Mental health and substance use problems in Western Australian prisoners

Report from the *Health and Emotional Wellbeing Survey of Western Australian Reception Prisoners, 2013*

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April 2015

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Mental Health and Substance Use Problems in Western Australian Prisons

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1 Executive Summary

This report details the findings of a comprehensive survey of the mental health and substance use problems of prisoners recently arrived in prison in Western Australia (WA). It is the first in WA to use validated diagnostic instruments. In addition, it goes beyond replicating studies showing a high prevalence of mental disorder, and examines needs across domains relevant to mental health.

The mental health of prisoners is not just the concern of prisons - it is a community health issue. Each year many prisoners are released back into the community, and their mental health problems impact not only on them, but on their families and their communities. Prisoners' treatment needs are often not well met, either in the health system or the prison system, and prisoners may frequently move back and forth between the two (1).

Prisoner populations are characterised by disadvantage, stigmatisation, social exclusion and poor physical and mental health. They have much higher rates of mental disorder and substance use than the general community, and high rates of morbidity, mortality and service use after release (2-6).

Planning mental health services for prisoners is difficult without reliable epidemiological data. Prisoners are excluded from all national health surveys in Australia, including the National Survey of Mental Health and Wellbeing and the first and second National Surveys of Psychosis (7, 8). There has been no diagnostic comprehensive survey of the mental health, or needs, of prisoners in WA.

This survey was designed to provide data which will help in the planning and provision of care. In order to further this aim, we not only quantified the numbers of people with different mental disorders, but also looked at their treatment and psychosocial needs.

1.1.1 Method

Data for this report came from face-to-face interviews with 719 reception prisoners in WA between June 2012 and September 2013. This included 574 men and 145 women out of the 4429 receptions to the four government-run prisons involved in the study (a 16% response rate). We approached as many newly arrived prisoners as we could, within a week of reception, to participate in a structured interview using validated instruments to look at demographic data, psychiatric history, diagnosis of mental disorders, alcohol and other drug use, social and emotional wellbeing and met and unmet social, psychological and clinical needs.
1.1.2 Key findings

1.1.2.1 Mental health

This study confirms the very high prevalence of mental disorder, substance use problems and complex needs of prisoners coming into prison.

- Nearly two thirds (63%) of women and 40% of men fulfilled criteria for a current diagnosis of mood disorder, anxiety disorder, post traumatic stress disorder and/or eating disorder.
- 44.2% of women and 24% of men had attempted suicide at some time in their life.
- Over a quarter (26%) of women fulfilled criteria for post traumatic stress disorder.
- An estimated one in five (20%) women and 13% of men had a lifetime diagnosis of a psychotic disorder (i.e. schizophrenia, schizoaffective disorder or organic psychotic disorder).
- Nearly a third of women (30.3%) and 17.9% of men had previously been inpatients in a psychiatric unit.

The prevalence of mental disorder and substance use disorders in WA reception prisoners is much higher than in the general population (Table 1).

**Table 1. Current study findings about mental health, compared with national figures.**

<table>
<thead>
<tr>
<th></th>
<th>Women reception prisoners in WA</th>
<th>Women in general population age 16-85(7, 9)</th>
<th>Male reception prisoners in WA</th>
<th>Men in general population age 16-85(7, 9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current disorder</td>
<td>53%</td>
<td>17.9%</td>
<td>32%</td>
<td>10.8%</td>
</tr>
<tr>
<td>12 month prevalence</td>
<td></td>
<td>7.1%</td>
<td>22.7%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Anxiety disorders</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mood disorders</td>
<td>36.2%</td>
<td>7.1%</td>
<td>22.7%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Substance use disorders</td>
<td></td>
<td>74%</td>
<td>3.3%</td>
<td>77%</td>
</tr>
<tr>
<td>Suicidal ideation in last month</td>
<td></td>
<td>26.6%</td>
<td>2.7%</td>
<td>16.3%</td>
</tr>
<tr>
<td>Schizophrenia and related disorders</td>
<td></td>
<td>20%**</td>
<td>0.35*%</td>
<td>13%**</td>
</tr>
</tbody>
</table>

*12 month treated prevalence (7)  ** estimate lifetime prevalence
Other key findings include:

### 1.1.2.2 Alcohol and drug use

Very high rates of alcohol and substance use:
- Three quarters of women (74%) and men (77%) fulfilled criteria for a clinically diagnosable alcohol and/or drug use disorder.
- The most commonly used substances in the previous 12 months were cigarettes (85.6% women and 87.1% men), alcohol (75.8% women and 85.2% men), and cannabis (63.6% women and 65.6% men).
- 62.1% of women and 60.8% of men had used amphetamines or methamphetamine in the previous 12 months.
- 62.9% of women and 51.4% of men had ever injected amphetamine or methamphetamine.

**Much higher rates of substance use than the general population**
- Table 2.

### Table 2. Substance use in previous 12 months, comparison of WA reception prisoners and national figures (National Drug Strategy Household Survey(10)).

<table>
<thead>
<tr>
<th>Used in last 12 months</th>
<th>Women in general population(10)</th>
<th>Women reception prisoners</th>
<th>Men in general population(10)</th>
<th>Men reception prisoners</th>
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</thead>
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<tr>
<td>Tobacco</td>
<td>11.2%</td>
<td>85.6%</td>
<td>14.5%</td>
<td>87.1%</td>
</tr>
<tr>
<td>Cannabis</td>
<td>7.6%</td>
<td>63.6%</td>
<td>12.8%</td>
<td>44.1%</td>
</tr>
<tr>
<td>Amphetamine/methamphetamine</td>
<td>1.5%</td>
<td>62.1%</td>
<td>2.7%</td>
<td>60.8%</td>
</tr>
</tbody>
</table>

### 1.1.2.3 Co-occurring disorders

High rates of co-occurring mental health problems and substance use disorders:
- Over half (52.9%) of women and 37.9% of men had a co-occurring mental illness and a substance use disorder.
- Only 12.6% of women and 15.9% of men had neither a mental disorder nor a substance use disorder.
- People with co-occurring mental illness and a substance use disorder had significantly more unmet needs that those with no disorder and those with either a mental illness or substance use disorder only.
1.1.2.4 Physical health
High numbers of physical health problems:

- Over three quarters of women (77%) and two thirds (66%) of men reported at least one physical health condition.
- Over half of women (53.9%) and a third (33.3%) of men reported two or more health conditions.
- Over a third (38.6%) of women and (41.8%) of men had a history of being knocked unconscious as a result of a head injury.

1.1.2.5 Life stressors
High rates of life stressors in previous 12 months:

- Over half (55.9%) of women and over a third (35.5%) of men had experienced the death of a family member or close friend.
- Nearly one in five (17.9%) women and 14.8% of men reported experiencing the suicide of a family member or close friend.
- Over a third (37.9%) of the women reported being abused, raped or beaten up and 47.6% of the women had witnessed violence.
- Over half (55.1%) of women and half (50.9%) of the men had either had difficulty getting a job or been sacked or made redundant.

1.1.2.6 Needs - health, social, clinical and functional
Many areas of unmet need in the last four weeks (prior to and in prison):

- The most common unmet needs reported by women were: psychological distress (44.2%), drug problems (38.3%), financial problems (34.9%), poor physical health (29.2%), lack of adequate accommodation (27.9%) and inadequate daytime activities (26.4%).
- The most common unmet needs reported by men were: drug problems (30.1%), financial problems (28.6%), psychological distress (24.1%), alcohol problems (21.4%) and social isolation (17.4%).
- The most common needs (met or unmet) that women reported had contributed to their coming to prison on this occasion were: drug problems (22.4%), psychological distress (20.9%), lack of adequate daytime activities (14.7%) and lack of adequate accommodation (14.7%).
- The most common needs that men reported had contributed to their current imprisonment were: drug problems (25.5%), alcohol problems (19.7%), psychological distress (16.6%) and financial problems (13.3%).
1.1.2.7 *Women*

- Significantly higher prevalence of mental disorders, social disadvantage and needs among women compared to men:
  - 66.9% of women had children under 18 compared with 48.6% of men.
  - Only 34% of women’s children were living with their father whereas 86.7% of men’s children were living with their mother while their father was in prison.
  - 13.1% of women were in paid employment prior to imprisonment compared with 41.3% of men.
  - 47.8% of non-Aboriginal women and 26.7% of Aboriginal\(^1\) women had had children removed by government or welfare intervention compared with 21.6% of Aboriginal men and 10% of non-Aboriginal men.
  - Women had a significantly higher prevalence of mood disorders, anxiety disorder, post traumatic stress disorder and psychotic disorders than men (see Table 1, above).
  - Over a quarter of women had a diagnosis of post traumatic stress disorder (26.1% women compared with 10.1% men).
  - Women were twice as likely as men to report unmet needs relating to lack of adequate accommodation, psychological distress, lack of treatment, lack of adequate daytime activities, poor physical health, psychotic symptoms, and problems with childcare and intimate relationships.

1.1.2.8 *Aboriginal prisoners*

- Aboriginal men and women were more likely to have been imprisoned previously than their non-Aboriginal counterparts (66.7% Aboriginal women compared with 53.1% non-Aboriginal women; 78.8% Aboriginal men compared with 62.2% on-Aboriginal men).
- Aboriginal men and women were less likely to have been in paid employment prior to prison than their non-Aboriginal counterparts (4.7% Aboriginal women compared with 19.5% of non-Aboriginal women; 13.9% Aboriginal men compared with 52.8% non-Aboriginal men).
- Aboriginal men and women were more likely to have experienced the death of a family member or close friend in the previous 12 months (63.5% Aboriginal women compared with 50% non Aboriginal women; 50.9% Aboriginal men compared with 29.3% non-Aboriginal men).

