GAMBLING AND PROBLEM GAMBLING AMONG RECENTLY SENTENCED WOMEN PRISONERS IN NEW ZEALAND

Report Number Four of the New Zealand Gaming Survey

Max Wenden Abbott
Brian G. McKenna

December 2000
Acknowledgments

The authors acknowledge the contribution of the women prisoners who participated in this study and assisted in advancing our understanding of gambling and problem gambling within the community.

As with previous reports in the New Zealand Gaming Survey series, the support provided by John Markland, Margaret de Joux and Mike Osmond of the Department of Internal Affairs is noted with appreciation.

Lynne Giles and Maynard Williams, Auckland University of Technology statisticians, gave statistical advice and undertook some of the more specialised data analyses. Lorna Dyall provided advice and comment, from a Māori perspective, on the questionnaire and study design. David Whales and a number of other Department of Corrections staff also assisted in various ways.

Rachel Volberg assisted with the study design and review of literature on women’s gambling and problem gambling.

Special thanks is given to the directors and staff of the three women’s prisons for their support with data collection, and to Carol Garnett for her perseverance and competence with respect to word processing and document presentation.

Finally, the professionalism that Andy Heinemann and his team of National Research Bureau interviewers brought to this project, particularly with respect to the cognitive testing of the questionnaire, participant recruitment and interviewing, is acknowledged.

The advice and assistance of all these people contributed substantially to the study and this report. However, editorial responsibility lies with the two principal authors alone.

Published by:
The Department of Internal Affairs
P.O. Box 805
Wellington
New Zealand

Funding for the New Zealand Gaming Survey came from the undistributed profits of the Lotteries Commission (applied to the project at the direction of the Minister of Internal Affairs). Funding also came from the Problem Gambling Committee.

This report is available on the Department’s website at: http://www.dia.govt.nz

ISBN: 0-478-09247-4
Foreword

Gambling and Problem Gambling Among Recently Sentenced Women Prisoners in New Zealand is the fourth report from the New Zealand Gaming Survey.

The primary objectives of the report were to assess the nature of gambling and problem gambling among recently incarcerated women prisoners and to examine relationships between gambling and criminal offending. A review of the literature suggests that this is only the second study internationally to focus exclusively on these issues in a population of women prisoners, and that it is the first such study to include a validated measure of problem gambling.

Although the sample size is relatively small (94 women), it includes almost two-thirds of recently-sentenced women prisoners, and many of those surveyed had gambling problems. Consequently, it was possible for the researchers to derive a great deal of information from the survey despite the small sample size.

I would like to commend Professor Max Abbott, Brian McKenna, and Andy Heinemann and his team of National Research Bureau interviewers, for their work in producing this report. I would also like to thank the 94 anonymous women whose contribution and cooperation made the study possible.

This report is the latest in a series of studies that make up the New Zealand Gaming Survey, a substantial body of gambling research commissioned by the Department. The full suite of seven reports from the Survey will comprise:

- A critical review of international literature on gambling participation and problem gambling prevalence
- Results from fresh interviews with people who participated in Phase 2 of a previous national survey in 1991/1992
- Results of the 1999 two-phase national prevalence study
- A survey in two reports of the gambling behaviour of recently incarcerated prisoners
- A synthesis of all aspects of the research project.

In addition, the Department has recently published a supplementary report bringing together in one volume three years of Problem Gambling Committee data on problem gambling counselling in New Zealand.

This is a very significant body of work that will assist Government in making informed choices in relation to its policy on gambling and responses to problem gambling in New Zealand.

Peter Hughes
Secretary for Internal Affairs
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXECUTIVE SUMMARY</td>
<td>1</td>
</tr>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Gambling Participation Prior to Imprisonment</td>
<td>1</td>
</tr>
<tr>
<td>Gambling in Prison</td>
<td>2</td>
</tr>
<tr>
<td>Gambling-related Offending</td>
<td>2</td>
</tr>
<tr>
<td>Problem Gambling</td>
<td>3</td>
</tr>
<tr>
<td>Health, Mental Health and Substance Use and Misuse</td>
<td>4</td>
</tr>
<tr>
<td>Comparisons between Problem and Non-problem Gamblers</td>
<td>4</td>
</tr>
<tr>
<td>Impacts of Other People’s Gambling</td>
<td>7</td>
</tr>
<tr>
<td>Relationships Between Performance on the SOGS-R, Other Clinical Measures, Age, Age When First Started Offending and Age When First Convicted</td>
<td>7</td>
</tr>
<tr>
<td>Multivariate Examination of Predictors of Problem Gambling</td>
<td>8</td>
</tr>
<tr>
<td>Problem Gambling Subgroups</td>
<td>8</td>
</tr>
<tr>
<td>Māori and Non-Māori</td>
<td>8</td>
</tr>
<tr>
<td>Hazardous Alcohol Consumption</td>
<td>9</td>
</tr>
<tr>
<td>Conduct Disorder</td>
<td>9</td>
</tr>
<tr>
<td>Antisocial Personality Disorder</td>
<td>10</td>
</tr>
<tr>
<td>Gambling-related Offending</td>
<td>10</td>
</tr>
<tr>
<td>The Temporal Pattern of Offending and Problem Gambling</td>
<td>10</td>
</tr>
<tr>
<td>Gambling in Prison</td>
<td>10</td>
</tr>
<tr>
<td>The Development of Gambling Problems</td>
<td>11</td>
</tr>
<tr>
<td>Help-seeking and Self Recovery</td>
<td>11</td>
</tr>
<tr>
<td>Participants’ Comments about Gambling and Problem Gambling</td>
<td>12</td>
</tr>
<tr>
<td>1. INTRODUCTION</td>
<td>13</td>
</tr>
<tr>
<td>2. BACKGROUND AND CONTEXT</td>
<td>15</td>
</tr>
<tr>
<td>2.1 Gambling and Problem Gambling</td>
<td>15</td>
</tr>
<tr>
<td>Gambling</td>
<td>15</td>
</tr>
<tr>
<td>Problem Gambling</td>
<td>17</td>
</tr>
<tr>
<td>2.2 The Measurement of Gambling Problems</td>
<td>18</td>
</tr>
<tr>
<td>2.3 Gambling and Criminal Behaviour</td>
<td>19</td>
</tr>
<tr>
<td>Introduction</td>
<td>19</td>
</tr>
<tr>
<td>Surveys of Problem Gamblers</td>
<td>20</td>
</tr>
<tr>
<td>Types of Offences Committed by Problem Gamblers</td>
<td>21</td>
</tr>
</tbody>
</table>
Comparing Problem and Non-problem Gamblers 58
Sociodemographic Risk Factors 58
Gambling Participation Risk Factors 58
Gambling Preference Risk Factors 61
Selected Offending Risk Factors 61
Health, Mental Health, Substance Use and Misuse among Problem and Non-problem Gamblers 65
Other Risk Factors and the Effects of Other People's Problem Gambling on Respondents 67
Pattern of Relationships between Performance on the Psychiatric Screens, Age, Age when First Started Offending and Age when First Convicted 70
Multivariate Analysis of Predictors of Problem Gambling 73
Examination of Problem Gambling Subgroups 75
Introduction 75
Māori 76
Hazardous Alcohol Consumption 81
Conduct Disorder 85
Antisocial Personality Disorder 88
Gambling-related Offending 89
Temporal Pattern of Offending and Problem Gambling 90
Gambling in Prison 91
The Development of Gambling Problems and Help Seeking 94
Participants' Comments about Gambling and Problem Gambling 96

4. DISCUSSION 99
4.1 Introduction 99
4.2 The Demographic and Social Characteristics of the Study Group in Comparison to Female Prisoners and the General Population 99
4.3 Offending Profile 100
4.4 Gambling Participation, Preferences, Expenditure and Reasons for Gambling 100
4.5 Gambling Participation in Prison 101
4.6 Substance Use and Hazardous Alcohol Consumption 103
4.7 Health and Wellbeing 105
4.8 Gambling-related Offending 106
4.9 Problem Gambling 107
Introduction 107
Prevalence of Probable Pathological and Problem Gambling and Comparison with Other Studies 108
‘Lifetime’ versus ‘Current’ Probable Pathological and Problem Prevalence Rates 109
Respondent Reasons for Problem Gambling Reduction or Cessation 112
Relationships between Problem Gambling and Criminal Offending 112
Gambling related Offending 112
Conduct disorder 114
Age of First Onset 115
Escalation of Gambling Problems 115
Summary 116
Risk Factors for Problem Gambling 116
Problem Gambling Subgroups 119
Māori 120
Hazardous Drinking 122
Conduct Disorder 123
Antisocial Personality Disorder 124
Problem Gamblers Gambling Participation in Prison 125
Help Seeking and Treatment Issues 126
The Effects of Other People’s Gambling 128
4.10 Conclusion 129
REFERENCES 131
APPENDICES 137
Appendix One: 1999 Prison Study Questionnaire 138
Appendix Two: Effects of Others’ Problem Gambling on the Women Prisoners 171
### TABLES

- **Table 1:** Lifetime and Past Month Mental Disorder Prevalence Estimates for Women from the 1998 National Study of Psychiatric Morbidity in Prisons
- **Table 2:** Response Rates for the Three Prisons and Total Study Group
- **Table 3:** Comparison of the Study Sample with the 1997 Prison Census
- **Table 4:** Comparison of the Study Sample with the Population of Eligible Participants at the Time of the Study
- **Table 5:** Sample Description: Sociodemographic Characteristics
- **Table 6:** Sample Description: Offending Profile
- **Table 7:** Sample Description: Gambling Related Offending Profile
- **Table 8:** Participation in and Expenditure on Different Gambling Activities Prior to and in Prison
- **Table 9:** Sample Description: Gambling Preferences in the Six Months Prior to Imprisonment, Reasons for Gambling and Usual Time Spent Gambling
- **Table 10:** Gambling While in Prison
- **Table 11:** Non-Problem Gambling Subgroups by Selected Sociodemographic Characteristics
- **Table 12:** Prevalence Estimates of Problem Gambling: Lifetime and Six Months Prior to Prison
- **Table 13:** Percentage Giving Positive Responses to Each Lifetime and Six Months Prior to Prison SOGS-R Question
- **Table 14:** Sample Description: Mental Health Status
- **Table 15:** Lifetime and Six Month Prior to Prison Gambling Problem Status by Selected Sociodemographic Characteristics
- **Table 16:** Lifetime and Six Month Prior to Prison Gambling Problem Status by Selected Gambling Participation Activities
- **Table 17:** Gaming Activity Most Enjoyed in the Six Months Prior to Imprisonment by Lifetime Problem and Non-problem Gamblers
- **Table 18:** Lifetime and Six Month Prior to Prison Gambling Problem Status by Selected Offending Characteristics
- **Table 19:** Pattern of Offending in Relation to Problem Gambling Status
- **Table 20:** Categories of Problem Gamblers by Offending Characteristics
- **Table 21:** Lifetime and Six Month Prior to Prison Gambling Problem Status by Selected Mental Health Status Characteristics
- **Table 22:** Perceived Risk Factors by Problem Gambling Status
- **Table 23:** Non-Parametric Correlations (Spearman Rho) Between Measures
Table 24: Variables Considered in the Multivariate Analysis of Predictors of Problem Gambling

