_\_\_\_\_
3. Year \_\_\_\_\_

**Q15a** Calculate annual instant scratchie buying

If Q15=1 then Q15a = Q15 x 52

If Q15=2 then Q15a = Q15 x 12

If Q15=3 then Q15a = Q15 x 1

### Keno

**Q16** Have you played Keno in the last 12 months?

1. Yes
2. No → Go to Q19 (lotto, powerball or the pools)

**Q17** Did you play at a \_\_\_\_\_ [read out] [multiple response]

- a. Pub – 1 Yes, 2 No
- b. Club – 1 Yes, 2 No
- c. Casino – 1 Yes, 2 No
- d. Online – 1 Yes, 2 No
- e. Other – 1 Yes, 2 No. Specify **Q17e\_o** \_\_\_\_\_

**Q18** How often did you play in the last 12 months?

1. Week \_\_\_\_\_
2. Month \_\_\_\_\_
3. Year \_\_\_\_\_

**Q18a** Calculate annual keno play

If Q18=1 then Q18a = Q18 x 52

If Q18=2 then Q18a = Q18 x 12

If Q18=3 then Q18a = Q18 x 1

### Lotto, Powerball or the Pools

**Q19** Have you bought lottery tickets such as Powerball, Lucky Lotteries or 6 from 38 Pools - in the last 12 months?

1. Yes
2. No → Go to Q21 (bingo)

**Q20** How often did you buy tickets in the last 12 months?

1. Week \_\_\_\_\_
2. Month \_\_\_\_\_
3. Year \_\_\_\_\_

**Q20a** Calculate annual lotto play

If Q20=1 then Q20a = Q20 x 52

If Q20=2 then Q20a = Q20 x 12

If Q20=3 then Q20a = Q20 x 1

### Bingo

**Q21** Have you played bingo money in the last 12 months?

1. Yes
2. No → Go to Q23 (casino table games)

**Q22** How often did you play bingo for money in the last 12 months?

1. Week \_\_\_\_\_

2. Month \_\_\_\_\_
3. Year \_\_\_\_\_

**Q22a** Calculate annual bingo play

If Q22=1 then Q22a = Q22 x 52

If Q22=2 then Q22a = Q22 x 12

If Q22=3 then Q22a = Q22 x 1

### Casino table games like Blackjack, baccarat, or Roulette or poker

**Q23** Have you played casino table games such as Blackjack, baccarat, or Roulette or poker in the last 12 months?

1. Yes
2. No → Go to Q26 (sport)

**Q24** Did you play at a \_\_\_\_\_ [read out] [multiple response]

- a. Casino – 1 Yes, 2 No
- b. Online – 1 Yes, 2 No
- c. Other – 1 Yes, 2 No. Specify **Q24c\_o** \_\_\_\_\_

**Q25** How often did you play in the last 12 months?

1. Week \_\_\_\_\_
2. Month \_\_\_\_\_
3. Year \_\_\_\_\_

**Q25a** Calculate annual casino table games

If Q25=1 then Q25a = Q25 x 52

If Q25=2 then Q25a = Q25 x 12

If Q25=3 then Q25a = Q25 x 1

Sports betting like on soccer, AFL, cricket or tennis

**Q26** Have you bet on a sport like AFL, cricket or tennis in the last 12 months?

1. Yes
2. No → Go to Q28 (non-sporting events)

**Q26** Did you bet at a \_\_\_\_\_ [read out] [multiple response]

- a. Pub – 1 Yes, 2 No
- b. Club – 1 Yes, 2 No
- c. TAB – 1 Yes, 2 No
- d. Casino – 1 Yes, 2 No
- e. Over the telephone – 1 Yes, 2 No
- f. Online – 1 Yes, 2 No
- g. Other – 1 Yes, 2 No. Specify **Q26g\_o** \_\_\_\_\_