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\(^1\) Within Western Australia, the term ‘Aboriginal’ is used in preference to ‘Aboriginal and Torres Strait Islander’, in recognition that Aboriginal people are the original inhabitants of Western Australia. No disrespect is intended to our Torres Strait Islander colleagues and community (WA Health OD 0435/13).
Nearly a quarter (24.8%) of Aboriginal men had experienced the suicide of a family member or close friend in the previous 12 months, compared with 10.8% Aboriginal men.

Aboriginal men and women were less likely than non-Aboriginal to have ever sought help for mental health problems (49.2% Aboriginal women compared with 62.1% non-Aboriginal women; 34.4% Aboriginal men compared with 48.6% non-Aboriginal men).

There was no significant difference in the proportion of Aboriginal men and women with a current diagnosis of a mood disorder, anxiety disorder, psychosis, or post traumatic stress disorder.

A greater proportion of Aboriginal women fulfilled diagnostic criteria for alcohol dependence than non-Aboriginal women (39.6% compared with 17.9%).

A greater proportion of Aboriginal men fulfilled criteria for alcohol dependence (49.7% compared with 27%) and for drug dependence (62.4% compared with 46.2%) than non-Aboriginal men.

Aboriginal men and women did not differ in the number of met and unmet health and psychosocial needs in the previous month compared with non-Aboriginal men and women.

However, Aboriginal women were more likely than non-Aboriginal women to report unmet needs in relation to alcohol problems and information about psychiatric treatment, and less likely to report unmet needs in relation to poor physical health and lack of adequate company and social life.

Aboriginal men were more likely than non-Aboriginal men to report unmet needs in relation to alcohol problems, and less likely to report unmet needs in relation to adequate accommodation.

Among Aboriginal women, there were some areas suggestive of resilience. Aboriginal women rated their positive wellbeing, self esteem and social support higher than non-Aboriginal women.

1.1.3 Conclusion

Time in custody presents an opportunity for health services to engage with a group who may not otherwise access these services. This can potentially improve not only individual health outcomes, but those of the families and communities to which they return. It may also reduce the risk of re-offending, as well as suicide and other preventable causes of death.

A major challenge for services is to address the high rate of co-occurring mental disorders and alcohol and other drug disorders in the context of multiple social problems. Neither mental illness nor alcohol and drug use can be treated in isolation...
in this group, but comprehensive treatment programmes carry significant resource implications.

The high prevalence of anxiety disorders, mood disorders and PTSD as well as substance use disorders has major implications for the provision of appropriate primary and specialist mental health care, and structured psychological therapies as part of that care. Our results also showed that reception prisoners had experienced very high rates of life stressors, which reinforces the need for trauma-informed services.

Prisoners are a very vulnerable group of individuals with a high prevalence of suicidal thoughts. It is not clear what factors might help to predict those who will go on to attempt suicide. There is a real challenge for services to understand the relationship between thoughts and actions, to respond constructively and supportively, and to manage the risk in ways that do not overwhelm prison services or restrict prisoners so much that it increases the long term risk.

The very high prevalence of schizophrenia and related disorders also has significant resource implications. These are serious disorders that often are associated with ongoing disability. Those with active psychotic symptoms are currently unwell and will need assessment and treatment. Some may need inpatient care, and some may need active intensive and assertive multidisciplinary care from a specialist mental health team. They may need a more supportive environment than is available on an ordinary prison unit. Many of those with a lifetime diagnosis of schizophrenia and related disorders who are not currently psychotic still need ongoing psychiatric treatment to stay well.

Women prisoners are a minority group in a system designed primarily for men. Services need to address the specific needs of women, including the very high rates of mental disorder and substance misuse, the needs of mothers, and the high rates of sexual and physical victimisation. Women also reported high rates of unmet needs in the areas of psychological distress, accommodation, treatment, daytime activities, physical health, psychotic symptoms and intimate relationships. Women prisoners are also more likely to be placed far from home, making it more challenging to help them maintain their community and family supports.

The results suggest that Aboriginal people suffer with similar high rates of mental disorder to non-Aboriginal people in prison, but are less likely to have previously accessed mental health services. Prisons provide an opportunity for healthcare for a population that under-uses health services in the community (11, 12). Paying attention to their particular reported areas of unmet need, and drawing on strengths such as self-esteem, positive wellbeing and social support would be a starting point for dialogue with Aboriginal communities about how to address these issues in culturally appropriate ways, both in and out of prison.

Prisoners reported life stressors and unmet needs in a range of areas including housing, work, family, money, and daytime activities, as well as in physical and
mental health areas. No single service or agency can effectively meet these needs: different agencies must work in partnership across different disciplines (e.g. GPs, specialist mental health teams, prison psychologists, community managed organisations, resettlement officers, and custodial staff), different sectors, and across the prison and community.

Times of transition also create vulnerability, so attention needs to be paid not only to reception into prison, but to the time of transition back to the community, when it is known that mortality and morbidity are very high.

This comprehensive study provides sufficient epidemiological data to begin planning improved forensic mental health and drug and alcohol services in Western Australia. It also indicates where further and more in-depth research is needed to help to target specific problems and pilot new interventions.


2 Background to the study

2.1.1 Rates of mental disorder in prisons

Prisoner populations are characterised by disadvantage, stigmatisation, social exclusion and poor physical and mental health. Prisoners have higher rates of mental disorder than the general community, especially psychosis, major depression and antisocial personality disorder (4, 13). They also have high rates of substance misuse; self-harm, suicide; co-occurrence of different disorders; and high rates of mortality, morbidity and mental health service use after release (5, 6). The prevalence of mental disorder has consistently been found to be highest amongst remand/reception prisoners and amongst women in custody (3, 14).

Prisoners are excluded from all national health surveys in Australia, including the National Survey of Mental Health and Wellbeing and the National Survey of People Living with a Psychotic Illness (7, 8, 15). Planning mental health services for prisoners is difficult without reliable epidemiological data. A national census of prisoners reported that 38% of all prison entrants in Australia had been told at some stage in their life they had a mental health disorder, including drug and alcohol misuse, and 21% were currently taking psychiatric medication. Prisoners reported high levels of psychological distress compared with the general population, with 31% of prison entrants reporting high or very high levels of distress on the Kessler 10. The census did not, however, include a standardised psychiatric assessment, nor look at treatment need (16).

The most comprehensive Australian survey of the mental health of prisoners was the NSW survey (17) which found high rates of mental disorder, and also found that prisoners with mental disorders had higher levels of disability and significant physical health co-morbidity, compared to those without. A comprehensive national survey of psychiatric morbidity in New Zealand prisons also found high rates of substance misuse, psychotic disorders, major depression, bipolar disorder, obsessive compulsive disorder and post-traumatic stress disorder, compared with the general population (18).

2.1.2 Treatment needs of prisoners with mental disorder in prison

Prisoners’ treatment needs are often not well met, either in the health system or the prison system, and prisoners may revolve between the two (1). Looking at the prevalence of different mental disorders provides some information about treatment need, but some studies in the UK and New Zealand have found that many prisoners with mental health problems are not identified at reception into the prison system, and have high levels of unmet treatment needs (18-22). If their needs are not
Background to the study

identified at reception, then they are likely to remain unidentified and be released without appropriate aftercare (23).

Gunn et al (24) and Brooke et al (25) looked in the UK at sentenced and remand prisoners respectively, and assessed 3% of the sentenced prisoners as needing transfer to a psychiatric hospital, and 10% requiring treatment for mental disorder within prison. They recommended hospital treatment for 88.2% of the psychotic sentenced prisoners. Brooke et al (25) found that 55% of the remand prisoners had immediate treatment needs for mental disorder. They concluded most of these treatment needs could be provided within the prison, but 9% needed transfer to a psychiatric inpatient unit.

The New Zealand national study (18) found that only 37% of those inmates with schizophrenia, 46% of those with depression, and 41% of those with post-traumatic stress disorder, were receiving treatment. They concluded there was much unmet need that was beyond the current capacity of forensic psychiatry, correctional psychological services and prison medical services. Harty et al (26) compared offenders in prison with serious mental disorder with patients living in the community with serious mental disorders, and found that those in prison had more needs relating to mental health, and more unmet needs.

2.1.3 Why treat prisoners with mental disorder?

In Australia the median time spent on remand is five months, and the median expected length of time to serve on a sentence is just under two years (27). It is estimated that 2.4% (385,000) Australians aged 16-85 have been to prison. This means that each year many prisoners are released back into the community, and their health issues and concerns are also those of the community. Morgan et al (28), using data linkage, found that 32.1% of people who had been treated in WA for a psychiatric illness had been arrested at some time, and 11% of people who had been arrested had a history of mental illness.

WA data linkage found that ex-prisoners had high rates of mental health service use pre- and post-prison, and higher rates of contact with mental health services and hospital admission after release, than individuals of the same age in the general community (6). The risk of hospitalisation was greatest for injury and poisoning and mental disorders, including acute and chronic effects of substance misuse (6), with 20% of released prisoners admitted for at least one of these. Released prisoners are also at greatly increased risk of death (29). Further WA data linkage studies have shown that the best predictors of mental health service use after release from prison are having a psychiatric diagnosis and a history of self harm prior to prison (30). They also found that a pre-sentence history of mental health service use doubled the risk of mortality on release (31).