Table 25: Multivariate Logistic Regression Analysis of Variables Predictive of Problem Gambling Status (Lifetime SOGS)

Table 26: Variables Considered in Each Sub Group Analysis

Table 27: Problem Gambling Subgroups: Māori Problem Gamblers Compared to Māori Non-problem Gamblers

Table 28: Comparison of Māori Problem Gamblers and Non-Māori Problem Gamblers

Table 29: Problem Gambling Subgroups: Problem Gamblers with Hazardous Alcohol Consumption Compared with Non-problem Gamblers with Hazardous Alcohol Consumption

Table 30: Comparison of Problem Gamblers with Hazardous Alcohol Consumption with Problem Gamblers with Non-Hazardous Alcohol Consumption

Table 31: Problem Gambling Subgroups: Problem Gamblers with a History of Conduct Disorder Compared to Non-problem Gamblers with a History of Conduct Disorder

Table 32: Comparison of Problem Gamblers who had Conduct Disorder with Problem Gamblers who did not have Conduct Disorder

Table 33: Problem Gambling Subgroups: Problem Gamblers with Antisocial Personality Disorder compared to Non-problem Gamblers with Antisocial Personality Disorder

Table 34: Comparison of Problem Gamblers with Antisocial Personality Disorder with Problem Gamblers who did not have Antisocial Personality Disorder

Table 35: Comparison of Problem Gamblers with Gambling Related Crimes to Problem Gamblers without Gambling Related Crimes

Table 36: Comparison of Problem Gamblers who were Gambling Prior to Offending to Problem Gamblers who Offended Prior to Gambling

Table 37: Prisoners who have Gambled in Prison - Significant Differences between Lifetime Problem Gamblers and Non-Problem Gamblers

Table 38: Comparison of Problem Gamblers who Gambled in Prison with Problem Gamblers who did not Gamble in Prison

Table 39: Problem Gamblers' Help Seeking Behaviour

x
EXECUTIVE SUMMARY

Introduction

This report outlines and discusses the major findings from a survey of gambling and problem gambling among recently sentenced inmates resident in New Zealand’s three prisons for women. A review of previous gambling research involving women, prisoners, and gambling in relation to criminal offending, is included to inform the design of the study and discussion of the findings.

This study is part of a programme of research, the New Zealand Gaming Survey (NZGS), commissioned by the Department of Internal Affairs. In general terms, the purpose of this research programme is to investigate the impact that the recent increase in gambling expenditure in New Zealand has had on people’s lives and to advance scientific understanding of gambling and problem gambling.

The primary objective of the study reported here was to assess the nature of gambling and problem gambling among recently incarcerated women prisoners and examine relationships between gambling and criminal offending.

It is the first study, internationally, to examine gambling and problem gambling among women prisoners using a validated measure of problem gambling. Although the sample size is not large (94 women) it contains almost two-thirds of recently sentenced women prisoners. It also has a high proportion of people with gambling problems. This enabled a number of relationships between problem gambling and other factors to be examined to an extent not possible previously.

This summary provides a skeletal overview of some of the major findings and their implications.

Gambling Participation Prior to Imprisonment

All of the women prisoners reported that they had gambled at some time in their lives. Ninety-seven percent said they had done so in the six months prior to entering prison and 73 percent said that they did so weekly or more often during this period. This level of gambling participation is very high relative to that of women in the general New Zealand population.

Exceedingly high levels of frequent gambling participation in continuous forms of gambling were evident. These types of gambling allow winnings to be quickly ‘re-invested’ and have been shown in previous studies to be associated with problem gambling. Continuous forms engaged in weekly or more often by over 20 percent of women were Instant Kiwi, gaming machines outside casinos and housie (bingo).

Reported average monthly gambling expenditure prior to imprisonment was more than six times that of women in the general population. Given that most women prisoners had low household incomes, this difference would have been greatly amplified if expressed as a percentage of monthly income.
Relative to women in the general population, women prisoners reported that their typical gambling sessions prior to imprisonment continued over long periods of time.

The most frequently mentioned reasons for gambling were (in descending rank order):

- To win money
- For entertainment or fun
- For excitement or challenge
- To socialise
- To support worthy causes
- For something to do or to relieve boredom.

Women prisoners much less frequently mentioned gambling to support worthy causes than do women in the general population. In other respects, their reasons for gambling were similar to those of women in the general population.

**Gambling in Prison**

Most women (72%) did not report having participated in any form of gambling during their current imprisonment. However, almost all of the 28 percent of women who did report gambling in prison did so weekly or more often. Lotto, housie and card games were the forms most frequently engaged in while in prison.

Reported monthly gambling expenditure for women who gambled in prison was much lower than it had been prior to imprisonment. The average expenditure for these women was similar to that of women who gamble in the general population. Although average expenditure was significantly lower in prison, wide variation was evident. In other words, some women spent very large sums and others much lower amounts. In addition to money, cigarettes, tobacco and confectionery were frequently reported as items used for gambling. Jewelry, drugs and items of clothing were also mentioned.

The typical length of gambling sessions was also much shorter in prison than outside prison and gambling was more often engaged in with others rather than alone.

The reasons most frequently given for gambling in prison were for entertainment or fun, to socialise, and for something to do or to relieve boredom.

Very few women who gambled in prison considered that gambling had either a positive or negative effect on their quality of life.

**Gambling-related Offending**

Just over a quarter of women (26%) indicated that they had committed a crime to obtain money to gamble or to pay gambling debts. The most frequently reported gambling-related crime was fraud, mentioned by 14 percent of women prisoners. Other crimes in this category, in descending order of frequency reported were burglary, shoplifting, supplying or selling illicit drugs, theft and robbery.

Almost one in five women (19%) said they had been convicted for a gambling-related offence. In total, these women reported 454 gambling-related convictions. Two women
were responsible for 390 of these convictions. Most of these women reported only one gambling-related conviction.

The total amount of money involved in gambling-related crimes was reported as approximately NZ$7 million. One woman who reported multiple gambling-related convictions accounted for NZ$5 million of the total. The median sum involved for offenders in this category was NZ$13,500 and the mode was NZ$5,000.

Problem Gambling

A third (31) of the 94 women prisoners were classified on the basis of their SOGS-R scores as lifetime probable pathological gamblers and just under a quarter (21; 22%) were assessed as being probable pathological gamblers during the six months prior to imprisonment (‘current’ probable pathological gamblers).

A further 12 percent (11) were classified as lifetime problem gamblers, with less serious problems than probable pathological gamblers. All of these women were also assessed as being problem gamblers during the six months prior to imprisonment (‘current’ problem gamblers).

In other words, 45 percent of the women were assessed as having experienced significant gambling problems at some stage in their lives and 34 percent had such problems at the time of their current imprisonment.

These prevalence rates are among the highest recorded in any previous problem gambling survey, apart from surveys of people seeking or receiving treatment for pathological gambling. However, they are virtually identical to those of a recent unpublished Australian male prison survey (Productivity Commission, 1999). The lifetime and past six months probable pathological gambling prevalence estimates for women in the general New Zealand population are 0.9 (0.5-1.4) percent and 0.5 (0.2-1.0) percent respectively. The figures in parentheses refer to 95 percent confidence intervals.

The ‘current’ probable pathological gambling categorisations (based on the SOGS-R) were checked by administering a second problem gambling screening test (the Fisher DSM Screen) to women who initially scored as ‘current’ probable pathological or problem gamblers. A very high level of agreement was reached with 19 of the 21 SOGS-R defined ‘current’ probable pathological gamblers identically classified on the basis of their performance on the second screen. One of the two who were not included on the basis of their Fisher Screen results fell just short of the cut-off score. Of the 11 SOGS-R defined ‘current’ problem gamblers, six were classified on the basis of their Fisher Screen results as ‘current’ probable pathological gamblers. Based on these findings it is concluded that, with this study group, the SOGS-R provides a conservative assessment of serious gambling problems. In other words, the actual rate of pathological gambling is considered more likely to be higher rather than lower than the SOGS-R estimates.

Relative to probable pathological gamblers identified in general population surveys, a large number of women prisoners had very high SOGS-R and Fisher Screen scores. Scores in this range are more typical of people who present to problem gambling services for counselling or treatment.
The differences between the lifetime and 'current' SOGS-R defined rates of probable pathological and problem gambling prevalence are much less than is typically found in general population surveys. Current problem rates, in particular, are usually much lower than lifetime problem rates. This has been interpreted as indicating greater problem remission over time in this group, through treatment and self-recovery. In the present study, the ‘current’ probable pathological gambling prevalence rate was two-thirds that of its lifetime counterpart and, in the case of ‘current’ problem gambling, there was no difference between the two rates. While there are a variety of possible explanations for this finding, it appears likely that probable pathological and problem gambling have high chronicity among women prisoners (i.e. they are less likely to recover).

Problem and probable pathological gambling prevalence rates did not differ significantly across the three prisons.

**Health, Mental Health and Substance Use and Misuse**

Sixty percent of women rated their general health as good and a similar percentage indicated that they were somewhat happy or very happy immediately prior to imprisonment. Perhaps surprisingly, somewhat more indicated that they were generally happy since they had been in prison.

Very high rates of substance use were found. Prior to imprisonment, 38 percent reported drinking ten or more drinks on a typical drinking day. The majority (84%) smoked cigarettes every day, 43 percent used marijuana twice a week or more and 32 percent used other illicit drugs this often.

Nearly half of the women (49%), on the basis of their scores on the AUDIT scale, experienced problematic or hazardous alcohol consumption prior to imprisonment and somewhat less than a third (30%) were assessed by the GHQ-12 as currently experiencing clinically significant levels of non-psychotic psychological disturbance.

Approximately two-thirds of the women (65%), on the basis of their PDQ-4+ scores, were considered to have experienced conduct disorder during childhood and 18 percent were currently classified as having antisocial personality disorder.

Nineteen percent of women prisoners said they had at some time received treatment for a mental health problem. Reasons given for receiving treatment, in the past, included depression, physical or mental abuse and suicidal ideation or suicide attempts. A few women also mentioned drug dependence/misuse and ‘personal problems’. Depression and alcohol or drug dependence/misuse were the most frequently mentioned reasons for receiving treatment during their current imprisonment.

**Comparisons between Problem and Non-problem Gamblers**

In contrast to the findings of the recent national prevalence survey (Abbott & Volberg, 2000), no statistically significant sociodemographic differences were found between the problem (probable pathological gambler and problem gambler groups combined) and non-problem gamblers.
Playing cards for money and taking bets with friends or work-mates on the outcome of events (at some time in the past and during the six months prior to imprisonment) were associated with both lifetime and 'current' problem gambling.

Other forms of gambling associated with 'current' problem gambling included:

- Gaming machines outside casinos (sometime in the past and currently)
- TeleBingo (sometime in the past and currently)
- Housie for money (sometime in the past and currently)
- Betting on horses or dogs (currently)
- Gaming machines in casinos (currently).

Lotto, other lotteries and raffles and Instant Kiwi were not associated with gambling problems either 'currently' or in the past.