**Q27** How often did you bet on a sporting event in the last 12 months?

1. Week \_\_\_\_\_
2. Month \_\_\_\_\_
3. Year \_\_\_\_\_

**Q27a** Calculate annual sports betting

If Q27=1 then  $Q27a = Q27 \times 52$

If Q27=2 then  $Q27a = Q27 \times 12$

If Q27=3 then  $Q27a = Q27 \times 1$

---

**Non-sporting events betting like betting on Logies, Fantasy Sports or an election**

**Q28** Have you bet on a non-sporting event like the Logies, Fantasy Sports or an election in the last 12 months?

1. Yes
2. No → Go to Q30 (Raffles and sweeps)

**Q29** How often did you bet on a non-sporting event in the last 12 months?

1. Week \_\_\_\_\_
2. Month \_\_\_\_\_
3. Year \_\_\_\_\_

**Q29a** Calculate annual bingo play

If Q29=1 then  $Q29a = Q29 \times 52$

If Q29=2 then  $Q29a = Q29 \times 12$

If Q29=3 then  $Q29a = Q29 \times 1$

---

**Raffles or sweeps and other phone and SMS competitions**

**Q30** Have you spent money on a raffle ticket or sweeps or SMS or phone-in competition in the last 12 months?

1. Yes
2. No → Go to 32 (informal private games - cards)

**Q31** How often did you participate in the last 12 months?

1. Week \_\_\_\_\_
2. Month \_\_\_\_\_
3. Year \_\_\_\_\_

**Q31a** Calculate annual raffles play

If Q31=1 then  $Q31a = Q31 \times 52$

If Q31=2 then  $Q31a = Q31 \times 12$

If Q31=3 then  $Q31a = Q31 \times 1$

---

**Betting on Informal private games like playing cards, mah-jong or snooker for money at home**

**Q32** Have you bet on any informal private games for money such as betting on cards, mah-jong, pool in the last 12 months?

1. Yes
2. No → Go to Q34 (other)

**Q33** How often did you play in the last 12 months?

1. Week \_\_\_\_\_
2. Month \_\_\_\_\_
3. Year \_\_\_\_\_

**Q33a** Calculate annual informal games betting

If Q33=1 then Q33a = Q33 x 52

If Q33=2 then Q33a = Q33 x 12

If Q33=3 then Q33a = Q33 x 1

### Other gambling activity

**Q34** Is there any other gambling activity you've spent money on in the last 12 months?

1. Yes
2. No → Go to DV1

**Q34a** What did you gamble on? (Record SINGLE ACTIVITY only) \_\_\_\_\_

\*\*Description needed for possible back coding

**Q35** How often did you play/bet in the last 12 months?

1. Week \_\_\_\_\_
2. Month \_\_\_\_\_
3. Year \_\_\_\_\_

**Q35a** Calculate annual informal games betting

If Q35 = 1 then Q35a = Q35 x 52

If Q35 = 2 then Q35a = Q35 x 12

If Q35 = 3 then Q35a = Q35 x 1

Create dummy variable for Gambler

**DV1** Gambling status (last 12 months)

1. Gamblers → If [Q8=1 or Q11=1 or Q14=1 Q16=1 or Q19=1 or Q21=1 or Q23=1 or Q26=1 or Q28=1 or Q30=1 or Q32=1 or Q34=1] then QHS1 (highest spend)

2. Otherwise ALL others are Non-gamblers → Q58

Highest spend activity

**QHS1** Of all the gambling activities you spent money on in the past 12 months, on which activity did you spend the most money? [read out ONLY activities played]

1. Playing the pokies or gaming machines
2. Betting on horse or harness or greyhound racing, but excluding sweeps
3. Instant scratch tickets
4. Keno
5. Lotto, Powerball or the Pools
6. Bingo
7. Betting on table games like blackjack, baccarat, or Roulette or poker
8. Betting on sports - like on AFL, cricket or tennis
9. Betting on non-sporting events like Logies, Fantasy Sports or an election
10. Raffles, sweeps or SMS or phone-in competitions
11. Informal private games for money such as betting on cards, mah-jong, snooker
12. Other gambling activity



**QHS2** How much money did you spend on average, when you played [insert QHS1 gambling activity] [insert times activity played and base as measured in previous gambling frequency questions – e.g., Once per week, Once per month or Once per Year - as per previous questions]?