The needs of prisoners are well recognised by the World Health Organization and the United Nations’ High Commission for Human Rights, who stress the right of
Background to the study

prisoners with mental disorders to have access to services for assessment, treatment and, where appropriate, referral, of a range and quality equivalent to those in the wider community (the principle of equivalence). This principle is the first principle in the 2002 Australian Health Ministry Advisory National Statement of Principles for Forensic Mental Health. This principle has been adopted in many countries within their laws and regulations (32).

Untreated mental disorder may lead to longer incarceration and aggravation of existing mental health problems (33). Providing treatment to the mentally disordered also serves the public interest, as people may be less likely to re-offend if they have engaged in treatment, rehabilitation and aftercare specific to their needs. Most prisoners return to the community, where they have high rates of service use and mortality, and their mental disorder may have an impact on their family, carers and the wider community (6). Treatment and care may reduce the risk of suicide and other preventable causes of death; reduce the harm to the individual, their family and community due to alcohol and drug misuse, mental disorder, social problems and crime; and be cost effective in terms of reducing the use of expensive health and criminal justice resources such as emergency department attendance, inpatient admissions, and re-imprisonment.

Providing appropriate and timely mental health treatment in prison provides a unique public health opportunity to identify and engage populations who are usually difficult to reach with treatment services both in prison and on release. A thematic review of offender mental health services conducted by the Inspector of Custodial Services in WA concluded that ‘the likely payoff for a public health investment during the window of opportunity presented by the presence of a high risk health population in a controlled environment would in all likelihood far exceed the investment’ (34).

2.1.4 Why survey Western Australia?

There has been no comprehensive survey of the mental health, or needs, of prisoners in WA. While data-linkage studies in WA have examined the link between schizophrenia and offending (35) and examined mental health service use before and after prison, and high rates of death after release from prison (6, 30, 31), this captures only the population who have had contact with a service. A small scale health survey in two prisons in WA suggested high rates of mental disorder, but was not representative of the whole prison system, and did not include diagnosis or treatment need (36).

On 30 June 2014 there were 5200 prisoners in WA and there has been a 38% increase in the prison population in WA in the last ten years (37). An estimated 40% more individuals cycle through prisons each year. WA has particular challenges in providing for the mental health needs of prisoners both as a result of its vast geography and because 40% of prisoners are of Aboriginal origin. WA has the highest rate of age standardised incarceration of Aboriginal people per head of population of any State. Many prisoners are from remote and rural areas, making
engagement with services after release particularly difficult. However, a survey of inmates in NSW suggested that Aboriginal people used health services more in prison than outside, suggesting prison presented an opportunity for health services to intervene in a group which is disadvantaged in terms of morbidity and mortality and has a high need for physical and mental health care (11, 34).

A further group who are especially vulnerable are those classed as mentally impaired and unfit to stand trial, or not guilty by reason of unsoundness of mind. According to the WA Mentally Impaired Accused Review Board 2013/2014 Annual Report, 18 of mentally impaired accused persons detained under custody orders are in prison compared with 10 in hospital, and only two or three custody orders are made each year (38). This suggests that there may be a group of prisoners with serious mental disorder within the WA prison system, instead of in a more appropriate treatment setting (39).

2.1.5 Aims and method
This current study’s survey was designed to provide information to assist in the planning and provision of care to prisoners with mental disorder, both within the prison system and in the community. In order to further this aim, we went beyond quantifying the numbers of people with mental disorder and additionally looked at their treatment and psychosocial needs.

Specific aims of the study were to:

1. Quantify the prevalence of mental disorders, including alcohol and substance use disorders, in prisoners entering WA prisons.

2. Describe and quantify the treatment and psychosocial needs of prisoners with mental disorders, including alcohol and substance use disorders, entering prison in WA.

2.1.5.1 Ethics
Approval was obtained from the WA Department of Corrective Services Research Evaluation Committee, the University of Western Australia Human Research Ethics Committee, and the Western Australian Aboriginal Health Information Ethics Committee.

2.1.5.2 Research sites
Data was gathered from the main male remand prison for the State and the main women’s prison, which had both remand and sentenced prisoners. We also gathered data from two regional prisons in different parts of WA.

2.1.5.3 Sample
We approached as many reception prisoners as we could at each site. Interviews were conducted in the health centre at each prison. A list of all receptions in the last
seven days was given to the prison officer in charge of calling prisoners to the health centre. This officer worked his or her way systematically down the list calling prisoners to the health centre. Once at the health centre, the interviewers explained the project and obtained consent. Interviewers approached and interviewed as many prisoners from the list as they could in the time available. The number of interviews was constrained by the availability of interview rooms.

At the regional prisons the mental health nurse received a list once per week of receptions in the previous week and called those who were still in the prison, explained the project, obtained consent and interviewed them.

2.1.5.4 Consent

When prisoners were called to the health centre, the interviewers explained the aims and objectives of the project, went through an information sheet with them and sought their consent to participate in the research project. Those who gave written consent were included in the study.

2.1.5.5 Interviewers

Nine interviewers conducted the research interviews in the metropolitan prisons (seven women and two men). Five were university students, four of whom had experience of interviewing detainees in police custody as part of the Drug Use Monitoring in Australia (DUMA) project. One was a trainee clinical psychologist, one an occupational therapist by training, one was medically trained and one had nursing experience.

At the regional prisons, the interviews were conducted by the mental health nurse at each prison.

All interviewers were trained in the administration of the questionnaire. The training of the interviewers recruited to interview in the metropolitan prisons also included sessions on dealing with aggression, on yarning Aboriginal style, and a prison induction training session about security and safety in prisons.

During the initial two weeks of interviewing, the interviewers in the metropolitan prisons worked in pairs alternating who administered the questionnaire, so they all observed each other and were able to clarify issues. After one week of interviewing, a group debriefing session was organised in which the interviewers raised any issues and questions they had about how to rate particular items. This provided a further training opportunity in rating questions within the MINI.

Sophie Davison, the Principal Investigator and an experienced clinician, who had looked through the completed questionnaires, clarified items where there appeared to be possible problems and inconsistencies in rating. The Principal Investigator was available to the interviewers to discuss any concerns the interviewers had, such as distress or feeling unsafe, or questions about rating the clinical symptoms.
2.1.5.6 Risk management agreement and referral to prison mental health services

Any participant who was expressing any suicidal thoughts or intentions at interview; anyone whom the interviewers were concerned may present a risk to themselves or were extremely distressed; and anyone who scored as having suicidal ideas in the last month on the MINI, was referred immediately to the prison mental health staff or the health centre staff, who then managed them according to the prison risk management policy.

If any prisoner being interviewed asked for referral to mental health services in prison, the interviewer referred them to the mental health nurses. The Principal Investigator was available to the interviewers to discuss any concerns they may have about a particular prisoner they had interviewed and how best to proceed.

2.1.5.7 Sampling time frame

Interviews occurred in the metropolitan prisons between June 2012 and May 2013.

Interviews occurred in the regional prisons between November 2012 and September 2013.

2.1.5.8 Interview

The interview collected the following data (see Appendix A for more detail):

1. Demographic, health, psychiatric history and offending history questions

2. Mental health and substance use disorder diagnoses:

Mini International Neuropsychiatric Interview version 6 (MINI) (40, 41)

It assesses the following DSM-IV disorders:

- Major depressive episode (lifetime and current)
- Suicidality - i.e. suicidal thoughts, feelings and actions (in the last month)
- Mania and hypomania (lifetime and current)
- Panic disorder (current)
- Agoraphobia (current)
- Social phobia (current)
- Obsessive-compulsive disorder (current)
- Post-traumatic stress disorder (in the last 12 months)
- Alcohol dependence and abuse (current)
- Substance dependence and abuse (current)
- Psychotic disorders (lifetime and current)
• Eating disorders (current)
• Generalised anxiety disorder (current)
• Antisocial personality disorder (current)

**Borderline Personality Disorder**

Self reported borderline personality disorder traits were assessed using the borderline PD questions from the Personality Disorder Questionnaire-4+ (PDQ-4+) and the clinical significance scale (42).

3. **Alcohol and substance use**

We asked questions about recent and lifetime substance use derived from the Australian Institute of Criminology DUMA project questions (43).

4. **Social and Emotional Wellbeing**

The following modules were included from the social and emotional wellbeing module of the 2004-2005 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), as well as additional modules used in the 2012-2013 NATSIHS survey (44):

- Psychological distress
- Impact of psychological distress
- Positive wellbeing
- Anger
- Life stressors
- Discrimination
- Cultural identification
- Removal from natural family
- Self esteem
- Multi-dimensional scale of perceived social support (MSPSS)
- Whether they needed to see a counsellor in the last 12 months but did not go and the reason for this.

Only people identifying themselves as Aboriginal were asked the cultural identification questions and discrimination questions. All participants, Aboriginal and non-Aboriginal, were asked all the other questions.

5. **Met and unmet needs**

Camberwell Assessment of Need – Forensic Version CANFOR (45)
The CANFOR short version (34) is an individual needs assessment scale which covers 25 domains of self-reported need including health, social, clinical and functional needs.

6. Psychosis - Diagnostic Interview for Psychoses
Inmates who screened positive for lifetime psychosis on the MINI were approached to take part in a second interview with the Principal Investigator (SD), a Consultant Psychiatrist using the Diagnostic Interview for Psychoses (46).

2.1.5.9 Data analysis
Data was analysed using SPSS software version 21.0. Descriptive and comparative statistical methods (parametric and non-parametric) were used to describe the frequency of different mental disorders and the needs of those with mental disorder.