This pattern of associations is broadly consistent with the findings of previous New Zealand research that shows weak or negative relationships between most non-continuous forms of gambling and problem gambling, and stronger links with a variety of continuous gambling forms, especially gaming machines and track betting. TeleBingo, a non-continuous form, is an exception in both the present study and the national survey (Abbott & Volberg, 2000). TeleBingo participation may have a direct relationship with problem gambling or be linked to it through its association with other gaming activities such as housie or one or more attributes of problem gamblers that are associated with both TeleBingo participation and problem gambling.

Although problem gamblers reported very few instances of gambling-related violent crime, they were no less likely than their non-problem gambling counterparts to have been convicted for violent offences, either in the past or currently. With respect to their most serious past and present convictions, the offending profiles of the two groups were similar.

Lifetime but not 'current' problem gamblers reported starting offending and first being convicted for a crime at a significantly younger mean age than non-problem gamblers.

Both lifetime and 'current' problem gamblers were significantly more likely than non-problem gamblers to report that their first conviction was related to gambling and that they had:

- Thought about doing something illegal to get money for gambling or to pay gambling debts
- Borrowed money without permission so they could gamble
- Committed a crime so they could gamble or pay gambling debts
- Gambled instead of committing a crime
- Had problems with the police due to gambling
- Appeared in court on charges related to their gambling
- Been in prison because of charges related to their gambling.

Only two women said that their early offending related to gambling and only three said their first conviction was gambling-related. All of these women were lifetime problem gamblers. These findings are consistent with the hypothesis that the large majority of problem gamblers in this population are 'criminals first and
problem gamblers second’, rather than people whose offending was a consequence of the development of serious gambling problems.

A half of the lifetime problem gamblers said they had committed a crime to get money for gambling or to pay gambling debts. Approximately 40 percent of this group indicated that their gambling had led to problems with the police and just over a quarter reported that they had appeared in court on charges related to their gambling. Nearly a third said they had been to prison because of charges related to their gambling. Very few non-problem gamblers reported any of these gambling-related criminal activities or outcomes.

Women with very severe gambling problems (lifetime SOGS-R scores of 10 or more) reported more frequently losing large sums of money gambling and thinking about and engaging in gambling-related criminal activities. They were not, however, significantly more likely than women with less serious problems to have appeared in court on charges related to gambling or to have been in prison for charges related to their gambling. All of the small number of women who said their first offending and first convictions related to gambling were in this group of serious problem gamblers.

From the foregoing, while it appears that few of the women commenced their criminal careers in response to gambling problems, gambling appears to have played a significant role in the subsequent offending of many women who later became problem gamblers. Following the development of gambling problems, many committed a mix of gambling-related and non-gambling related crimes. A significant number committed predominantly or exclusively gambling-related crimes. However, a half of the women problem gamblers said that they had never committed a gambling-related crime. These women had all engaged in other forms of criminal activity. These findings also suggest that many gambling offences go undetected by the police.

A surprising finding was that many women, especially those with more serious gambling problems, indicated that they at least sometimes had gambled instead of committing a crime. Further investigation is required to determine the circumstances under which this occurs and its implications for offending.

Relative to non-problem gamblers, problem gamblers (‘current’ and lifetime) experienced higher rates of conduct disorder during childhood and higher levels of non-psychotic psychological disorder currently. However, problem gamblers were not more likely to report receiving treatment for a mental health problem, either in the past or while in prison. These two groups did not differ significantly with respect to drug use, hazardous alcohol consumption or personality disorder.

Previous studies in New Zealand and elsewhere have found high rates of substance use and misuse among problem gamblers. The lack of a significant association in the present study appears to be largely a consequence of very high rates of substance use and misuse among the women prisoners generally, including those with gambling problems.

Relative to non-problem gamblers, ‘current’ and lifetime problem gamblers were significantly more likely to report ever having felt nervous about the amount of money they gambled and indicated usually gambling for longer periods of time
and having lost much larger sums of money gambling. These findings support the construct validity of the SOGS-R measure.

Problem gamblers were also much more likely to report having been in trouble with the law because of their gambling. Fourteen of the 32 ‘current’ problem gamblers said they had this experience in comparison with only four of the 62 non-problem gamblers. Although only a small number of non-problem gamblers indicated that their gambling had led to problems with the police, given their much larger number in the general population, this group could account for a moderate to large percentage of total gambling-related offending. Thus, consideration of gambling-related offending should not focus exclusively on problem gamblers.

‘Current’ problem gamblers were also more likely to report that one or both of their parents had a gambling problem in their lifetime. This association has been found in many previous studies and is clearly a risk factor for problem gambling.

A moderately large number of women reported that other people in their lives, additional to their parents, had gambling problems. Problem gamblers reported higher rates than non-problem gamblers, especially with respect to sisters, spouses/partners and brothers.

Impacts of Other People’s Gambling

A variety of adverse impacts of other peoples’ gambling on the women’s lives were reported. Those most frequently mentioned included:

- Loss of household or personal money
- Arguments, anger and violence
- Contribution to the development of their own gambling problems
- Neglecting the family.

Having a partner or spouse with a gambling problem was the form of relationship most often associated with adverse impacts.

Relationships Between Performance on the SOGS-R, Other Clinical Measures, Age, Age When First Started Offending and Age When First Convicted

Relationships between these variables, scored as continuous rather than categorical measures, were examined by correlation analysis. Very high correlation was found between lifetime and ‘current’ SOGS-R scores, consistent with the finding that there was little difference between lifetime and ‘current’ prevalence in the study group. Moderately high correlation was also found between SOGS-R and Fisher DSM Screen scores, a finding consistent with the view that they are in large part measuring the same thing.

Statistically significant but weak relationships were found between higher levels of gambling problems and higher levels of both psychological disturbance and antisocial behaviour. Higher levels of gambling problems were not found to be associated with higher degrees of hazardous drinking or age, however they did have a weak relationship with both age of first offending and first being convicted at a younger age.
Younger prisoners were found to have commenced offending and first been convicted at a younger age than older prisoners and, as expected, there was a strong association between age when offending commenced and age of first conviction.

Younger women tended to have higher levels of antisocial behaviour and antisocial behaviour was associated with having first commenced offending and first being convicted at a younger age. These relationships were of moderate strength and are consistent with the findings of previous criminological studies. Higher levels of antisocial behaviour also had a statistically significant but weak association with higher levels of hazardous drinking. In this population hazardous drinking was not age-related.

**Multivariate Examination of Predictors of Problem Gambling**

Because many different variables were found to be associated with problem gambling and because many of these variables were themselves inter-related, multivariate analyses were conducted to identify a parsimonious set of the most important predictors of problem gambling.

Although a large number of variables were examined together, only gambling-related measures emerged as significant predictors of problem gambling. Respondents with a preference for housie or for gaming machines outside of casinos were found to be at very high risk for lifetime problem gambling.

The relatively small sample size resulted in wide confidence intervals for these risk factors. Had the sample been larger, more precise estimates of the strength of these relationships could have been obtained and it is also likely that other risk factors may have been statistically significant. Furthermore, it would have been possible to include interaction terms made up of more than one variable and to build stronger predictive models.

**Problem Gambling Subgroups**

Given the relatively large number of lifetime problem gamblers identified (42 out of 94 in the total sample), it was possible to examine a number of problem gambling subgroups.

**Māori and Non-Māori**

Although 32 lifetime problem gamblers were Māori and 10 were non-Māori, Māori were not significantly more likely to experience gambling problems. This was because there were proportionately more Māori in the total study sample of recently imprisoned women.

Compared to non-Māori problem gamblers, Māori problem gamblers more often mentioned participating in card games and were less likely to have played gaming machines in a casino. Māori were also more likely to have ever been convicted for a violent offence and to be currently serving a sentence for violent offending. However, neither ethnic grouping differed significantly from their non-problem gambling counterparts with respect to having been convicted for a violent crime. The most notable difference between Māori and non-Māori problem gambling concerned alcohol consumption. Māori were much more likely to report regular heavy consumption and
hazardous drinking. Māori were also more likely to have a childhood history of conduct disorder.

**Hazardous Alcohol Consumption**

Over half of the problem gamblers were also hazardous drinkers, a similar degree of co-morbidity to that found in some previous surveys of problem gamblers. However, as mentioned above, problem gamblers did not differ from their non-problem gambler counterparts in this respect. This reflects the high level of hazardous drinking and alcohol problems among women prisoners as a whole.

Problem gamblers with co-morbid hazardous drinking were younger than were women problem gamblers without this pattern of drinking behaviour. As already indicated, they were much more likely to be Māori. Only one non-Māori problem gambler reported hazardous drinking. Problem gamblers with hazardous drinking were also more likely to be living with another adult or adults prior to imprisonment and less likely to be living with a spouse or partner. They were less likely to have bet on horses or dogs during the six months prior to imprisonment.

Problem gamblers with hazardous alcohol consumption were much more likely to have been convicted for a violent offence and to be currently serving a sentence for violent offending. This may indicate an interaction effect, whereby a combination of gambling and hazardous drinking or alcohol problems disproportionately increases the probability of violent offending and/or conviction for violent offending.

However, higher levels of violent offending in this group of problem gamblers may also be due to the influence of additional factors such as ethnicity that are associated with both hazardous alcohol consumption and violent offending. Further investigation, using longitudina designs and larger samples is required to tease out the causal pathways between problem gambling, hazardous drinking and violent and other types of offending.

**Conduct Disorder**

A large majority of problem gamblers (34 women) had a history of conduct disorder. This subgroup reported commencing gambling and commencing offending at much younger ages than those without a history of conduct disorder. Members of this subgroup also had higher levels of participation in card games and non-casino gaming machines, reported greater losses gambling in a single day and said that they usually gambled for longer periods of time. They reported much higher rates of parental gambling problems, both in the past and currently. They also reported drinking alcohol more often prior to imprisonment. However, they did not have higher levels of hazardous drinking and, apart from the age at which they commenced offending, they did not differ from non-conduct disordered groups with respect to offending behaviour or convictions.
Antisocial Personality Disorder

A small group of problem gamblers (10 women) had antisocial personality disorder. By definition, all of these women also had a childhood history of conduct disorder. Problem gamblers with antisocial personality disorder were more likely than problem gamblers without this disorder to report having taken part in a number of forms of gambling during the six months prior to imprisonment, namely gaming machines outside casinos, Instant Kiwi, TeleBingo and other lotteries and raffles. As with conduct disorder, a large number (9 out of 10) reported having had a parent with a gambling problem. This suggests a particularly strong association with parental gambling among problem gamblers with a history of conduct disorder and antisocial personality disorder. This link warrants more detailed investigation. Eighty percent also reported using illicit drugs prior to imprisonment, a very high rate relative to that of other problem gamblers.

Gambling-related Offending

Thirty-eight percent of problem gamblers (16 women) reported that they had been in trouble with the law because of activities related to gambling. These women were more likely to be married or living with a partner. They much more frequently reported gambling on gaming machines in casinos, both at some time in the past and during the six months prior to imprisonment. This suggests that this form of gambling may be particularly important in the development of problem gambling-related criminal offending.

Women problem gamblers who had been in trouble with the law because of their gambling also somewhat more often reported having participated in TeleBingo and having purchased lottery or raffle tickets during the six months prior to imprisonment. They were much more likely to indicate having lost very large sums of gambling in a single day. This is consistent with the finding that women with more serious gambling problems commit more gambling-related crimes.