(999998, Refused, 999999. Don't Know)

\*Use a refusal code that is likely to be out of range

**QHS2** Enter amount (\$)\_\_\_\_\_

INSERT QHS2 BASE VARIABLE (CALLED QHS2\_BASE) with 1=Week, 2=Month and 3=Year

QHS2\_Annual spend calculated as follows

Calculate annual spend on highest spend activity:

If QHS2\_BASE=1, then QHS2\_Annual = QHS2 x 52

If QHS2\_BASE=2, then QHS2\_Annual = QHS2 x 12

If QHS2\_BASE=3, then QHS2\_Annual = QHS2 x 1

#### All gamblers

#### PGSI - Problem gambling Severity Index

**PGSI1** Thinking about the past 12 months, how often have you bet more than you could really afford to lose? Would you say

0. Never
1. Sometimes
2. Most of the time
3. Almost always

**PGSI2** 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? Would you say

0. Never
1. Sometimes
2. Most of the time
3. Almost always

**PGSI3** Thinking about the past 12 months, how often have you gone back another day to try to win back the money you lost Would you say

0. Never
1. Sometimes
2. Most of the time
3. Almost always

**PGSI4** Thinking about the past 12 months, how often have you borrowed money or sold anything to get money to gamble? Would you say

0. Never
1. Sometimes
2. Most of the time
3. Almost always

**PGSI5** Thinking about the past 12 months, how often have you felt that you might have a problem with gambling? Would you say

0. Never
1. Sometimes
2. Most of the time
3. Almost always

**PGSI6** 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? Would you say

0. Never
1. Sometimes
2. Most of the time
3. Almost always

**PGSI7** Thinking about the past 12 months, how often have you felt guilty about the way you gamble, or what happens when you gamble? Would you say

0. Never
1. Sometimes
2. Most of the time
3. Almost always

**PGSI8** Thinking about the past 12 months, how often has gambling caused you any health problems, including stress or anxiety? Would you say never, sometimes, most of the time, or almost always?

0. Never
1. Sometimes
2. Most of the time
3. Almost always

**PGSI9** Thinking about the past 12 months, how often has your gambling caused any financial problems for you or your household? Would you say

0. Never
1. Sometimes
2. Most of the time
3. Almost always

**Q45**  $CPGI\_SCORE = PGSI1 + PGSI2 + PGSI3 + PGSI4 + PGSI5 + PGSI6 + PGSI7 + PGSI8 + PGSI9$

**GAMBLER\_TYPE**

1. Non-problem gamblers =  $CPGI\_SCORE=0$
2. Low risk gamblers =  $CPGI\_SCORE=1$  to 2
3. Moderate risk gamblers =  $CPGI\_SCORE=3-7$
4. Problem gamblers =  $CPGI\_SCORE=8-27$
5. Non-gamblers (REST OF SAMPLE – non-gamblers did not do PGSI above)

**Pokies players only (all) if Q8=1**

**Q46** In the last 12 months, at which venue did you most frequently play the pokies?

INSERT DROP DOWN LIST OF ALL VENUES IN NT – MATT TO SUPPLY

ADD OTHER SPECIFY (If cannot select from menu) (RECORD) – **Q46o**

98. Refused (Do not read) → Go to **Q49** (pokies harm reductions measures)

99. Don't know (Do not read) → Go to **Q49** (pokies harm reductions measures)

**Q48** About how far from your home is this venue?

1. 1 km or less
2. 1.1-5 km
3. 5.1-10 km
4. 10 km or more

98. Refused (Do not read)

99. Don't know (Do not read)

**Pokies harm reduction measures**

**Q49** Has the ban on smoking in gaming areas increased, not changed, or decreased the amount of money you have spent on pokies?

1. Increased
2. No change
3. Decreased

98. Refused (Do not read)

99. Don't know (Do not read)

**Q50** Has putting the ATM out of sight away from the gaming floor increased, decreased or not changed the amount of money you spend on pokies?

1. Increased
2. No change
3. Decreased

98. Refused (Do not read)

99. Don't know (Do not read)

**At-risk Gamblers only (Low risk gamblers, moderate risk gamblers and problem gamblers to do questions below) – i.e. GAMBLER\_TYPE=2, 3 or 4**

**Policy measures effectiveness**

**Q51** Have you accessed cash from an ATM for gambling when in a gambling venue (such as in a pub, club, TAB or casino) in the past 12 months?

1. Yes
2. No → Go to **Q53**
3. Don't gamble in venues → Go to **Q53**
98. Refused [Do not read] → Go to **Q53**
99. Don't know [Do not read] → Go to **Q53**

**Q52** How many times on average per gambling session did you access cash from the ATM?

- 1. Less than once
- 2. Once
- 3. Two times
- 4. Three times
- 5. Four or more times
- 98. Refused [Do not read]
- 99. Don't know [Do not read]

**Q53** In the last 12 months, has a staff member of a gambling venue ever spoken with you to check if you are okay while you were gambling?