2.1.5.10 Cultural considerations
An Aboriginal reference group was set up, and members of this group were part of the project steering committee and involved at all stages of the project to ensure that cultural issues were properly considered, from design through analysis to dissemination. In addition, we consulted and obtained support from key stakeholders such as the Aboriginal Medical Services in the areas around each prison, the Office of Aboriginal Health, the Department of the Attorney General and the Aboriginal Visitors Service.
3 Results

3.1 Demographics

3.1.1 Sample
There were 4313 persons received into prison (‘receptions’) over the study period for the four prisons involved in the research. Reception status was defined as any new arrival into the prison site, and included prison entrants from the community (sentenced or on remand), prison-to-prison transfers, and hospital-to-prison transfers.

Of these 4313 reception prisoners, 719 (16.7%) participated in the study. This included 574 men and 145 women. 165 of the men and 63 of the women were Aboriginal. We therefore interviewed 29% of the women received into prison during our interview period, and 15% of the men. Table 3 and Table 4 compare age, sentence status and Aboriginal status of the all male and female reception prisoners during the study time period to the study participants.

Table 3. Comparison of male reception prisoners and study participants.

<table>
<thead>
<tr>
<th></th>
<th>Male receptions (n=3814)</th>
<th>Male participants (n=574)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Median age</strong></td>
<td>30.0 years (range=18-73)</td>
<td>29.9 years (range=18-73)</td>
</tr>
<tr>
<td><strong>Remanded</strong></td>
<td>67.4 %</td>
<td>66.7%</td>
</tr>
<tr>
<td><strong>Sentenced</strong></td>
<td>32.6%</td>
<td>32.1%</td>
</tr>
<tr>
<td><strong>Aboriginal</strong></td>
<td>30.8%</td>
<td>28.7%</td>
</tr>
</tbody>
</table>

*percentages do not add to 100 as some participants did not know their sentence status.

There was no significant difference between men in our sample and the overall male reception prisoners during the study period, in the proportion who were Aboriginal or who were on remand.

Table 4. Comparison of female reception prisoners and study participants.

<table>
<thead>
<tr>
<th></th>
<th>Female receptions (n=499)</th>
<th>Female participants (n=145)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Median age</strong></td>
<td>32.0 years (range=18-67)</td>
<td>30.3 years (range=18-57)</td>
</tr>
<tr>
<td><strong>Remanded</strong></td>
<td>40.9%</td>
<td>62.8%</td>
</tr>
<tr>
<td><strong>Sentenced</strong></td>
<td>59.1%</td>
<td>34.5%</td>
</tr>
<tr>
<td><strong>Aboriginal</strong></td>
<td>48.5%</td>
<td>43.4%</td>
</tr>
</tbody>
</table>

*percentages do not add to 100 as some participants did not know their sentence status.
Women who participated in our study were less likely to be Aboriginal ($\chi^2(1)=86.679$, $p<.0001$) and more likely to be on remand ($\chi^2(1)=32.596$, $p<.0001$) than the overall proportion in the women entering prison.

93.5% of surveys (n=672) were completed. 30 (5.2%) men and 17 (12%) women did not complete the survey. Men who did not complete the interview did not differ from those who did in age, sentence status or Aboriginality. The same applied to the women who did not complete the interview. Reasons for non-completion included asking to stop the interview, having to go to another appointment e.g. visit, and running out of time and/or being asked to stop by prison staff for prison procedural reasons. We have included data up to the point of stopping the interview, except where participants indicated they wished to withdraw entirely from the study. Adjusted sample sizes are reported where applicable.

Mean time spent in prison prior to interview was 8 days (SD=8.3, range=1-105, median=7.0), with women spending a mean time of 7 days (SD=8.6, range=1-78, median=5.0) and men spending a mean time of 8 days (SD=8.2, range=1-105, median=7.0).

Those prisoners who had spent greatest time in prison prior to interview were those prisoners who had been transferred from other prison sites or from facilities such as mental health units.

See Figure 1 for a flowchart depicting proportion of prisoners approached.
Figure 1. Proportion of prisoners approached.

- **4313 receptions**
  - **3814 males (100%)**
    - 757 (19.8%) approached for participation
      - 183 (4.8%) declined
      - 574 (15.0%) consented
  - **499 females (100%)**
    - 233* (46.7%) approached for participation
      - 88* (17.6%) declined
      - 145 (29.1%) consented

*Due to 4 weeks of missing data on numbers of female prisoners approached/declined, this figure is estimated based upon the proportion of female participants who declined in the rest of the interview time period.*
3.1.2 Overview of demographics

Demographic characteristics of participants are discussed in detail below. Table 5 provides a snapshot of the predominant characteristics of male and female participants.

Table 5. Demographic characteristics of male and female participants.

<table>
<thead>
<tr>
<th></th>
<th>Women (n=145)</th>
<th>Men (n=574)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (median)</td>
<td>30.3 years</td>
<td>29.9 years</td>
</tr>
<tr>
<td>Australian born</td>
<td>87.6%</td>
<td>79.1%</td>
</tr>
<tr>
<td>Aboriginal</td>
<td>43.4%</td>
<td>28.7%</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Married/defacto</td>
<td>44.8%</td>
<td>41.3%</td>
</tr>
<tr>
<td>- Single</td>
<td>37.2%</td>
<td>42.7%</td>
</tr>
<tr>
<td>Highest Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Completed year 10 or less</td>
<td>56.5%</td>
<td>52.8%</td>
</tr>
<tr>
<td>Special or remedial education</td>
<td>11.0%</td>
<td>10.4%</td>
</tr>
<tr>
<td>Unemployed&lt;sup&gt;1&lt;/sup&gt;</td>
<td>86.9%</td>
<td>58.7%</td>
</tr>
<tr>
<td>Children under 18 years</td>
<td>66.9%</td>
<td>48.6%</td>
</tr>
<tr>
<td>Living in metropolitan area</td>
<td>76.5%</td>
<td>82.6%</td>
</tr>
</tbody>
</table>

<sup>1</sup> In the 4 weeks prior to imprisonment
3.1.3 Age

See Figure 2 for the age distribution of the participants.

Aboriginal men were significantly younger than non-Aboriginal men (mean=28.0 compared with 32.6 years), t(384.8)=5.542, p=.000.

There was no significant difference in age between Aboriginal and non-Aboriginal women.

**Figure 2. Distribution of age across participants.**

3.1.4 Aboriginal identity

**Women**

Of the 63 women identifying as Aboriginal, 30 (47.6%) identified with an Aboriginal mob or language group (Nyoongar, Yamatji and Wongai being the most frequently mentioned). Almost two-thirds of Aboriginal women (n=39, 62.9%) recognised an area as their home or traditional land. Of these 39 women, 82.1% identified a regional area as their home land and 7.7% identified a metropolitan area, with 10.2% not specifying. Sixteen (25.4%) of all Aboriginal women reported living in their traditional area in the 12 months prior to imprisonment, and all Aboriginal women reported that they were welcome in their traditional land.

**Men**

Of the 165 men identifying as Aboriginal, 49.1% (n=81) identified with an Aboriginal mob or language group (Nyoongar and Yamatji being most frequently mentioned). Over half (56.4%, n=93) of the Aboriginal men recognised an area as their home or traditional land. Of these 93 men, 78.5% (n=73) identified a regional area as their
home land, 16.1% (n=15) identified a metropolitan area, and 5.4% (n=5) did not specify. Thirty-six (38.7%) of all Aboriginal men reported living in their traditional land prior to being imprisoned, and 96.7% (n=89) of Aboriginal men reported they were welcome in their traditional land.
3.1.5 Country of birth / language spoken

Women
Most women (87.6%, n=127) were born in Australia, and those born elsewhere had lived in Australia for a mean time of 21.4 years (SD=13.28). Nearly all women (96.6%, n=140) spoke English as a main language in the home they grew up in, with 9.7% (n=14) speaking a language other than English while growing up.

Men
The majority of men (79.1%, n=454) were born in Australia, and those born elsewhere had lived in Australia for a mean time of 18.7 years (SD=13.4; Range: 0-60 years). 90.1% of men (n=517) spoke English as a main language in the home they grew up in, with 10.6% (n=61) speaking a language other than English while growing up.

3.1.6 Marital status
Table 6 shows the marital status of Aboriginal and non-Aboriginal women and men.

Table 6. Marital status of participants

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Aboriginal women %</th>
<th>Non-Aboriginal women %</th>
<th>Aboriginal men %</th>
<th>Non-Aboriginal men %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married/de facto</td>
<td>45.1</td>
<td>44.4</td>
<td>38.1</td>
<td>49.1</td>
</tr>
<tr>
<td>Stable relationship</td>
<td>7.3</td>
<td>11.1</td>
<td>8.8</td>
<td>9.1</td>
</tr>
<tr>
<td>Single</td>
<td>35.4</td>
<td>39.7</td>
<td>44.5</td>
<td>38.2</td>
</tr>
<tr>
<td>Separated/divorced</td>
<td>9.8</td>
<td>1.6</td>
<td>8.3</td>
<td>3.0</td>
</tr>
<tr>
<td>Widowed</td>
<td>2.4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>3.2</td>
<td>0</td>
<td>0.6</td>
</tr>
</tbody>
</table>
3.1.7 Children

**Women**

66.9% (n=97) of women had children under the age of 18 years. The average number of children per woman was 2.6 (SD=1.77). There was no significant difference between Aboriginal and non-Aboriginal women with regard to having children.

Figure 3 shows who was looking after their children while the women were in prison. The children of non-Aboriginal women were three times more likely to be living with their father than were Aboriginal women’s children (OR: 3.15, 95% CI: 1.29-7.70).

**Men**

48.6% (n=279) of men had children under the age of 18 years. The average number of children was 2.3 (SD=1.48). Aboriginal men were two times more likely than non-Aboriginal men to report having children (OR: 2.12, 95% CI: 1.47-3.07).