The Temporal Pattern of Offending and Problem Gambling

Under half of the problem gamblers (17 women) reported that they first offended prior to having ever engaged in gambling activities and somewhat more (23 women) reported having gambled prior to commencing offending. The study did not include a precise measure of the time of onset of gambling problems. This would have required longitudinal investigation. However, it is assumed that the former group contained no women whose initial offending arose in response to gambling or gambling problems and that the latter group contained some women whose early offending was gambling-related.

Women who commenced offending prior to gambling were more likely to have a secondary school qualification, to usually gamble with others and to report illicit drug use in the 12 months prior to imprisonment. They also reported having first gambled and first being convicted at a younger age.

Gambling in Prison

A third of problem gamblers (14 women) reported having gambled during their current imprisonment. The large majority said they gambled weekly or more often.
Problem gamblers who gambled in prison were much more likely to report that their gambling had led to problems with the police and that they gambled instead of committing a crime. They more often reported having a parent with gambling problems and proportionally more had antisocial personality disorders. They also more often mentioned heavy alcohol consumption and smoking more than 20 cigarettes a day.

The Development of Gambling Problems

Problem gamblers were much more likely than non-problem gamblers to report that people in their family of origin gambled a lot or a moderate amount and somewhat less likely to report that they did not gamble at all.

Problem gamblers were also somewhat more likely to report that their friends gambled a lot or a moderate amount and somewhat less likely to report that they did not gamble at all.

Of the problem gamblers who indicated that there had been a time when the amount of money they gambled made them nervous, 19 percent said they first had this experience before the age of 16 years, 38 percent between the ages of 16 to 20 years, 25 percent between the ages of 21 to 25 years and 19 percent after the age of 25 years.

Twenty of the 42 lifetime problem gamblers indicated that they felt that they had a problem with their own gambling. Eighteen of these women were lifetime probable pathological gamblers. Ten percent of women who acknowledged that they had at some time had a gambling problem said they first noticed a problem before the age of 16 years, 25 percent between the ages of 16 to 20 years, 10 percent between the ages of 21 to 25 years, 25 percent between the ages of 26 and 35 years and 30 percent after the age of 35 years.

Help-seeking and Self Recovery

Twelve of the 20 women who reported that they were personally aware of their problems with gambling said they had at some time wanted help to stop gambling. Three of these women said that they had tried to get help to stop gambling.

Thirty-five percent (7 women) of those who reported having problems with gambling said they had had periods of six months or more when they were free or mostly free of gambling problems. All seven were lifetime probable pathological gamblers. Three indicated that this change came about mainly through their own efforts, three because they were in prison and one from help from a minister. Although three women had sought specialist help from one or more of a gambling hotline, mental health professional or mutual help group, none gave this as the reason for a reduction or cessation of gambling problems.

Three women also said they had sought help from a psychologist, psychiatrist or counsellor for gambling problems during their current imprisonment. One said this had been very helpful and two said it had been somewhat helpful.
Participants' Comments about Gambling and Problem Gambling

At the conclusion of the interview, participants were asked if there was anything they would like to add about gambling and/or problem gambling in their own life, within New Zealand society generally or within prison.

Nine percent of women mentioned that gambling can be an addiction or obsession. A further nine percent said gambling particularly affected lower income groups. Smaller numbers indicated that gambling results in negative consequences, leads to trouble with the law, that more help is needed for problem gamblers and that they liked gambling or that nothing is wrong with it. One woman said gambling was not a problem in New Zealand.

Participants also made a variety of suggestions about ways to reduce gambling problems within the community and to assist people with problems. Two women, both probable pathological gamblers, mentioned a need for programmes to help problem gamblers in prison.
1. INTRODUCTION

This report gives an account of the findings from a study of sentenced women prisoners who had been resident for less than twelve months in New Zealand's three women's prisons. The findings are discussed with respect to previous gambling research involving women, prisoners and gambling in relation to criminal offending. The study appears to be only the second internationally to focus exclusively on gambling and problem gambling in a population of women prisoners. It is the first to include a validated measure of problem gambling.

In their review of United States and Canadian problem gambling prevalence studies, Shaffer, Hell and Vander Bilt (1997, p.84) noted:

To better understand the nature of disordered gambling prevalence, investigators must begin to conduct larger scale studies of special populations, and smaller but prospective studies of adult and youth segments of the general population.

The study outlined and discussed in this report, as indicated, involves a special population that has been little studied to date. While not large in terms of the number of participants involved, this is because the number of women prisoners in New Zealand is small. This study provides information on a group of people who are omitted from general population gambling and problem gambling surveys and who have a high prevalence of problem gambling. This high prevalence allows relationships between problem gambling and a variety of risk factors to be examined.

The general aim of this study is to assess the nature of gambling and problem gambling among recently incarcerated women prisoners. This includes an examination of their pre-incarceration gambling behaviour and histories and relationships between gambling and criminal offending.

The present study is part of the New Zealand Gaming Survey (NZGS), conducted by a research consortium directed by Professor Max Abbott and Dr Rachel Volberg. Other consortium partners include the National Research Bureau, Statistics New Zealand and Taylor, Baines and Associates.

The NZGS was commissioned by the Department of Internal Affairs (DIA). The Department administers New Zealand's three pieces of gaming legislation and services the Lottery Grants Board, which distributes the profits of the Lotteries Commission to the community. Most of the funding for the research programme derives from the undistributed profits of the Lotteries Commission (applied to the project at the direction of the Minister of Internal Affairs). Some funding also comes from the Problem Gambling Committee (formerly the Committee on Problem Gambling Management), an organisation with representation from all major sectors of the gaming industry and problem gambling treatment providers. Notwithstanding the sources of funding, the director's contract is with the Crown through the Department of Internal Affairs, and no agency or organisation is empowered to control the research or to exercise editorial control over the publication of the research results.
Other components of the NZGS include:

- Literature Review (Abbott & Volberg, 1999)
- Longitudinal Study (Abbott, Williams & Volberg, 1999)
- Male Prison Study (Abbott, McKenna & Giles, in press)
- National Prevalence Survey: Phase Two

The terms of reference for this research programme were developed by the DIA in consultation with a wide variety of statutory, industry and national voluntary sector organisations. The intent of the research is to inform Government policy on gaming and responses to problem gambling and contribute to local and international scientific knowledge concerning aspects of gambling and problem gambling. It is also expected to provide information that has relevance to a variety of other stakeholder and end-user organisations with an interest in gambling and/or problem gambling. The male and female prison studies, for example, are expected to be of particular interest to the Department of Corrections.

Before describing the methodology of the present study some contextual information, including a brief review of relevant literature, is provided to assist in subsequent consideration of the major findings.
2. BACKGROUND AND CONTEXT

2.1 Gambling and Problem Gambling

Gambling

Gambling and gaming (these terms are used interchangeably in this and other NZGS reports) refer to a variety of activities that have in common the placing at risk of something of value in exchange for something of greater value (Thompson, 1997). In contrast to other high-risk undertakings, for example starting a new business venture, gambling activities are typically presented as recreation or entertainment. They are also widely regarded as forms of gambling within general society. More detailed consideration of definitional issues is provided in Abbott and Volberg (1999), a companion volume to the present report.

Gambling activities have a long pedigree, with written accounts and archaeological evidence dating back to antiquity in major civilisations throughout the world. Although some tribal societies do not appear to have had a history of gambling, gambling practices have spread widely across cultural and geographical boundaries. Pre-European contact Māori and some other Polynesian societies apparently number among those that did not engage in gambling activities as they are defined above (Abbott & Volberg, 1999; North Health, 1996).

Abbott and Volberg (1999) outline how attitudes towards gambling and the degree of control exercised over it by state, church and other authorities have varied markedly throughout history. They describe how, other than in most Islamic nations, legal gambling has proliferated rapidly throughout the world during the past two decades. Although official and public attitudes are generally much more accepting towards gambling than they were prior to the present expansionary phase, there are indications in New Zealand and elsewhere of growing concern about the widespread availability of some forms of gambling and adverse health and social impacts. While this concern may lead to controls and measures designed to mitigate negative consequences, Abbott and Volberg (1999) suggest that a variety of inter-related developments and trends, operating on a global scale, make the current expansion qualitatively different from what has occurred previously. They argue that these global forces blur traditional distinctions between different forms of gambling and make them difficult to regulate.

Although commonly grouped together by researchers and members of the wider community there are many different forms of gambling, conducted in a variety of settings, appealing to different sorts of people and perceived in various ways by participants and observers. In other words, despite the trend toward convergence mentioned in the previous paragraph, gambling is not a unitary entity and failure to appreciate this diversity can be expected to limit scientific understanding of the topic.

One reason why the recognition of differences between various forms of gambling is important is that there is mounting evidence that some types are more strongly linked with the development of problem gambling than others (Abbott & Volberg, 1999). Conceptual models have been developed to categorise forms of gambling that share
common underlying attributes. Two that have particular relevance to problem gambling include the skill-luck and event frequency dimensions.

Various researchers have classified gambling activities in terms of the degree of skill and luck involved in the determination of outcomes (Volberg & Banks, 1994; Walker, 1992). Activities involving a high degree of skill include games such as darts, chess and pool. Those where outcomes are determined by chance alone include most lotteries, bingo games (including housie) and some traditional casino games such as roulette. Activities that involve varying mixes of skill and luck include card games, e.g. poker, baccarat and blackjack, and betting on track (horse and dog) racing and sports events.

The issue of skill and luck is complicated because, in addition to a consideration of the actual degree of skill and luck involved in a given activity, participants vary in the extent to which they attribute these parameters to their own gambling. For example, while some gaming machines may objectively involve a slight element of skill, most involve chance alone. However, the design of machines generally foster the illusion that some skill is involved and many players believe they can influence machine outcomes (Abbott & Volberg, 1999).

Walker (1992), among others, has argued that gambling that involves an intermediate blend of skill and luck is more likely to result in problems for regular participants. In part this is because these forms also provide opportunities for escalating the size of bets, chasing losses, and both betting and losing more than intended. The findings of a number of studies are consistent with this hypothesis. For example, both the 1991 and 1999 New Zealand national surveys of gambling and problem gambling found that betting on horse and dog races was strongly associated with problem gambling. In the 1999 survey, various forms of casino gambling were also linked with problem gambling (Abbott & Volberg, 1991; 1992; 1996; 2000). Some of these forms involve a degree of skill.

Event frequency refers to the number of opportunities to gamble in a specified period of time. Some forms, such as gaming machines, involve very rapid cycles of stake, play, determination of outcome and opportunity to re-invest. Other forms are much slower. Although event frequency can be regarded as a continuum, investigators have often classified gambling activities as being either continuous or non-continuous. The former category, in addition to gaming machines, includes most casino games, cards and betting on the outcomes of events that allow frequent ‘re-investment’ of winnings. Instant or scratch lotteries are also regarded as continuous forms. Lotteries and raffles, that are drawn relatively infrequently, are the most widely available types of non-continuous gambling. Research has also shown that event frequency is particularly relevant to problem gambling development (Abbott & Volberg, 1999). In the 1991 and 1999 New Zealand national surveys referred to above, regular gaming machine participation was also found to be very strongly associated with problem gambling (Abbott & Volberg, 1991; 1992; 1996; 2000). Lotto and other non-continuous forms generally had little or no association with problem gambling. An exception was the recently introduced TeleBingo.