- 1. Yes
- 2. No
- 98. Refused [Do not read]
- 99. Don't know [Do not read]

**0.25 Non-problem gamblers, All low risk gamblers, All moderate risk gamblers and All problem gamblers)**  
**Gambling motives**

**Q54** While thinking about your favourite type of gambling, please indicate how strongly you agree or disagree with the following statements. [Read out: You can say you Strongly disagree, disagree, neither agree or disagree, Agree, Strongly agree]

- a. Gambling is a rush
- b. Gambling is a way to win big money immediately
- c. Gambling is about enjoying intensive feelings
- d. Gambling gives a feeling of being really alive
- e. Gambling provides a good chance to win big with small money
- f. Gambling is a way to forget everyday problems
- g. Gambling is the best way to relax
- h. Gambling can help clear your mind
- i. Gambling helps release tension
- j. Gambling is about feeling like an expert
- k. Gambling produces a feeling of importance
- l. Gambling is about feeling in control
- m. Gambling produces a feeling of being powerful
- n. Gambling is a way to make big money
- o. Gambling provides an opportunity to be with similar people
- p. Gambling is a way to meet new people
- q. Gambling provides an opportunity to get along with others favourably
- r. Gambling provides an opportunity to be with friends

- 1. Strongly disagree
- 2. Disagree
- 3. Neither agree or disagree
- 4. Agree
- 5. Strongly agree
- 98. Refused [Do not read]
- 99. Don't know [Do not read]

(All low risk gamblers, All moderate risk gamblers and all problem gamblers)

**Negative consequences of persons gambling**

**Q55** In the last 12 months, has your own gambling affected you in any of the following ways?

[read out]

- a. Ran out of money for rent or mortgage
- b. Ran out of money for food
- c. Ran out of money for other bills (e.g. electricity)
- d. Raided savings accounts/funds
- e. Borrowed money from family or friends
- f. Debt collectors repossessed goods
- g. Sold/hocked possessions
- h. Relationship problem with friends
- i. Relationship problems with family
- j. Physical or verbal violence toward you
- k. Kids did not attend school
- l. Kids missed out on something (e.g. school excursion)
- m. Felt stress, anxiety or depression
- n. Did something outside the law
- o. Had a problem with work (e.g. time off, lost job)
- p. Other (specify **Q55p\_o** \_\_\_\_\_ )

Each of the above negative consequences items to have following scale –

1. Yes, 2. No, 98. Refused [Do not read], 99. Don't know [Do not read]

**Q56** Did you seek help for problems related to your own gambling in the last 12 months?

[Read out: such as help from a counsellor or a friend]

- 1. Yes
- 2. No → Go to Q58 (affect by other's gambling)
- 98. Refused [Do not read]
- 99. Don't know [Do not read]

**Q57** Did you seek help from any of the following \_\_\_\_\_ [read out] multiple responses

- a. Called the gambling helpline
- b. Self-excluded from venue
- c. Saw a gambling counsellor
- d. Saw another social worker
- e. Spoke to a staff member at gambling venue
- f. Went to Gamblers Anonymous
- g. Spoke to a church or religious worker
- h. Used internet online help
- i. Saw a Doctor
- j. Talked to your spouse or partner
- k. Talked to other family
- l. Talked to friends
- m. Did you seek help in any other way (specify **Q57m\_o** \_\_\_\_\_ )

n. None of the above

All above items to include following scale:

1. Yes
2. No
98. Refused [Do not read]
99. Don't know [Do not read]

All	respondents				section				
(Survey	0.25	Non-gamblers,	0.25	non-problem	gamblers,	All	low	risk	gamblers,
All moderate risk gamblers and All problem gamblers)									

**Affected by other persons gambling**

**Q58** In the last 12 months have you been negatively affected by someone else's gambling?

1. Yes
2. No → Go to Q63 (pokies increase or not)
98. Refused [Do not read]
99. Don't know [Do not read]

**Q59** Is this person your \_\_\_\_\_? [Prompt if a respondent replies there is more than one person. If there is more than one person, think about the person that has affected you the most]

1. Parent
2. Son or daughter
3. Friend
4. Work colleague
5. Spouse
6. Acquaintance
7. Other (please specify) **Q59o** \_\_\_\_\_
98. Refused [Do not read]
99. Don't know [Do not read]