Figure 3 shows who was looking after their children while the men were in prison. The children of Aboriginal men were two times more likely to be living with other relatives than those of non-Aboriginal men (OR: 2.15, 95% CI: 1.06-4.36).

**Figure 3. Participants with children: residence of children at time of interview.**

*Note that participants sometimes had several children being cared for in different situations, so percentages do not add up to 100.
3.1.8 Accommodation

Over three-quarters of women (76.5%, n=111) and 82.6% (n=474) of men lived predominantly in the metropolitan area in the 12 months prior to imprisonment, with 20.0% (n=29) of women and 17.1% (n=98) of men living in regional areas. Table 7 shows the type of accommodation participants were living in prior to coming into prison.

Table 7. Type of accommodation prior to coming into prison.

<table>
<thead>
<tr>
<th>Type of accommodation</th>
<th>Aboriginal women %</th>
<th>Non-Aboriginal women %</th>
<th>Aboriginal men %</th>
<th>Non-Aboriginal men %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renting/Public housing</td>
<td>49.2</td>
<td>52.4</td>
<td>32.7</td>
<td>47.4</td>
</tr>
<tr>
<td>Parents/relative’s home</td>
<td>30.2</td>
<td>13.4</td>
<td>48.5</td>
<td>23.0</td>
</tr>
<tr>
<td>Own home/mortgage</td>
<td>1.6</td>
<td>11</td>
<td>1.8</td>
<td>15.2</td>
</tr>
<tr>
<td>Sheltered/community housing</td>
<td>6.3</td>
<td>2.4</td>
<td>7.9</td>
<td>1.2</td>
</tr>
<tr>
<td>Unsettled lodgings</td>
<td>1.2</td>
<td>7.3</td>
<td>1.8</td>
<td>6.4</td>
</tr>
<tr>
<td>Sleeping rough</td>
<td>9.5</td>
<td>6.1</td>
<td>4.2</td>
<td>3.7</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>7.3</td>
<td>3.0</td>
<td>3.2</td>
</tr>
</tbody>
</table>

Table 8 shows who participants were living with prior to imprisonment.

Table 8. Living arrangements of female and male participants, immediately prior to imprisonment.

<table>
<thead>
<tr>
<th></th>
<th>Women n</th>
<th>Women %</th>
<th>Men n</th>
<th>Men %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alone</td>
<td>20</td>
<td>13.8</td>
<td>86</td>
<td>15.0</td>
</tr>
<tr>
<td>Partner/Spouse/De Facto</td>
<td>47</td>
<td>32.4</td>
<td>215</td>
<td>37.5</td>
</tr>
<tr>
<td>Dependent Children</td>
<td>33</td>
<td>22.8</td>
<td>91</td>
<td>15.9</td>
</tr>
<tr>
<td>Dependent Grandchildren</td>
<td>3</td>
<td>2.1</td>
<td>1</td>
<td>0.2</td>
</tr>
<tr>
<td>Parent/s</td>
<td>18</td>
<td>12.4</td>
<td>131</td>
<td>22.8</td>
</tr>
<tr>
<td>Family/extended family</td>
<td>39</td>
<td>26.9</td>
<td>138</td>
<td>24.0</td>
</tr>
<tr>
<td>Unrelated Flat or Housemates</td>
<td>28</td>
<td>19.3</td>
<td>120</td>
<td>20.9</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>1.4</td>
<td>2</td>
<td>0.3</td>
</tr>
</tbody>
</table>

*Percentages do not add up to 100 as some people answered yes to more than one category
3.1.9 Education

11.0% (n=16) of women and 10.4% (n=59) of men reported receiving special education or remedial teaching while in school.

Table 9 shows the level of education obtained by Aboriginal and non-Aboriginal women and men.

**Table 9. Highest level of education obtained by participants.**

<table>
<thead>
<tr>
<th>Highest level of education</th>
<th>Aboriginal women %</th>
<th>Non-Aboriginal women %</th>
<th>Aboriginal men %</th>
<th>Non-Aboriginal men %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed year 9 or lower</td>
<td>41.2</td>
<td>21.8</td>
<td>39.4</td>
<td>20.3</td>
</tr>
<tr>
<td>Completed year 10</td>
<td>23.8</td>
<td>28</td>
<td>24.2</td>
<td>28.1</td>
</tr>
<tr>
<td>Completed years 11 or 12</td>
<td>20.6</td>
<td>20.8</td>
<td>20.0</td>
<td>21.7</td>
</tr>
<tr>
<td>College certification/diploma</td>
<td>4.8</td>
<td>22</td>
<td>5.5</td>
<td>8.8</td>
</tr>
<tr>
<td>Technical or trade qualification</td>
<td>6.3</td>
<td>2.4</td>
<td>9.1</td>
<td>17.8</td>
</tr>
<tr>
<td>Degree/tertiary education</td>
<td>3.2</td>
<td>4.9</td>
<td>1.2</td>
<td>3.4</td>
</tr>
</tbody>
</table>

3.1.10 Employment and income

**Women**

Overall 19 women (13.1%) reported working in paid employment in the four weeks prior to imprisonment. This included only 3 (4.7%) of the Aboriginal women. One in five women (22.1%, n=22) reported never having worked before.

**Men**

41.3% of men (n=237) reported working in paid employment in the four weeks prior to coming into prison (52.8%, n=216, of non-Aboriginal men, and 13.9%, n=23, of Aboriginal men). 18.2% of Aboriginal men and 4.2% of non-Aboriginal men reported they had never worked.
Table 10 shows the sources of income reported by participants in the four weeks prior to prison. Participants could endorse more than one source of income.

Table 10. Sources of income in the four weeks prior to prison.

<table>
<thead>
<tr>
<th>Sources of income in 4 weeks prior to prison</th>
<th>Women</th>
<th>%</th>
<th>Men</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centrelink</td>
<td>115</td>
<td>79.9</td>
<td>313</td>
<td>54.5</td>
</tr>
<tr>
<td>Paid work</td>
<td>19</td>
<td>13.2</td>
<td>244</td>
<td>42.5</td>
</tr>
<tr>
<td>Family/friends</td>
<td>8</td>
<td>5.6</td>
<td>54</td>
<td>9.4</td>
</tr>
<tr>
<td>Savings</td>
<td>2</td>
<td>1.4</td>
<td>29</td>
<td>5.1</td>
</tr>
<tr>
<td>Illegal activities</td>
<td>13</td>
<td>9.0</td>
<td>23</td>
<td>11.0</td>
</tr>
<tr>
<td>Other</td>
<td>14</td>
<td>9.7</td>
<td>23</td>
<td>4.0</td>
</tr>
</tbody>
</table>

*Percentages do not add to 100% as one person may report several sources of income*

Men were significantly more likely than women to have received money from paid work ($\chi^2(1)=42.618, p<.0001$) and were significantly less likely to have received their income from Centrelink ($\chi^2(1)=30.681, p<.0001$) and other sources ($\chi^2(1)=7.693, p=.006$). Other sources of income (all endorsed by fewer than 5 people) included aged pension, child support, family tax credit, bake sales, begging, superannuation, selling belongings and assets, swapping things, veterans pension, and selling scrap metal.
3.1.11 Current offences

Table 11 shows the offences that the participants were charged with or convicted of.

Table 11. Offence categories\(^1\) of male and female participants

<table>
<thead>
<tr>
<th>Offence category</th>
<th>Women</th>
<th></th>
<th>Men</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Homicide &amp; related offences</td>
<td>2</td>
<td>1.4</td>
<td>7</td>
<td>1.2</td>
</tr>
<tr>
<td>Acts intended to cause injury</td>
<td>30</td>
<td>20.7</td>
<td>136</td>
<td>23.7</td>
</tr>
<tr>
<td>Sexual assault &amp; related offences</td>
<td>0</td>
<td>0</td>
<td>14</td>
<td>2.4</td>
</tr>
<tr>
<td>Dangerous or negligent acts endangering persons</td>
<td>7</td>
<td>4.8</td>
<td>11</td>
<td>1.9</td>
</tr>
<tr>
<td>Abduction, harassment &amp; other offences against the person</td>
<td>2</td>
<td>1.4</td>
<td>22</td>
<td>3.8</td>
</tr>
<tr>
<td>Robbery, extortion &amp; related offences</td>
<td>13</td>
<td>9.0</td>
<td>76</td>
<td>13.2</td>
</tr>
<tr>
<td>Unlawful entry with intent/burglary, break and enter</td>
<td>25</td>
<td>17.2</td>
<td>111</td>
<td>19.3</td>
</tr>
<tr>
<td>Theft &amp; related offences</td>
<td>33</td>
<td>22.8</td>
<td>92</td>
<td>16.0</td>
</tr>
<tr>
<td>Fraud, deception &amp; related offences</td>
<td>12</td>
<td>8.3</td>
<td>25</td>
<td>4.4</td>
</tr>
<tr>
<td>Illicit drug offences</td>
<td>23</td>
<td>15.9</td>
<td>92</td>
<td>16.0</td>
</tr>
<tr>
<td>Prohibited &amp; regulated weapons &amp; explosive offences</td>
<td>4</td>
<td>2.8</td>
<td>31</td>
<td>5.4</td>
</tr>
<tr>
<td>Property damage &amp; environmental pollution</td>
<td>8</td>
<td>5.5</td>
<td>27</td>
<td>4.7</td>
</tr>
<tr>
<td>Public order offences</td>
<td>7</td>
<td>4.8</td>
<td>41</td>
<td>7.1</td>
</tr>
<tr>
<td>Traffic &amp; vehicle regulatory offences</td>
<td>17</td>
<td>11.7</td>
<td>68</td>
<td>11.8</td>
</tr>
<tr>
<td>Offences against government procedures, government security &amp; government operations</td>
<td>41</td>
<td>28.3</td>
<td>156</td>
<td>27.2</td>
</tr>
</tbody>
</table>

\(^1\)Participants may have committed offences across multiple categories, so percentages will not add up to 100.