Other NZGS reports provide an overview and critique of international and New Zealand research on gambling participation and attitudes towards gambling in the general population. Abbott and Volberg (1999) examine research prior to 1999. Abbott, Williams and Volberg (1999) investigate changes in gambling participation from 1991 to 1998 in
samples of frequent gamblers and problem gamblers. Abbott and Volberg's (2000) survey of gambling participation in New Zealand during 1999 compares participation then with participation findings from previous New Zealand surveys. Abbott, McKenna and Giles (in press) examine gambling and problem gambling among recently incarcerated male prisoners and make some comparisons between male and female prisoners.

Problem Gambling

As with gambling, the realisation that gambling participation can lead to a variety of personal and social problems has a lengthy history (Abbott & Volberg, 1999; Wildman, 1998). Criminal offending, which will be considered in more detail shortly, is one aspect of this. Although it has long been acknowledged that problem gambling and related negative social impacts occur, it is only relatively recently that this topic has been taken seriously by health professionals, policy-makers and members of the wider community.

Pathological gambling was first included in medical diagnostic classification systems in 1977 (5th Edition of the International Classification of Diseases) and 1980 (3rd Edition of the Diagnostic and Statistical Manual of the American Psychiatric Association - DSM-III). In subsequent editions of the DSM, the diagnostic criteria for pathological gambling have changed somewhat, although it retains its classification as a disorder of impulse control, alongside kleptomania and compulsive fire lighting (American Psychiatric Association, 1980; 1987; 1994).

Currently, the essential features of pathological gambling are a continuous or periodic loss of control over gambling; a progression, in gambling frequency and amounts wagered, in the preoccupation with gambling and in obtaining monies with which to gamble; and a continuation of gambling involvement despite adverse consequences (American Psychiatric Association, 1994).

A diagnosis of pathological gambling is arrived at by an appropriately trained mental health professional following a clinical interview with a client or patient. Often, information gathered during the interview will be augmented by examination of other relevant clinical documentation and interviews with family members or others who know the patient well. To make a diagnosis of pathological gambling, the clinician is required to establish that the patient meets a specified number of diagnostic indicators. In the most recent version of the DSM, ten criteria are specified. Meeting any five qualifies for a diagnosis, as long as the clinician is also satisfied that the patient's gambling behaviour is not better explained by a manic episode. One of the ten criteria involves criminal activities, namely 'has committed illegal acts such as forgery, fraud, theft or embezzlement in order to finance gambling'.

Unlike the situation with alcohol dependence and many other mental disorders, there is no requirement for the clinician to establish that the pathological gambling diagnostic criteria have been met within a specified time period, e.g. during the preceding 12 months. Instead, the diagnosis is made on the basis of the patient's cumulative experience of gambling-related problems. This reflects an underlying assumption that pathological gambling is a chronic or chronically relapsing disorder.
The term 'problem gambling' is used in a variety of ways. In this report it refers to all patterns of gambling behaviour that have an adverse effect on one or more of general health, personal, family, vocational or wider social activities. Such problems vary in severity and duration and can be regarded as lying on a continuum from minor and transient to serious and of long duration. Pathological gambling, in this context, can be regarded as a sub-category of problem gambling. Problem gambling will also be used in this report to refer to problems that fail to reach DSM diagnostic criteria for pathological gambling, yet which have an adverse impact on one or more spheres of life.

2.2 The Measurement of Gambling Problems

A variety of methods have been developed to measure problem gambling for clinical and research purposes. A detailed account of these measurement procedures is outlined in Abbott and Volberg (1999) and Rönberg, Volberg and Abbott et al (1999).

The most thoroughly validated and widely used measure of problem gambling is the South Oaks Gambling Screen (SOGS) and subsequent modifications to it, particularly the SOGS-R (Abbott & Volberg, 1991; 1992; 1996). The original SOGS was developed in the United States as a screening instrument for use in clinical settings (Lesieur & Blume, 1987). It was based on DSM-III diagnostic criteria for pathological gambling and validated against the subsequent revision of these criteria in the DSM-III-R. The measure was shown to have high internal consistency and test-retest reliability and to correlate with independently determined DSM-III-R diagnoses. Shortly after its development, the SOGS was adapted for use in community surveys.

The SOGS-R was developed for the New Zealand National Survey of Problem and Pathological Gambling (Abbott & Volberg, 1991). The main change was the addition of a current (past 6 months) scale to complement the original lifetime measure. This adaptation was made to bring the assessment of problem gambling into line with the measurement of other mental disorders and enable prevalence estimates for both lifetime and current problem gambling to be derived from epidemiological surveys that employ the new measure. The retention of the lifetime scale provided continuity with earlier research. Comparison of performance on the lifetime and current scales was regarded as providing an indication of recovery from problems over time (Abbott & Volberg, 1991; 1996; 1999). This adaptation of the original SOGS and interpretation of lifetime-current prevalence differences rested on the assumption that while often a chronic disorder, problem and pathological gambling severity vary over time and for some people are transitory. This assumption is different from that underly the present DSM conceptualisation of pathological gambling.

The SOGS involves 20 items. The SOGS-R uses the same 20 items but presents them in both lifetime and current formats. Although a six month 'window' was initially used for the current scale, the large majority of subsequent studies have substituted a longer 12 month timeframe. This substitution was made because Abbott and Volberg (1992) found that the shorter frame generated a relatively large number of false negatives when used in a community setting. In other words, it failed to detect a number of people who were subsequently assessed by independent interviewers as experiencing problems. However, some uncertainty remains concerning this matter in that it is not known whether or not the interviewer assessments provided a more valid measure of current problem gambling than the SOGS-R. Furthermore, it has yet to be determined that the
12 month measure performs better in this regard than the six month version. Typically, in general population surveys, both the six and 12 month SOGS-R scales yield prevalence estimates that are a third to a half their lifetime counterparts.

People who score five or more on the SOGS or SOGS-R are usually classified as probable pathological gamblers. They are referred to as probable pathological gamblers to distinguish them from pathological gamblers diagnosed on the basis of a clinical interview. People who score three or four on the SOGS or SOGS-R are usually referred to as problem gamblers and people who score less than three are referred to as non-problem gamblers (Abbott & Volberg, 1999).

Although the SOGS-R remains the most commonly used measure of problem gambling in clinical and a variety of research settings, since the advent of the DSM-IV in 1994, some new measures have been developed based on DSM-IV criteria. Changes to diagnostic criteria for pathological gambling in the three most recent editions of the American Psychiatric Association's Diagnostic and Statistical Manual are detailed in Abbott and Volberg (1999). While it is likely that measures based on the DSM-IV or future DSM revisions will replace the SOGS-R, to date none of these measures have been fully developed as psychometric instruments and validated in appropriate settings. Only a few studies have used these new measures alongside the SOGS-R. Although these studies generally obtained high correlation between one of the new measures (namely the Fisher DSM Screen) and the SOGS-R, further investigation is required. From the findings to date, it would appear that the Fisher Screen and the SOGS-R are essentially measuring the same thing (Abbott & Volberg, 1999).

### 2.3 Gambling and Criminal Behaviour

**Introduction**

Relationships between crime, gambling and problem gambling are numerous and complex. Participation in some forms of gambling is, by definition, illegal. Criminals also engage in legalised gambling and illegal gambling, either as a means of making money or laundering money obtained from other sources (Abbott & Volberg, 1999; Productivity Commission, 1999; Wildman, 1998). Problem gamblers are also involved in criminal activities for a variety of reasons. It is this latter relationship that is a major focus of the present study.

As indicated earlier, having engaged in criminal activities to finance gambling or gambling debts is one of the DSM-IV diagnostic indicators of pathological gambling. Its inclusion arises from the consistent finding in studies of problem gamblers in clinical settings and self-help groups that high percentages of participants report having committed offences to finance their gambling. Its inclusion is also in keeping with traditional notions of the development of pathological gambling as a downward spiral whereby ever increasing obligations and debts collide with ever decreasing opportunities (Lesieur, 1984). In this situation, criminal activities are considered to occur relatively late in the development of pathological gambling as other sources of money become depleted and gambling behaviour and debts escalate.

There is considerable evidence from a variety of sources that problem gamblers have high rates of criminal offending and that much of this offending is related to their
gambling problems. Relevant literature is reviewed in Abbott and Volberg (1999) and Productivity Commission (1999). This aspect of problem gambling is one of the more important in terms of wider social costs and impacts. In addition to the financial cost and various adverse effects on immediate victims of crime and people close to them, there are additional costs to offenders and their families as well as to the state and taxpayer generated by the involvement of the police, courts, corrections and social welfare institutions. A further cost results from higher insurance premiums to cover theft, burglary and insurance fraud and higher prices for retail goods to take account of employee and ‘customer’ theft.

Surveys of Problem Gamblers

Information concerning the prevalence of criminal offending among problem gamblers comes from general population surveys, surveys of special populations and studies of problem gamblers involved in mutual help groups, who seek problem gambling counselling or who are receiving treatment. Prison studies also have some relevance in this context.

General population surveys generally find low rates of self-reported gambling-related criminal offending. For example, of the interviewer-determined pathological gamblers from the 1991 New Zealand National Survey who were interviewed in depth, only 19 percent acknowledged that they had ever thought of doing something illegal to get money for gambling or to pay gambling debts (Abbott & Volberg, 1992). Although ten percent indicated that their gambling had led to problems with the police, none said they had appeared in court or been in prison because of crimes related to their gambling. A recent Australian National Survey of gambling and problem gambling found that 11 percent of probable pathological gamblers indicated that they had at some time engaged in gambling-related illegal activity. Seven percent said they had obtained money illegally because of their gambling, four percent reported that they had been in trouble with the police because of their gambling and three percent said that they had appeared in court on gambling-related charges (Productivity Commission, 1999).

In contrast to the findings of general population surveys, much higher levels of offending are apparent from surveys of problem gamblers involved in Gamblers Anonymous (GA) groups. For example, Meyer and Fabian (1992), in a survey of 437 predominantly male members of GA in Germany, found that over half reported having obtained money for gambling through illegal means. Blaszczynski and McConaghy (1994a; 1994b) obtained similar results in Australia. This study involved 154 members of GA groups and 152 problem gamblers receiving in-patient treatment. Fifty-nine percent acknowledged having committed at least one gambling-related offence and 48 percent indicated that they had committed only gambling-related offences. Eighteen percent acknowledged that they had committed at least one non-gambling-related offence and six percent said they had committed only non-gambling-related offences. Eleven percent acknowledged committing both gambling and non-gambling-related offences and 35 percent said they had not committed any type of offence during their lifetime. On average, the amount of money involved in gambling-related crimes was three times higher than that of other crimes.

The Productivity Commission (1999) also conducted a survey of 404 clients receiving counselling for problem gambling. Over 40 percent reported ‘borrowing without
permission' or 'obtaining money improperly' to gamble. Eighteen percent acknowledged that gambling had led to problems with the police, 16 percent to a court appearance on criminal charges and six percent to a prison sentence. Overall, 44 percent acknowledged some type of gambling-related criminal activity.