**Q60** Has this person's gambling affected you in any of the following ways? [RA]

- a. Ran out of money for rent or mortgage
- b. Ran out of money for food
- c. Ran out of money for other bills (e.g. electricity)
- d. Raided savings accounts/funds
- e. Borrowed money from family or friends
- f. Debt collectors repossessed goods
- g. Sold/hocked possessions
- h. Relationship problem with friends
- i. Relationship problems with family
- j. Physical or verbal violence toward you
- k. Kids did not attend school
- l. Kids missed out on something (e.g. school excursion)
- m. Felt stress, anxiety, depression or shame
- n. Did something outside the law
- o. Had a problem with work (e.g. time off, lost job)
- p. Other (specify **Q60o**) \_\_\_\_\_

Each of the above negative consequences items to have following scale –

- 1. Yes,
- 2. No,
- 98. Refused [Do not read],
- 99. Don't know [Do not read]

**Q61** Did you seek help when you were affected by this person's gambling in the last 12 months? [Prompt: such as help from a counsellor or a friend]

- 1. Yes
- 2. No → Go to Q63 (pokies increase or decrease)
- 98. Refused [Do not read]
- 99. Don't know [Do not read]

**Q62** Did you seek help from any of the following \_\_\_\_\_ [Read out] multiple responses

- a. Called the gambling helpline
- b. Self-excluded from venue
- c. Saw a gambling counsellor
- d. Saw another social worker
- e. Spoke to a staff member at gambling venue
- f. Went to Gamblers Anonymous
- g. Spoke to a church or religious worker
- h. Used internet online help
- i. Saw a Doctor
- j. Talked to your spouse or partner
- k. Talked to other family
- l. Talked to friends
- m. Did you seek help in any other way (specify **Q62o**) \_\_\_\_\_
- n. None of the above

All above items to include following scale:

- 1. Yes
- 2. No
- 98. Refused [Do not read]
- 99. Don't know [Do not read]

**Q63\_Pubs** - Should the number of pokies in Pubs should be increased, decreased or stay the same?

- 1. Increase
- 2. Stay the same
- 3. Decrease
- 98. Refused [Do not read]
- 99. Don't know [Do not read]

**Q63\_Clubs** - Should the number of pokies in clubs should be increased, decreased or stay the same?

- 1. Increase
- 2. Stay the same
- 3. Decrease
- 98. Refused [Do not read]
- 99. Don't know [Do not read]

**Q63\_Casino** - Should the number of pokies in the casino should be increased, decreased or stay the same?

- 1. Increase
- 2. Stay the same
- 3. Decrease
- 98. Refused [Do not read]
- 99. Don't know [Do not read]

**Public health questions (Survey 0.25 Non-gamblers, 0.25 non-problem gamblers, All low risk gamblers, all moderate risk gamblers and All problem gamblers)**

**Alcohol**

**Q64** Have you drank alcohol in the last 12 months?

- 1. Yes
- 2. No → Go to Q69 (smoking)
- 98. Refused [Do not read]
- 99. Don't know [Do not read]

**Q65** In the last 12 months, have you ever felt you should cut down on your drinking?

- 1. Yes
- 2. No

**Q66** In the last 12 months, have people annoyed you by criticizing your drinking?

- 1. Yes
- 2. No

**Q67** In the last 12 months, have you ever felt bad or guilty about drinking?

- 1. Yes
- 2. No

**Q68** In the last 12 months, have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover (i.e. An eye opener)?

- 1. Yes
- 2. No

**Smoking**

**Q69** Do you currently smoke?

- 1. Yes
- 2. No → Got to Q71
- 98. Refused (Do not read)
- 99. Don't know (Do not read)

**Q70** Do you smoke regularly, that is, at least once a day?

- 1. Yes → Go to Q70a
- 2. No → Go to Q72
- 98. Refused (Do not read)
- 99. Don't know (Do not read)



**Q70a** How many cigarettes per day would you usually smoke?

Enter number \_\_\_\_\_ → Go to Q72

998 Refused → Go to Q72,

999 Don't know → Go to Q72

**Q71** Have you ever smoked regularly, that is, at least once a day?

1. Yes

2. No

98. Refused (Do not read)

99. Don't know (Do not read)

**Q72** Using the scale never, sometimes, most of the time and always, do you or does anyone ever smoke inside your house/unit?