Women

Aboriginal women were more likely than non-Aboriginal women to be charged with/convicted of acts intended to cause injury (OR=3.4, 95% CI: 1.3–5.2) whereas non-Aboriginal women were more likely to be charged with/convicted of illicit drug
Demographics

offences (OR=6.5, 95% CI: 1.8-22.8). There were no significant difference between Aboriginal and non-Aboriginal women for the other offence types.

Men

Aboriginal men were more likely than non-Aboriginal men to be charged with/convicted of:

- acts intended to cause injury (OR=2.32, 95% CI: 1.55-3.48),
- unlawful entry with intent/burglary, break and enter (OR=2.27, 95% CI: 1.48-3.49), and
- theft and related offences (OR=1.68, 95% CI: 1.05-2.67).

Non-Aboriginal men were more likely to be charged with/convicted of:

- illicit drug offences (OR=8.59, 95% CI: 3.42-21.59),
- fraud and related offences (OR=4.82, 95% CI: 1.12-20.71), and
- prohibited and regulated weapons and explosives offences (OR=2.83, 95% CI: 0.97-8.21).

There were no significant difference between Aboriginal and non-Aboriginal men for the other offence types.
3.1.12 Offending history

Figure 4 shows the proportion of men and women who had previously been imprisoned.

Figure 4. Percentage of participants who have previously been imprisoned by gender and Aboriginal status.

Aboriginal women were more than two times more likely to have previously been imprisoned than non-Aboriginal women (OR=2.8, 95% CI: 1.4-5.5) and Aboriginal men were nearly three times more likely to have previously been imprisoned than non-Aboriginal men (OR=2.96, 95% CI: 1.94-4.51).
3.2 Life experience and stressors

3.2.1 Life stressors in previous 12 months

Participants were asked whether any of a list of life experiences had been a problem for them in the last 12 months (Table 12 and Table 13).

Table 12. Stressors experienced by women in past 12 months.

<table>
<thead>
<tr>
<th>Stressor</th>
<th>Aboriginal women</th>
<th>Non-Aboriginal women</th>
<th>Total women</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Trouble with police*</td>
<td>49</td>
<td>77.7</td>
<td>61</td>
</tr>
<tr>
<td>Drug related problems</td>
<td>37</td>
<td>58.7</td>
<td>45</td>
</tr>
<tr>
<td>Death of a family member or close friend</td>
<td>40</td>
<td>63.5</td>
<td>41</td>
</tr>
<tr>
<td>Witnessing violence</td>
<td>30</td>
<td>47.6</td>
<td>39</td>
</tr>
<tr>
<td>Not able to get a job</td>
<td>34</td>
<td>54.0</td>
<td>30</td>
</tr>
<tr>
<td>Abuse or violent crime</td>
<td>27</td>
<td>42.9</td>
<td>37</td>
</tr>
<tr>
<td>Mental illness</td>
<td>24</td>
<td>38.1</td>
<td>34</td>
</tr>
<tr>
<td>Been abused, raped or beaten up</td>
<td>24</td>
<td>38.1</td>
<td>31</td>
</tr>
<tr>
<td>Sent to/in jail (other than current custodial period)</td>
<td>22</td>
<td>34.9</td>
<td>27</td>
</tr>
<tr>
<td>Really bad illness</td>
<td>17</td>
<td>27.0</td>
<td>20</td>
</tr>
<tr>
<td>Alcohol related problems</td>
<td>27</td>
<td>42.9</td>
<td>10</td>
</tr>
<tr>
<td>Really bad accident</td>
<td>11</td>
<td>17.5</td>
<td>16</td>
</tr>
<tr>
<td>Suicide of a family member or close friend</td>
<td>11</td>
<td>17.5</td>
<td>15</td>
</tr>
<tr>
<td>Divorce or separation</td>
<td>9</td>
<td>14.3</td>
<td>17</td>
</tr>
<tr>
<td>Getting back together with a partner</td>
<td>8</td>
<td>12.7</td>
<td>17</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>9</td>
<td>14.3</td>
<td>10</td>
</tr>
<tr>
<td>Overcrowding at home</td>
<td>11</td>
<td>17.5</td>
<td>7</td>
</tr>
<tr>
<td>Lost job, made redundant, sacked or retired</td>
<td>2</td>
<td>3.2</td>
<td>14</td>
</tr>
<tr>
<td>Really bad disability</td>
<td>5</td>
<td>7.9</td>
<td>10</td>
</tr>
<tr>
<td>Pressure to fulfil cultural responsibilities</td>
<td>11</td>
<td>17.5</td>
<td>4</td>
</tr>
<tr>
<td>New family member</td>
<td>8</td>
<td>12.7</td>
<td>6</td>
</tr>
<tr>
<td>Unwelcome at child’s school</td>
<td>9</td>
<td>14.3</td>
<td>5</td>
</tr>
<tr>
<td>Gambling problems</td>
<td>8</td>
<td>12.7</td>
<td>5</td>
</tr>
<tr>
<td>Getting married</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>At least one life stressor</td>
<td>62</td>
<td>98.4</td>
<td>78</td>
</tr>
</tbody>
</table>

*Other than for current offence
Life experience and stressors

Table 13. Stressors experienced by men in past 12 months.

<table>
<thead>
<tr>
<th>Stressor</th>
<th>Aboriginal men</th>
<th>Non-Aboriginal men</th>
<th>Total men</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Trouble with police*</td>
<td>130</td>
<td>78.8</td>
<td>317</td>
</tr>
<tr>
<td>Drug related problems</td>
<td>91</td>
<td>55.2</td>
<td>176</td>
</tr>
<tr>
<td>Sent to/in jail (other than current custodial period)</td>
<td>70</td>
<td>42.4</td>
<td>153</td>
</tr>
<tr>
<td>Death of a family member or close friend</td>
<td>84</td>
<td>50.9</td>
<td>120</td>
</tr>
<tr>
<td>Alcohol related problems</td>
<td>7</td>
<td>46.7</td>
<td>104</td>
</tr>
<tr>
<td>Not able to get a job</td>
<td>66</td>
<td>40.0</td>
<td>114</td>
</tr>
<tr>
<td>Witnessing violence</td>
<td>53</td>
<td>32.1</td>
<td>116</td>
</tr>
<tr>
<td>Abuse or violent crime</td>
<td>37</td>
<td>22.4</td>
<td>105</td>
</tr>
<tr>
<td>Lost job, made redundant, sacked or retired</td>
<td>17</td>
<td>10.3</td>
<td>95</td>
</tr>
<tr>
<td>Mental illness</td>
<td>20</td>
<td>12.1</td>
<td>87</td>
</tr>
<tr>
<td>Divorce or separation</td>
<td>23</td>
<td>13.9</td>
<td>79</td>
</tr>
<tr>
<td>Really bad illness</td>
<td>27</td>
<td>16.4</td>
<td>61</td>
</tr>
<tr>
<td>Suicide of a family member or close friend</td>
<td>41</td>
<td>24.8</td>
<td>44</td>
</tr>
<tr>
<td>Getting back together with a partner</td>
<td>24</td>
<td>14.5</td>
<td>47</td>
</tr>
<tr>
<td>Really bad accident</td>
<td>18</td>
<td>10.9</td>
<td>51</td>
</tr>
<tr>
<td>Been abused, raped or beaten up</td>
<td>12</td>
<td>7.3</td>
<td>45</td>
</tr>
<tr>
<td>Overcrowding at home</td>
<td>22</td>
<td>13.3</td>
<td>34</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>18</td>
<td>10.9</td>
<td>31</td>
</tr>
<tr>
<td>Gambling problems</td>
<td>21</td>
<td>12.7</td>
<td>22</td>
</tr>
<tr>
<td>Pressure to fulfil cultural responsibilities</td>
<td>20</td>
<td>12.1</td>
<td>22</td>
</tr>
<tr>
<td>New family member</td>
<td>12</td>
<td>7.3</td>
<td>22</td>
</tr>
<tr>
<td>Really bad disability</td>
<td>10</td>
<td>6.1</td>
<td>17</td>
</tr>
<tr>
<td>Unwelcome at child’s school</td>
<td>5</td>
<td>3.0</td>
<td>11</td>
</tr>
<tr>
<td>Getting married</td>
<td>2</td>
<td>1.2</td>
<td>8</td>
</tr>
<tr>
<td>At least one life stressor</td>
<td>160</td>
<td>97.0</td>
<td>392</td>
</tr>
</tbody>
</table>

*Other than for current offence

3.2.2 Removal from natural family

Being taken from your natural family – through Government or welfare intervention – is a sensitive topic, so participants were asked whether they were willing to discuss the topic prior to being asked about this. 94.3% of participants (n=678) agreed to proceed. These included 135 women (60 Aboriginal, 75 non-Aboriginal) and 543 men (162 Aboriginal, 381 non-Aboriginal). 4.8% (n=7) of women and 4.5% (n=26) of men declined to discuss this topic.

3.2.2.1 Removal of self

Women

135 women answered questions on family removal. Figure 5 shows the proportion who reported being removed from their family. There was no statistically significant
difference in the proportion of Aboriginal and non-Aboriginal women who had been removed from their families as children.