Both Meyer and Fabian (1992) and the Productivity Commission (1999) found that gambling-related criminal offending rates were substantially higher among problem gamblers with more serious problems.

The Australian survey findings are generally consistent with the view that problem gamblers, especially those with serious problems, are at high risk for committing criminal offences and that these offences are predominantly associated with their need to finance their gambling and gambling debts. However, these findings also suggest that for some problem gamblers, criminal offending occurs independently of their gambling problems. The findings of these studies were not presented separately for males and females.

The only study of offending among female problem gamblers appears to be that of Lesieur (1988). This survey involved in-depth structured interviews with 50 predominantly Caucasian members of GA in the United States. Approximately two-thirds of participants reported engaging in crimes to finance their gambling and gambling-related debts. Only two women said they had been arrested for gambling-related offending.

From these and related studies, it can be concluded that between a third to two-thirds of problem gamblers who seek help through GA or treatment programmes report having committed crimes related to their gambling. Considerably lower figures are obtained from general population surveys, probably because respondents are reluctant to report their offending and/or because, on average, their gambling problems are of less severity than those of problem gamblers involved in treatment or mutual help programmes.

**Types of Offences Committed by Problem Gamblers**

Research has also sought to identify the types of offending that are characteristic of problem gamblers. The studies mentioned above and other research reviewed in Abbott and Volberg (1999) are generally consistent with the view that the majority of crimes committed by problem gamblers are in the non-violent property category. A great deal of this offending takes place within the family of the problem gambler, for example forging a spouse’s signature on cheques, taking housekeeping money and selling or pawning personal or household items belonging to other members of the household. Crimes of this type appear to be rarely reported to the police. Workplace theft, insurance fraud, shoplifting, embezzlement and misappropriation of money and the distribution and sale of illicit drugs such as cannabis are also reported frequently in surveys of problem gamblers who are receiving treatment or involved in mutual help organisations. (Productivity Commission, 1999). Although less commonly reported in surveys, some problem gamblers engage in burglary, armed robbery or other violent crimes.

**The Development of Gambling-related Offending**

The findings of most studies of offending among problem gamblers appear to be generally consistent with the belief that offending occurs relatively late in the
development of gambling problems and is a response to the need to maintain habitual gambling patterns or out of desperation to settle debts. This suggests a causal relationship with problem gambling leading to gambling-related offending. Blaszczynski and McConaghy (1994b) maintain that their finding of an average age difference of nine years between the onset of regular gambling and criminal offending supports this causal interpretation.

Although the relationship between problem gambling and offending may be causal, demonstration that a proposed cause precedes the proposed effect is only one condition that must be satisfied to establish causation (see Abbott & Volberg, 1999). This demonstration is necessary but not sufficient. It must also be shown that observed instances of the cause do not occur without the effect, that all other possible influences other than the one being investigated are excluded or controlled and that other investigators can replicate the relationship. Furthermore, as discussed in Abbott and Volberg (1999) and Abbott, Williams and Volberg (1999), retrospective accounts of the type provided in Blaszczynski and McConaghy (1994b) are a poor proxy for prospective longitudinal investigation. Prospective studies, that are necessary to demonstrate the temporal sequence of events convincingly, involve following and reassessing a cohort of people over time. Research of this type has yet to be undertaken in the gambling studies field.

Prison and Offender Studies

A few studies have examined problem gambling in prison and other correction populations. This research also has relevance to the consideration of linkages between problem gambling and criminal offending.

Blaszczynski and McConaghy (1994a) and the Productivity Commission (1999) have found in Australian GA and clinical surveys that approximately a quarter of serious problem gamblers have been charged with a gambling-related offence. This is approximately 40 percent of those who acknowledged having committed a gambling-related offence. The charge rate varied considerably from one type of offence to another. For example, minor property crimes, larceny and embezzlement typically eluded detection and, when people were charged, they infrequently received prison sentences. Offences such as breaking and entering, armed robbery and the sale or distribution of illicit drugs, on the other hand, generally led to custodial sentences.

Many factors other than the nature of offending influences whether or not a crime is reported, leads to conviction, or receives a custodial or non-custodial sentence. Furthermore, it can be expected that the significance of these influences will vary from one jurisdiction to another. This topic does not appear to have been studied in relation to gambling-linked offending. In the present context, however, it should be noted that problem gamblers who are surveyed in prison or other criminal justice settings are likely to be atypical of the total population of problem gamblers. This means, among other things, that caution should be exercised when inferences are made from studies of problem gamblers in prison to problem gamblers generally or, indeed, to problem gamblers in other prisons.

In their review of the international literature, Abbott and Volberg (1999) located only two published, peer reviewed accounts of prison prevalence surveys (Templer, Kaiser &
Siscoe, 1993; Walters, 1997). Both were included in Shaffer, Hall and Vander Bilt's (1997) meta-analysis of problem gambling prevalence studies. When these authors compared the findings of these two studies with those of 16 other North American studies that had been conducted in substance dependence and psychiatric in-patient settings, they found no significant difference with respect to problem and probable pathological gambling prevalence rates. The mean lifetime probable pathological gambling prevalence rate for these studies was 14.2 percent (10.7-17.8% confidence interval). The mean lifetime problem gambling prevalence estimate was 15 percent (8.9-22.0%). These lifetime rates are very high relative to those for general population prevalence surveys. For example, the 1999 New Zealand National Survey lifetime probable pathological gambling prevalence estimate was 1.0 percent (0.7-1.4%); the lifetime problem gambling prevalence estimate was 1.9 percent (1.4-2.5%).

Templer, Kaiser and Siscoe (1993) used the SOGS to assess 136 consecutive admissions to a medium security prison in Nevada. This study found that 26 percent were probable pathological gamblers. The authors noted that this high prevalence rate could have resulted in part from the prison being located 30 miles from the gambling centre of Las Vegas. Walters (1997) also used the SOGS, which was administered to 363 male medium security prison inmates in Pennsylvania. The lifetime probable pathological gambling prevalence was five percent. The lifetime problem gambling prevalence was seven percent.

Abbott and Volberg (1999) located two further relevant reports. Jones (1990) assessed 62 of 124 remandees at the Canning Vale Remand Centre in Western Australia. The SOGS determined lifetime probable pathological gambling prevalence rate was 22 percent. A similar result (a lifetime SOGS prevalence rate of 26%) was obtained in Auckland, with a sample of 100 convicted offenders on community sentences (Brown, 1998). At any given time, approximately 25,000 New Zealanders are serving this type of non-custodial sentence. Unlike sentenced prisoners or remandees, people in this category could be included in general population surveys.

Jones’ (1990) study is of further interest in that whereas eight of the probable pathological gamblers were classified as gambling-related offenders, five were not. Furthermore, six of the 13 probable pathological gamblers had been convicted for offending by the age of 17, suggesting that their criminal behaviour preceded the development of problem gambling.

The Productivity Commission (1999) report cites findings from a more recent, as yet unpublished, prison study in South Australia. This study involved interviews with 103 of 176 newly admitted sentenced inmates. The gender of the sample was not mentioned. However, given the small number of female inmates, it can be assumed that they were exclusively or predominantly male. A third received SOGS scores of five or more and were classified as probable pathological gamblers. All 26 of the inmates who had committed a gambling-related offence were probable pathological gamblers. A further eight pathological gamblers (24% of the total 34 pathological gamblers) had not committed a gambling-related offence. This group was referred to as 'criminals who happen to be gamblers' (Productivity Commission, 1999, p.7.62).

Lesieur (1993) conducted, in 1986, what appears to be the only survey of female prisoners prior to the present study. This unpublished survey, located subsequently to Abbott and Volberg’s (1999) review, involved 114 inmates in a New Jersey prison.
Approximately 30 percent were classified as probable pathological gamblers. However, the scale used to make this assessment, the ‘gambling history test’ is of unknown validity and pre-dated the development of the SOGS.

Lesieur (1993) compared problem gamblers in his 1986 prison study with those of his subsequent survey of women involved in GA (Lesieur, 1988). Both groups were found to have high levels of involvement in illegal activities to finance their gambling and gambling debts. They had similar rates of reported offending with respect to employee theft, fraud and involvement in illegal gaming operations. The prison sample had higher rates of forgery, burglary, robbery, prostitution and drug-related criminal activities. The prison sample also had higher rates of drug and alcohol misuse and dependence, was from lower socioeconomic groups, had lower levels of education and was more ethnically diverse. Lesieur considered that these attributes in large part explained the difference in the offending profiles of the two groups of problem gamblers. However, it also appears probable that the types of more serious crime reported in the prison sample are those that are most likely to lead to custodial sentences, albeit that low socioeconomic status and membership of minority ethnic groups may independently increase the probability of imprisonment. It may well be that the inter-relationships between these various sets of variables are highly complex.

Although methodological description is somewhat sparse in Lesieur’s studies, given the focus of this report on women prisoners, some additional findings from these studies are worthy of note. In the GA sample, women generally had problem gambling patterns that had a late onset. They had a preference for card games, gaming machines, betting on horse races and lotto. Lesieur concluded that their gambling problems generally arose from a need to ‘escape’ from emotional trauma associated with dysfunctional upbringing and adult relationships and loneliness. He also reported that many of the participants mentioned other addictive behaviours in the past including drug and alcohol abuse, compulsive spending and compulsive eating. Money for gambling came predominantly from employment income and the juggling of household resources including the diversion of money from other purchases and delaying the payment of bills. As problem gambling escalated and debts mounted, most resorted to criminal activities.

From the studies reviewed it would appear that many, perhaps most, people with serious gambling problems turn to crime to finance their gambling and associated debts. However, a significant number of problem gamblers do not apparently engage in criminal activities. Further research is warranted to determine why some problem and pathological gamblers commit crimes to finance their gambling and others do not. To date, one factor that seems to be implicated is the degree of problem gambling severity. This is consistent with the hypothesis that offending occurs relatively late in the development of pathological gambling.

Problem gamblers who are in prison have committed crimes of one sort or another. However, while most prisoners with serious gambling problems have engaged in gambling-related crimes, a substantial minority have not and are in prison for other reasons. Another subgroup appears to have committed both serious gambling-related and non-gambling-related crimes. These two latter groups may be regarded as criminal offenders who also happen to be problem gamblers. The reasons for their problem gambling and non-gambling-related offending may be distinct. However, in at least some instances, there may be common factors underlying both patterns of ‘deviant’ behaviour. Exploration of these matters will require careful sub-classification of problem
and pathological gamblers in relation to their patterns of offending and the examination of a variety of social, psychological and biological factors that may differentiate these groups.

A small number of additional studies are reviewed in Abbott and Volberg (1999) that are relevant to the consideration of the relationship between problem gambling and crime. For example, research with young offenders in the United Kingdom suggests that 'excessive gambling' and youth offending may be 'markers' of the same pre-existing pattern of behaviour rather than causally related (Maden, Swinton & Gunn, 1992). Australian research has also challenged the proposal of a causal link between gambling and youth offending (Abbott, Palmisano & Dickerson, 1995). It remains unclear whether or not similar findings would be found with respect to more serious patterns of problem gambling among young people or people in other age categories.