1. Never

2. Sometimes

3. Most of the time

4. Always

98. Refused [Do not read]

99. Don't know [Do not read]

#### **Self-assessed health**

**Q73** In general, would you say your health is ..... [read out]

1. Excellent

2. Very good

3. Good

4. Fair

5. Poor

98. Refused (Do not read)

99. Don't know (Do not read)

#### **Exposure to personal stressors**

**Q74** In the last 12 months, have any of the following been a problem for you, a close friend or family member? [read out]

a. Serious illness or disability

b. Serious accident

c. Death of a family member or close friend

d. Mental illness

e. Divorce or separation

f. Not able to get a job

g. Involuntary loss of job

h. Alcohol-related problems

i. Drug-related problems (not alcohol)

j. Witness to violence

k. Abuse or violent crime

l. Trouble with the police

m. Gambling problem

n. Discrimination because ethnic/cultural background

o. Other (**Q74o** please specify \_\_\_\_\_)

Use the following scale below for each item above

- 1. Yes
- 2. No
- 98. Refused (Do not read)
- 99. Don't know (Do not read)

#### **Financial stress**

**Q75** In the last 12 months, have you run out of money for essentials such as food and rent?

- 1. Yes
- 2. No → Go to **Q77** (Demographics)
- 98. Refused (Do not read)
- 99. Don't know (Do not read)

**Q76** In the last 2 weeks, have you run out of money for essentials such as food and rent?

- 1. Yes
- 2. No
- 98. Refused (Do not read)
- 99. Don't know (Do not read)

#### **Demographics (all)**

I am now going to ask you a few questions to ensure we survey a good cross-section of the community. All information is strictly confidential and only reported for the survey overall.

**Q77** Is English the main language spoken in your household?

- 1. Yes
- 2. No
- 98. Refused [Do not read]
- 99. Don't know [Do not read]

**Q78** Which of the following best describes your household? [Read out]

- 1. Couple with no children
- 2. Couple with children still at home
- 3. Couple with children not living at home
- 4. Single person household (no children)
- 5. Single with children still at home
- 6. Single with children not living at home
- 7. Group or shared household
- 8. Other living arrangement
- 98. Refused [Do not read]
- 99. Don't know [Do not read]

**Q79** Are you currently studying at University, College or TAFE? [Read out if Yes: Would that be Full-time or Part-time?]

- 1. Full-time
- 2. Part-time
- 3. Not studying
- 98. Refused [Do not read]
- 99. Don't know [Do not read]

**Q80** Which of the following best describes your current work status? [Read out]

- 1. Working full-time
- 2. Working part-time
- 3. Home duties
- 4. Retired (self-supporting, in receipt of superannuation)
- 5. Pensioner
- 6. Unemployed (or looking for work)
- 7. Other [Do not read]
- 98. Refused [Do not read]
- 99. Don't know [Do not read]

**Q81** Are you a Fly-in Fly-out or Drive-in Drive-out worker?

- 1. Yes
- 2. No
- 98. Refused [Do not read]
- 99. Don't know [Do not read]

**Q82** What is the highest completed education qualification you have received?  
[read out]

- 1. University Bachelor or above
- 2. A trade, technical certificate (III or IV) or Diploma
- 3. Completed Senior high school (Year 12)
- 4. Completed Junior high school (Year 10)
- 5. Less than year 10
- 98. Refused [Do not read]
- 99. Don't know [Do not read]

**Q83** Could you please tell me your personal annual income from all sources before tax? [Read out if necessary]

- 1. Less than \$20,000 (less than \$769 per fortnight)
- 2. \$20,000 - \$29,999 (\$770 – \$1,154 per fortnight)
- 3. \$30,000 - \$49,999 (\$1,155 – \$1,884 per fortnight)
- 4. \$50,000 - \$69,999 (\$1,885 – \$2,654 per fortnight)
- 5. \$70,000 - \$99,999 (\$2,655 – \$3,808 per fortnight)
- 6. \$100,000- \$119,999 (\$3,809 – \$4,615 per fortnight)
- 7. \$120,000 or more (\$4,615 or more per fortnight)
- 98. Refused [Do not read]
- 99. Don't know [Do not read]

**Q84** We may do a follow-up study. May we contact you about this? [If NO then tell respondent they can decline at the time]

1. Yes
2. No [Finish]

Record contact details if Yes

**Q85a** Home phone number [insert sample item number and confirm]

**Q85b** Mobile number

**Q85c** Work number

This completes the survey. My supervisor may call to check that the interview, so could I have your first name please? (Record \_\_\_\_\_)

Thank you very much for your time and assistance. Your co-operation is greatly appreciated.

Would you like any numbers for the Gambling Helpline or Life line?

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