Of the 37 women removed, 38.9% (n=14) had been placed with extended family, and 36.1% (n=13) were put into foster care.

**Men**

543 men answered questions on family removal. Figure 5 shows the proportion who were removed from their family. Aboriginal men were more than two times more likely to have been removed from their families than non-Aboriginal men (OR=2.60, 95% CI: 1.65-4.11).

Of the 94 men removed, 36.6% (n=34) had been placed with extended family, and 30.1% (n=28) had been placed in foster care.

**Figure 5. Percentage of participants removed from their natural family.**

![Bar chart showing percentage of participants removed from their natural family by gender.](chart)

### 3.2.2.2 Removal of family members

**Women**

46.9% (n=68) of women had family members removed through Government or welfare intervention. Aboriginal women were more than 7 times more likely to have experienced the removal of family members compared with non-Aboriginal women (OR=7.3, 95% CI: 3.35-15.77). Fisher’s exact test indicated Aboriginal women were significantly more likely than non-Aboriginal women to have had a parent (p=.014) or
aunt/uncle (p=.002) removed. Of the 68 women who had family members removed, more non-Aboriginal women proportionally (47.8%, n=11) reported the removal of their children or grandchildren compared with Aboriginal women (26.7%, n=12), although this was not a significant difference. Figure 6 displays the family members of Aboriginal and non-Aboriginal women who were removed. Percentages are expressed as a percentage of the people who had family members removed.

Figure 6. Members of women’s families removed by Government or welfare intervention.

Men

26.3% (n=151) of men had family members removed through Government or welfare intervention (Aboriginal n=100; non-Aboriginal n=51). Aboriginal men were more than 10 times more likely to have experienced the removal of family members compared with non-Aboriginal men (OR=10.44, 95% CI: 6.77-16.09). Aboriginal men were nine times more likely than non-Aboriginal men to report the removal of a grandparent/great-grandparent (OR=9.00, 95% CI: 2.62-30.97), four times more likely to report the removal of an aunt/uncle (OR=4.00, 95% CI: 1.13-14.17), and more than 3 times more likely to report the removal of a cousin (OR=3.51, 95% CI: 1.14-10.78). No other differences were significant. Figure 7 displays the family members of Aboriginal and non-Aboriginal men who were removed. Percentages are expressed as a percentage of the men who had family members removed.
Figure 7. Members of men’s families removed by Government or welfare intervention.

- Aboriginal (n=100) vs. Non-Aboriginal (n=51)

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Aboriginal</th>
<th>Non-Aboriginal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children/grandchildren</td>
<td>10.0%</td>
<td>21.6%</td>
</tr>
<tr>
<td>Siblings</td>
<td>29.0%</td>
<td>25.5%</td>
</tr>
<tr>
<td>Parents</td>
<td>40.0%</td>
<td>36.0%</td>
</tr>
<tr>
<td>Grandparents</td>
<td>5.9%</td>
<td>9.0%</td>
</tr>
<tr>
<td>Aunties/uncles</td>
<td>20.0%</td>
<td>5.9%</td>
</tr>
<tr>
<td>Cousins</td>
<td>23.0%</td>
<td>7.8%</td>
</tr>
<tr>
<td>Nieces/nephews</td>
<td>8.0%</td>
<td>8.0%</td>
</tr>
<tr>
<td>Other family members</td>
<td>0.0%</td>
<td>2.0%</td>
</tr>
</tbody>
</table>
3.2.3 Experiences of discrimination

Aboriginal participants were asked about their experiences of discrimination over the previous 12 months, both within healthcare and general situations. Overall, 62 (98.4%) Aboriginal women and 161 (97.6%) Aboriginal men answered this section.

3.2.3.1 Healthcare discrimination in the previous 12 months

Figure 8 shows how Aboriginal men and women reported they had been treated when seeking healthcare in the previous 12 months.

Figure 8. Aboriginal women and men’s perceptions of how they were treated when seeking healthcare in the previous 12 months.
3.2.4 General discrimination

33.9% (n=21) of Aboriginal women and 26.7% (n=43) of Aboriginal men considered they had been discriminated against in other (non-healthcare) situations in the previous 12 months.

Emotional impact of discrimination

When asked how they felt when they were discriminated against as a result of being Aboriginal, the majority of the 21 women described feeling angry (81.1%, n=17), followed by sad (47.6%, n=10), sick (33.3%, n=7), and/or ashamed or worried (28.6%, n=6). The majority of the 43 men described feeling angry (74.4%, n=32), followed by sad (37.2%, n=16), another feeling (20.9%, n=9), sick (15.4%, n=8), or ashamed/worried about it (11.6%, n=5).

Response to discrimination

Participants were asked how they responded to being discriminated against in the previous 12 months, and were provided a list of possible responses. Figure 9 displays the different actions taken by the Aboriginal women and men when discriminated against.

Figure 9. Action taken by Aboriginal people after experiencing discrimination.
3.3 Physical health

3.3.1 General health rating
Participants were asked to rate their general health on a scale from poor to excellent. The results are shown below in Figure 10 for men and women.

Figure 10. Participant rating of their general health status.
3.3.2 Illnesses, sicknesses and conditions

Participants were further asked if they had ever been told by a doctor or other health professional that they had any of a list of specific illnesses, sicknesses or conditions. They were asked to identify whether it was a current problem, and/or a previous problem. The median number of health conditions reported by women was 2.0, with a range range of 0-8 (Table 14).

Table 14. Current problematic physical health conditions (women).

<table>
<thead>
<tr>
<th>Condition</th>
<th>Female Aboriginal</th>
<th>Female Non-Aboriginal</th>
<th>Female Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Problem</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Tooth Decay / Bad Teeth</td>
<td>26</td>
<td>41.9</td>
<td>34</td>
</tr>
<tr>
<td>Back Problems</td>
<td>15</td>
<td>24.2</td>
<td>23</td>
</tr>
<tr>
<td>Poor Eyesight</td>
<td>13</td>
<td>21.0</td>
<td>20</td>
</tr>
<tr>
<td>Joint Problems / Arthritis</td>
<td>12</td>
<td>19.4</td>
<td>17</td>
</tr>
<tr>
<td>Asthma</td>
<td>12</td>
<td>19.4</td>
<td>15</td>
</tr>
<tr>
<td>High Blood Pressure</td>
<td>12</td>
<td>19.4</td>
<td>10</td>
</tr>
<tr>
<td>Kidney Problems</td>
<td>7</td>
<td>11.3</td>
<td>12</td>
</tr>
<tr>
<td>Hearing Problems</td>
<td>11</td>
<td>17.7</td>
<td>7</td>
</tr>
<tr>
<td>Other Major Illness / Conditions</td>
<td>4</td>
<td>6.6</td>
<td>13</td>
</tr>
<tr>
<td>Epilepsy or Seizures</td>
<td>2</td>
<td>3.2</td>
<td>9</td>
</tr>
<tr>
<td>Diabetes</td>
<td>5</td>
<td>8.1</td>
<td>2</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>4</td>
<td>6.5</td>
<td>2</td>
</tr>
<tr>
<td>Intellectual Disability</td>
<td>1</td>
<td>1.6</td>
<td>5</td>
</tr>
<tr>
<td>High Cholesterol</td>
<td>3</td>
<td>4.8</td>
<td>2</td>
</tr>
<tr>
<td>Brain Injury / Lead Toxicity</td>
<td>2</td>
<td>3.2</td>
<td>3</td>
</tr>
<tr>
<td>Cancer / Tumour</td>
<td>3</td>
<td>4.8</td>
<td>2</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>HIV</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>One or more health problems</td>
<td>46</td>
<td>73.0</td>
<td>66</td>
</tr>
</tbody>
</table>

*Percentages do not add to 100% as participants could endorse more than one problem.
The median number of health conditions reported by men was 1.0, with a range from 0 to 11 (Table 15).

Table 15. Current problematic physical health conditions (men).

<table>
<thead>
<tr>
<th>Current Problem</th>
<th>Aboriginal</th>
<th>Male</th>
<th>Non-Aboriginal</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tooth Decay / Bad Teeth</td>
<td>44</td>
<td>26.7</td>
<td>128</td>
<td>31.4</td>
<td>172</td>
</tr>
<tr>
<td>Back Problems</td>
<td>25</td>
<td>15.2</td>
<td>74</td>
<td>18.4</td>
<td>99</td>
</tr>
<tr>
<td>Joint Problems/Arthritis</td>
<td>24</td>
<td>14.5</td>
<td>61</td>
<td>15.1</td>
<td>85</td>
</tr>
<tr>
<td>Poor Eyesight</td>
<td>17</td>
<td>10.4</td>
<td>46</td>
<td>11.3</td>
<td>63</td>
</tr>
<tr>
<td>Asthma</td>
<td>19</td>
<td>11.5</td>
<td>28</td>
<td>6.9</td>
<td>47</td>
</tr>
<tr>
<td>High Blood Pressure</td>
<td>10</td>
<td>6.1</td>
<td>29</td>
<td>7.1</td>
<td>39</td>
</tr>
<tr>
<td>Hepatitis C</td>
<td>12</td>
<td>7.3</td>
<td>27</td>
<td>6.7</td>
<td>39</td>
</tr>
<tr>
<td>Hearing Problems</td>
<td>11</td>
<td>6.7</td>
<td>27</td>
<td>6.7</td>
<td>38</td>
</tr>
<tr>
<td>Other Major Illness / Conditions</td>
<td>12</td>
<td>7.3</td>
<td>25</td>
<td>6.1</td>
<td>37</td>
</tr>
<tr>
<td>Intellectual Disability</td>
<td>7</td>
<td>4.3</td>
<td>15</td>
<td>3.7</td>
<td>22</td>
</tr>
<tr>
<td>Brain Injury / Lead Toxicity</td>
<td>4</td>
<td>2.4</td>
<td>10</td>
<td>2.5</td>
<td>14</td>
</tr>
<tr>
<td>Epilepsy or Seizures</td>
<td>3</td>
<td>1.8</td>
<td>10</td>
<td>2.5</td>
<td>13</td>
</tr>
<tr>
<td>Kidney Problems</td>
<td>4</td>
<td>2.4</td>
<td>8</td>
<td>2.0</td>
<td>12</td>
</tr>
<tr>
<td>High Cholesterol</td>
<td>5</td>
<td>3.0</td>
<td>5</td>
<td>1.2</td>
<td>10</td>
</tr>
<tr>
<td>Cancer / Tumour</td>
<td>2</td>
<td>1.2</td>
<td>5</td>
<td>1.2</td>
<td>7</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>1</td>
<td>0.6</td>
<td>5</td>
<td>1.2</td>
<td>6</td>
</tr>
<tr>
<td>Diabetes</td>
<td>2</td>
<td>1.2</td>
<td>3</td>
<td>0.7</td>
<td>5</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>2</td>
<td>1.2</td>
<td>2</td>
<td>0.5</td>
<td>4</td>
</tr>
<tr>
<td>Stroke</td>
<td>2</td>
<td>1.2</td>
<td>2</td>
<td>0.5</td>
<td>4</td>
</tr>
<tr>
<td>HIV</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>One or more health problems</td>
<td>100</td>
<td>60.6</td>
<td>246</td>
<td>60.1</td>
<td>346</td>
</tr>
</tbody>
</table>