Study of the relationship between problem gambling and criminal offending is complicated because of the many other variables that are associated with both gambling problems and offending. This is particularly so in the case of prison populations. Prisons include disproportionate numbers of persons who are known or suspected to be at particularly high risk for problem gambling, for example, young adults, unemployed people, people of low socioeconomic status and people who come from marginalised groups within society. In New Zealand, Māori are over-represented in all of these categories and have high rates of both problem gambling (Abbott & Volberg, 1991; 1996; 2000; Volberg & Abbott, 1994) and incarceration. Prison populations also include significant numbers of people with personality disorders, substance misuse and dependence disorders, and a variety of other forms of mental disorder that display moderate to high levels of co-morbidity with pathological gambling (Department of Corrections, 1999). While prison studies provide an opportunity to examine relationships between these various risk factors and problem gambling, these factors confound comparisons between prison samples and samples from the general population or other settings (Abbott & Volberg, 1999).

Prison studies provide a convenient setting within which to study relationships between antisocial personality disorder (ASPD) and problem gambling. This disorder has a very strong relationship with offending behaviours and, consequently, has a high prevalence in prisons (Department of Corrections, 1999). Given that this disorder first presents during childhood and early adolescence, demonstration of a link between ASPD and problem gambling would challenge the viewpoint that offending behaviours evolve as a response to excessive and problematic gambling. To the contrary, it would suggest that pathological gambling is an expression of the risk-taking and antisocial behaviours associated with ASPD and that pathological gamblers are criminals first and gamblers second (Shaffer, Hall & Vander Bilt, 1997).

Some research outside prisons has examined pathological gambling in relation to ASPD. For example, the Blaszczynski and McConaghy (1994a) study referred to earlier, found that 15 percent of their total sample of hospital and GA pathological gamblers met the diagnosis for ASPD. Although approximately ten percent of the sample was female, all members of the ASPD sub-sample were males. The great majority of this sample reported offending behaviours and for this group, the authors concluded that their gambling was another expression of their ASPD. However, most of the offending reported by pathological gamblers was undertaken by those who were not diagnosed as ASPD and the authors further concluded that offending more typically emerges in
pathological gamblers in response to gambling-related difficulties rather than as a manifestation of antisocial behaviour.

A recent German study (Meyer & Stadler, 1999) reached a similar conclusion to that of Blaszczynski and McConaghy. Meyer and Stadler concluded that there is an identifiable subgroup of problem gamblers whose problem gambling is an expression of personality factors and that these factors also have both direct and indirect influences on criminal offending. However, they also concluded that pathological gambling per se is the most important factor in precipitating criminal activities, especially property crimes. The personality measure used in this study was complex. It included 'risk-motivation', 'impulsivity', 'emotionality', 'mental stress' and 'non-conformal social orientation' components.

In as much as pathological gambling is a significant factor in offending, Meyer and Stadler (1999) maintain that the treatment of this disorder is likely to be an effective strategy to reduce recidivism. Brown (1987) has previously maintained that once problem gambling is overcome, offending ceases. However, this assertion has yet to be empirically evaluated. From the foregoing, it may be hypothesised that this outcome would be more likely for the group of problem gamblers whose offending is strongly gambling-related and commenced after the onset of pathological gambling. It could be expected that effective treatment for problem gambling would have less impact on the future offending of problem gamblers who are characterised by personality and other attributes that are associated with criminal activities more generally.

Although pathological gamblers in prison appear to have infrequently accessed treatment options or mutual help groups such as GA, many apparently express a willingness to do so if services are available (Jones, 1990; Walters, 1997; Brown, 1998). Further research is required to assess prisoner uptake of treatment when it is offered and its efficacy over and above that of incarceration per se.

As suggested earlier, it will require prospective longitudinal studies of large numbers of people, assessed at regular intervals from childhood or early adolescence to mid-adulthood, to adequately disentangle the various connections between gambling behaviour, problem gambling and offending. From the studies considered in this section it seems likely that, in many instances, problem gambling leads to criminal behaviour in people who would not otherwise commit crimes. For others, criminal behaviour precedes or occurs independently of their gambling problems and may be part of an antisocial personality disorder. Some people will probably fall into both categories, i.e. they offend independently of their gambling problems but, in addition, commit crimes to finance gambling and gambling-related debts.

The linkages between pathological gambling and criminal offending referred to in the preceding paragraph can be expected to account for the high prevalence rates of this disorder that appear to be evident in most prison and criminal justice settings. However, again as mentioned earlier, in some of these settings high prevalence may also arise as a consequence of other characteristics that are common to both problem gambling and offending, e.g. marginalised or minority ethnic status, youth, low educational attainment, unemployment and alcohol and drug dependence.
Gambling in Prison

Apart from providing an opportunity to examine relationships between problem gambling and criminal offending, studies of gambling in prisons are of interest for other reasons. For example, prison environments per se may have the potential to contribute to the development of problem gambling or to contribute to recovery. Prisons characterised by low levels of gambling activity could assist inmates with serious gambling problems to overcome their problems. Alternatively, where gambling is part of a pervading prison sub-culture, with pressure for inmates to be involved, the prison setting may help sustain ongoing gambling problems as well as contribute to the development of problems among people who did not previously experience them. To date, very little is known about gambling in prisons and the impact of imprisonment, both short- and long-term, on gambling behaviour and problem gambling.

Jones (1990) reported that all of the gambling-related offenders (n=8) in his study in a remand prison, gambled in prison. Card games were the most popular form of gambling activity. Of these offenders, four reported winnings in excess of prison wages, which indicated the potential for some inmates to experience difficulties in settling debts. This could be expected to contribute to tension and conflict between prisoners. Bellringer (1996) obtained postal questionnaire responses from 12 inmates who had participated in a GA group during their stay in an English prison. These respondents indicated that gambling was part of the prison sub-culture. Betting on horse races, cards and snooker were the preferred activities and the currency used to gamble included money, tobacco, sweets and cannabis. In both prisons where the studies referred to in this paragraph were undertaken, gambling was officially prohibited. However, it would seem that prison authorities did not enforce these regulations or that gambling involvement was covert.

Abbott and Volberg (1999) discuss some of the functions served by gambling and possible benefits to participants in various forms of gambling. This topic, especially in the context of problem gambling and criminal offending, is seldom considered. However, regular and problem gamblers do report a number of benefits from gambling (Abbott & Volberg, 1992; 1999; Abbott, Williams & Volberg, 1999). Benefits are also noted in the recent Productivity Commission (1999) report. They include relaxation, taking thoughts away from problems, providing an interesting hobby, and socialising. It would seem likely that these and other positive aspects of gambling participation would be particularly important in prison settings and that gambling may help relieve some of the discomfort of prison life.

2.4 Women's Gambling and Problem Gambling

From their review of relevant international literature, Brown and Coventry (1997) conclude:

With few exceptions, gender comparisons are rare in gambling research. There is, in fact, an extraordinary lack of women-specific research about either gambling, in general, or problem gambling, in particular. Some researchers have attributed this lack to the perception that gambling and problem gambling are almost exclusively male preserves (p. 6).
Volberg, the co-principal investigator in the NZGS, at the time of writing completed a search of the gambling studies literature. Searches using a number of keywords including 'female,' 'women,' and 'gender' located only 16 empirical studies of women and gambling carried out since 1980.

While studies explicitly addressing women's gambling are sparse, relevant information on women's gambling and problem gambling is contained in the literature reviewed in Abbott and Volberg (1999). Much of it, however, is embedded within reports on mixed gender studies and information regarding women specifically has not been extricated and considered as a whole. Brown and Coventry (1997) provide an overview of some of these findings and add new information from studies they conducted in Victoria, Australia. Relevant articles and reports are also included in an annotated bibliography prepared by Women's Health West, et al (1998).

Early gambling and problem gambling surveys generally found substantially lower levels of gambling participation, expenditure and problem gambling among women than were evident among men (Abbott & Volberg, 1999). These studies also showed marked gender differences in gambling preferences and the forms of gambling participated in by men and women. For example, New Zealand general population surveys during the mid-1980s to mid-1990s found that while little difference was evident between men and women with respect to having participated in at least one form of gambling during the past year, women were less likely to be regular participants. Women also reported spending half to two-thirds that of men and were much less likely to report regular participation in continuous forms of gambling including track betting and gaming machines. In the 1991 New Zealand National Survey (Abbott & Volberg, 1991; 1996) while men were also somewhat more likely than women to report purchasing Lotto tickets regularly, over a half of women's reported gambling expenditure went on Lotto relative to just over a quarter of men's. Women also spent proportionately more than men did on other lottery games, namely Instant Kiwi and raffles. Housie (bingo) was the only gambling activity that significantly more women than men participated in on a regular basis. Studies in other countries also show high female participation in this form of gambling since the 1960s. Bingo has been described as providing women with the same opportunity as men to participate in gambling in the public sphere (Dixey, 1987).

In the 1991 National Survey, women were less likely than men to say they gambled for fun, entertainment, recreation, excitement or challenge. They were more likely than men to report gambling to support worthy causes.

During the 1990s, as the availability of legal gambling expanded in a number of countries including New Zealand, women's gambling patterns came to more resemble those of men (Abbott & Volberg, 1999). However, some differences remain. In the 1999 New Zealand National Survey, for example, while there was no difference between men and women with respect to regular involvement in non-continuous forms of gambling, males were significantly more likely than women to take part regularly in continuous forms (Abbott & Volberg, 2000). Women also reported spending less on average per month then men (NZ$30 versus NZ$53). Of the eight most frequently engaged in gambling activities, women had higher past six months or more frequent participation than men did in lotteries and raffles, Instant Kiwi and TeleBingo. They had similar rates to men in Lotto and casino gaming machines, and lower rates in gaming machines outside casinos, betting on horse and dog races and taking bets with friends or workmates.
In the 1999 National Survey, women remained more likely than men to report that they gambled to support worthy causes. However, in contrast to the situation in 1991, gender differences were small with respect to gambling for excitement or challenge and for entertainment or fun. Women remained somewhat less likely than men to say they gambled to socialise (Abbott & Volberg, 2000).

One factor that has been considered to play an important role in increased gambling participation by women, especially in continuous forms such as gaming machines, is the perceived safety of gambling venues (Trevorrow & Moore, 1999). In Christchurch and Auckland, the introduction of casinos has probably been significant in this regard, although large numbers of women also participate in gaming machines at non-casino locations. Their participation in these locations, particularly hotels/pubs, may be fostered by a change in the character of these venues. They appear to be more 'female friendly' than was formerly the case.

At the same time that women’s involvement in gambling increased, there are a number of indications that problem gambling prevalence also increased among women (Abbott & Volberg, 1999). Australian research strongly implicates increased regular gaming machine participation on the part of women (Productivity Commission, 1999). In Australia, approximately half of problem gamblers presenting for counselling are women and the recent National Survey in that country found that 40 percent of probable pathological gamblers were women.

In 1991, male problem and probable pathological gamblers greatly outnumbered women in New Zealand (Abbott & Volberg, 1991; 1996). However, in the 1999 National Survey, similar numbers of men and women were identified as current probable pathological gamblers. Women continued, however, to be under-represented among those with less severe problems and among lifetime problem and probable pathological gamblers. The gap between men and women has also progressively narrowed in New Zealand with respect to gambling helpline and counselling client presentations (Abbott & Volberg, 1999, 2000; Gruys et al, 2000). In 1993, the first year of the national gambling hotline’s operation, 19 percent of problem gambler callers were women. Five years later, in 1998, 38 percent of callers were women. In both 1993 and 1998, women callers were much more likely than men to report problems with gaming machines. This was also evident among women who presented for treatment in 1998 (Abbott & Volberg, 2000). In that year, 60 percent of first-time female clients nationwide indicated that non-casino gaming machines were their primary gambling mode. A further 30 percent said gaming machines located in casinos were their primary mode. Corresponding percentages for males were 55 and 11 percent. Females were much less likely than men to report problems associated with track betting or casino table games.

The 'feminisation' of problem gambling has also been observed in the United States. Throughout the 1980s and 1990s, typically a third of problem and probable pathological gamblers in general population surveys have been women (Gemstein et al, 1999). More recently, in states that have introduced large numbers of gaming machines, male and female prevalence rates have been very similar (Polzin et al, 1998; Volberg & Moore, 1999). Half of the respondents in recent surveys of GA groups in Louisiana and Montana were women (Polzin et al, 1998).
Relatively little research has compared the characteristics of male and female problem gamblers. The majority of studies focus on male problem gamblers. When both genders are included in studies, they are not usually considered separately. Because women problem gamblers are generally greatly outnumbered by men in such studies, the characteristics of women problem gamblers (if they do differ from men) are likely to be obscured.

One of the few studies of women pathological gamblers was referred to earlier (Lesieur & Blume, 1991). This study involved interviews with 50 GA members. Relative to male GA members, women were more likely to be single, separated or divorced. They were also more likely to have gambled alone and have hidden the extent of their gambling from friends and family. Alcohol and substance misuse/dependence rates amongst the women pathological gamblers were two to three times higher than among women in the general population. High rates of compulsive over-eating and over-spending were also evident. Almost half suffered from serious depression and 12 percent reported having made suicide attempts.

Another United States survey of women GA members found that ten percent also acknowledged experiencing alcohol problems (Strachan & Custer, 1993). Higher percentages (25 and 15 respectively) acknowledged addiction to illicit drugs and prescription medications. A third reported being physically abused as children, 19 percent reported childhood sexual abuse and a third had experienced parental divorce before the age of 15 years. Approximately a third had lost a spouse, parent, child or close friend or relative during the two years prior to entering GA. Twenty-three percent indicated that they had attempted suicide.

A clinical study of Australian pathological gamblers identified four dimensions of problem gambling, namely 'psychological distress', 'sensation seeking', 'impulsive antisocial' and 'crime and liveliness' (Steel & Blaszczynski, 1996). Twelve percent of the participants were women. Relative to men, women experienced higher levels of psychological distress.

It has been suggested that women problem gamblers are more likely than their male counterparts to commence gambling later in life and to do so as a means of escape from personal problems and psychological distress (Lesieur & Blume, 1991). Male problem gamblers more typically commence gambling in their early to mid-teens and are claimed to be motivated by 'action seeking' and 'the big win' (Lesieur, 1984). While there appear to be some differences between male and female problem and pathological gamblers with respect to sociodemographic and psychological risk factors and problem development, this topic has been little investigated to date.

### 2.5 Women Prisoners in New Zealand

In absolute terms and relative to men, women prisoners constitute a small group. The most recent national census of New Zealand prisons was conducted in November 1997 (Ministry of Justice, unpublished). At that time, there were 207 sentenced female inmates located in three prisons. Relative to the general population, women prisoners are younger and include a disproportionate number of Māori. Specifically, in 1997, 15 percent were under 20 years, two-thirds were aged 20 to 39 years, and 18 percent were
40 years and over. Approximately half were Māori, a third European/Pakeha and a sixth of other ethnicities.

In 1997, the most serious current conviction for a third of sentenced women prisoners was for violence. A larger number (40%) had been convicted for a property crime. Other major categories of conviction were drug offence (14%), traffic offence (6%) and offence against justice (3%). Relative to male sentenced prisoners, women were much more likely to have been convicted for property and drug offences. Seventy-eight percent were classified as minimum security prisoners and 13 percent as medium security prisoners. Only one woman (0.5%) had maximum security status. The remainder were not classified.

In 1998, the Department of Corrections (1999) commissioned a national survey of psychiatric morbidity in prisons. This study included a sample of 158 women. The female sample included 12 remand prisoners. All women prisoners were approached for inclusion in the study. The response rate for those completing major sections of the survey questionnaire was 79 percent. Women in the study sample had proportionately fewer property offences and more violent offences than the prison census population. However, they were similar with respect to age, ethnicity and security status. Because the small number of women remand prisoners did not differ from the sentenced prisoners with respect to age and ethnicity, the two groups were combined.

The 1998 psychiatric morbidity study involved the use of standardised psychiatric diagnostic interviews for mental disorders and personality disorders. It was found that the majority of women prisoners had experienced one or more psychiatric disorders and that a large percentage had a personality disorder.

Eighty-nine percent of women prisoners were found to have experienced one or more psychiatric disorders at some stage in their lives. This dropped to 69 percent when substance misuse disorders were excluded. The lifetime and past month point prevalence estimates for mental disorders are outlined in Table 1.

**Table 1: Lifetime and Past Month Mental Disorder Prevalence Estimates for Women from the 1998 National Study of Psychiatric Morbidity in Prisons**

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Lifetime Percentage</th>
<th>Past Month Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schizophrenic and related disorders</td>
<td>6.7</td>
<td>3.6</td>
</tr>
<tr>
<td>Bipolar Affective Disorder</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Major Depression</td>
<td>31.9</td>
<td>11.1</td>
</tr>
<tr>
<td>Dysthymic Disorder</td>
<td>1.9</td>
<td>-</td>
</tr>
<tr>
<td>Eating Disorders</td>
<td>3.1</td>
<td>-</td>
</tr>
<tr>
<td>Obsessive Compulsive Disorder</td>
<td>9.9</td>
<td>4.3</td>
</tr>
<tr>
<td>Panic Disorder</td>
<td>1.8</td>
<td>1.4</td>
</tr>
<tr>
<td>Generalised Anxiety Disorder</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Agoraphobia</td>
<td>1.8</td>
<td>0</td>
</tr>
<tr>
<td>Phobic Disorder</td>
<td>30.9</td>
<td>-</td>
</tr>
<tr>
<td>Post Traumatic Stress Disorder</td>
<td>37.0</td>
<td>16.6</td>
</tr>
<tr>
<td>Alcohol Dependence</td>
<td>35.8</td>
<td>2.5</td>
</tr>
<tr>
<td>Alcohol Abuse</td>
<td>33.3</td>
<td>4.3</td>
</tr>
<tr>
<td>Cannabis Dependence</td>
<td>19.8</td>
<td>0</td>
</tr>
<tr>
<td>Cannabis Abuse</td>
<td>23.5</td>
<td>3.7</td>
</tr>
<tr>
<td>Other Drug Dependence or Abuse</td>
<td>46.2</td>
<td>3.7</td>
</tr>
</tbody>
</table>

Note: Past month estimates were not provided for some disorders (-)
The only relevant general community psychiatric epidemiological study findings with which the prison prevalence estimates can be compared was conducted in Christchurch during the mid 1980s (Wells et al, 1989). Relative to the Christchurch survey, women prisoner psychiatric morbidity rates appear to be very high for schizophrenia and related disorders, bipolar affective disorder, major depression, and obsessive compulsive disorder. Post traumatic stress disorder was not assessed in the Christchurch study. However, the report on the prison survey notes that the lifetime and past six months prison rates for this disorder were grossly elevated relative to those found in United States community surveys and comparable to those of combat veterans and victims of serious criminal offences.

Relative to the Christchurch study and other community surveys, the women prison lifetime prevalence rates for alcohol, cannabis and other drug misuse disorders are exceedingly high. In comparison to other populations where males generally have much higher prevalence rates for these disorders than women, in the 1998 prison study, gender differences were small. The report’s authors cautioned that the current (past month) substance misuse diagnoses were likely to be unreliable and greatly underestimate the actual rates. They stated that the lifetime diagnoses were likely to be more accurate, albeit that the rates still probably under-estimated the true prevalence of these disorders.

Very high rates of co-morbidity were found for all major diagnostic groups and substance misuse. These rates were not considered separately for males and females. For the combined male and female sample, over 90 percent of people who had at some time had an obsessive compulsive disorder, bipolar disorder or post traumatic stress disorder had also experienced one or more forms of alcohol or other substance misuse disorder.

Although the Comprehensive International Diagnostic Interview incorporates questions that enable a diagnosis of pathological gambling to be determined, these questions were not included in the 1998 New Zealand prison study. This omission is unfortunate given the high quality of this nationally representative study of male and female prisoners and the opportunity it would have provided to examine the relationship between pathological gambling and a wide spectrum of other mental disorders.

Prior to entering prison, ten percent of women had at some time been an in-patient in a psychiatric hospital or other mental health facility and a further ten percent had received treatment from a community mental health centre or out-patient psychiatric unit. Somewhat more (22%) reported having received treatment for mental health problems from a primary health care or community agency. Approximately one in five women said they had received treatment from a psychologist or psychiatrist while in prison. Thirteen percent had received treatment from a nurse. Twenty-two percent said they had received treatment for alcohol or drug related problems in prison. Twenty-nine percent of women inmates reported being on medication for mental health problems at the time of their interview (Department of Corrections, 1999).

With respect to personality disorder, slightly over half of the women prisoners (53%) were reported to have at least one verified disorder. Forty percent of the total sample had a diagnosis of paranoid personality disorder, 35 percent had a diagnosis of antisocial personality disorder and 20 percent met the criteria for borderline personality disorder. Lower rates were obtained for the other two diagnoses considered, namely
narcissistic and histrionic personality disorders. These rates are all very high relative to rates obtained from community surveys in other countries. In the case of antisocial personality disorder, only two percent of women in the Christchurch study received this diagnosis (Wells et al, 1989).

Personality disorders are patterns of behaviour and thinking that have been present since early adult life, display rigidity and lead to impaired functioning and/or cause distress. They are probably best regarded as traits that are present in normal people but which, when accentuated, are deemed to be pathological because they have adverse effects on many aspects of work and social life (American Psychiatric Association, 1994).

People with antisocial personality disorder persistently disregard and violate the rights of other people and fail to conform to the norms of the society that they live in. They frequently use drugs excessively, engage in fights, tell lies and are involved in a variety of criminal activities. Treatment is generally not effective, although the disorder often decreases with advancing age.

To be diagnosed with this disorder, people must first satisfy the criteria for conduct disorder. Conduct disorder involves, before the age of 15 years, repeated violation of the rights of others and age-appropriate norms. It is expressed through aggression against people or animals, property destruction, lying or theft and other serious rule violations. The second requirement is that, after the age of 17 years, they must have at least four antisocial symptoms that persist over time and that these symptoms occur independently of substance misuse or a serious mental disorder such as schizophrenia or bipolar disorder.