*Percentages do not add to 100% as participants could endorse more than one problem.
Figure 11 shows the number of health conditions reported by men and women.

**Figure 11. Number of health conditions reported by men and women.**
### 3.3.3 Head injury / loss of consciousness

**Women**

Figure 12 shows the percentage of women with different types of injury to the head and neck.

**Figure 12. Percentage of Aboriginal and non-Aboriginal women who reported head or neck injuries.**

<table>
<thead>
<tr>
<th>Injury Type</th>
<th>All women</th>
<th>Aboriginal</th>
<th>Non-Aboriginal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treated in hospital</td>
<td>40.7</td>
<td>44.4</td>
<td>37.8</td>
</tr>
<tr>
<td>Injured in vehicle accident</td>
<td>20.7</td>
<td>17.5</td>
<td>23.2</td>
</tr>
<tr>
<td>Injured in fight, assault, accident, etc</td>
<td>47.6</td>
<td>50.8</td>
<td>45.1</td>
</tr>
<tr>
<td>Knocked unconscious</td>
<td>38.6</td>
<td>34.9</td>
<td>41.5</td>
</tr>
</tbody>
</table>

Legend:
- All women
- Aboriginal
- Non-Aboriginal
**Men**

Figure 13 shows the percentage of men who reported different types of head and neck injury.

**Figure 13. Percentage of men who reported different types of head or neck injuries.**
3.3.4 Body Mass Index

Self-reported height-weight data was available from 110 women (n=69 non-Aboriginal, n=41 Aboriginal) and 480 men (n=358 non-Aboriginal, n=122 Aboriginal). There was no difference between Aboriginal and non-Aboriginal men, or between Aboriginal and non-Aboriginal women, in body mass index.

*Gender Differences*

BMI was not significantly different across male and female participants. Body Mass Index classifications by gender and Aboriginal status are represented in Figure 14.

**Figure 14. Self-reported Body Mass Index classifications by gender and Aboriginal status.**
3.4 Social and emotional wellbeing

3.4.1 Psychological distress

Psychological distress was measured using the Kessler-5. Data from the participants who had valid responses across all five questions are presented in figure 15 and 16 as three groups: no distress; ‘low/moderate’ (scores of 6 to 11); and ‘high/very high’ (scores of 12 to 25). This is consistent with scoring procedures presented in the 2004-05 NATSIHS (44).

We had complete data for 688 (135 women and 553 men) participants. Percentages are reported as a percentage of those who responded to this part of the survey.

Women

Figure 15 shows the distress ratings for women. Aboriginal women did not differ from non-Aboriginal women in their mean distress score (mean of 14.48 for Aboriginal women compared with mean 14.81 for non-Aboriginal women).

Figure 15. Level of psychological distress as rated by female participants.
For those participants reporting any distress in the previous 4 weeks (n=129), further questions were asked regarding frequency and impact of this distress.

57.1% (n=76) of women who reported some distress, reported their feelings of distress had occurred more often than usual in the past four weeks, with 35.3% (n=47) reporting the feelings had stayed the same, and 7.5% (n=10) reporting they had decreased in the past four weeks. 38.5% (n=52) women reported that there had been days in the last 4 weeks when they had been totally unable to carry out normal activities because of their distress. 58.1% (n=75) of women attributed their distress to reasons other than physical health problems with the remaining women indicating physical health problems contributed to their distress ‘a little’ through to ‘all’ of the time.

**Men**

Figure 16 shows the distress ratings for the men. Aboriginal men had a significantly higher mean distress score than non-Aboriginal men (mean 12.41 compared with mean 11.85; F5.441; t=-1.186; df= 551; p=0.02).

**Figure 16. Level of psychological distress as rated by male participants.**

For those participants reporting any distress in the previous 4 weeks (n=129), further questions were asked regarding frequency and impact of this distress. 57% (n=282) of men reporting any distress, reported their feelings of distress had occurred more often than usual in the past four weeks, with 34.5% (n=171) reporting the feelings
had stayed the same, and 8.1% (n=40) reporting they had decreased in the past four weeks. 27.3% (n=137) men reported that there had been days in the last 4 weeks when they had been totally unable to carry out normal activities because of their distress. 76.1% (n=372) of men attributed their distress to reasons other than physical health problems.

**Gender differences**

Men were more likely than women to report no distress (OR=2.6; CI 1.1-6.1) or low-moderate distress levels (OR=1.7, 95% CI: 1.13-2.6). Women were more likely than men to report high/very high distress levels (OR=2.16, 95% CI: 1.4-3.2).

**3.4.2 Positive wellbeing**

Positive wellbeing was measured through four questions: ‘how often in the past four weeks: did you feel calm and peaceful; have you been a happy person; did you feel full of life; did you have a lot of energy’. The response options were the same as those asked for the K5 questions.

**Women**

The mean positive wellbeing score for women was 11.96 (SD=4.67). Aboriginal women on average rated their positive wellbeing significantly higher than non-Aboriginal women (M=13.8 compared with 10.6) (t(133.8)=4.339, p=.000); (Figure 17).
Social and emotional wellbeing

Figure 17. Proportion of women who reported positive wellbeing items ‘all or most of the time’ in the previous 4 weeks, stratified by Aboriginal status.

Men

The mean positive wellbeing score for men was 12.86 (SD=4.1). Aboriginal and non-Aboriginal men showed no significant difference in their rating of their positive wellbeing over the previous 4 weeks (Figure 18).

Figure 18. Proportion of men who reported positive wellbeing items ‘all or most of the time’ in the previous 4 weeks, stratified by Aboriginal status.
Gender differences

Male participants rated their overall positive wellbeing significantly higher than female participants ($t(198.0)=2.089, p=.038$).
3.4.3 Anger

Manifestations of anger were measured by four questions asking whether the participant had been bothered or upset in the previous four weeks due to: having violent thoughts like wanting to beat, injure or harm someone; wanting to break or smash things; getting into a lot of arguments; and/or shouting or throwing things. Responses and scoring were ‘not at all’ (1), ‘some’ (2), or ‘a lot’ (3). This resulted in a total score of 4 to 12.

Women

142 women answered the anger section. The mean anger score for women was 6.20 (SD=2.38, Range=4-12). 32.4% (n=46) of women reported no feelings of anger in the previous 4 weeks. There was no difference between the Aboriginal and non-Aboriginal women in their mean anger scores. The figure below shows the proportion of women who reported particular manifestations of anger ‘a lot’ in the previous 4 weeks (Figure 19).

Figure 19. Proportion of women who reported being bothered by manifestations of anger ‘a lot’ in the previous 4 weeks.
**Men**

562 men answered the anger questions. The mean anger score for men was 5.43 (SD=1.96, Range=4-12). 48.2% (n=271) of men reported no feelings of anger in the previous 4 weeks. Mean anger score was significantly higher for Aboriginal men compared with non-Aboriginal men (M=5.74 compared with 5.30) ($t(253.6)=-2.244$, $p=.026$). The figure below shows the proportion of men who reported particular manifestations of anger ‘a lot’ in the previous 4 weeks (Figure 20).

**Figure 20. Proportion of men who reported being bothered by manifestations of anger ‘a lot’ in the previous 4 weeks.**

![Graph showing the proportion of men who reported being bothered by manifestations of anger ‘a lot’](image)

---

**Gender differences**

Female participants reported a significantly higher mean anger score compared with male participants ($t(190.6)=-3.551$, $p=.000$).
3.4.4 Self esteem and social support

Six statements from the self-esteem module used within the WA Aboriginal Child Health Survey, and six statements from the Multi-dimensional Scale of Perceived Social Support were administered to participants.

Women

142 women answered the self-esteem questions. The mean self-esteem score for women was 8.9 (SD=2.9, Range=0-24). 141 women answered the social support questions. The mean social support score was 7.46 (Range=0-12; SD= 7.46).

Aboriginal women had significantly higher perceptions of self-esteem (M=9.6 compared with M=8.5) than non-Aboriginal women (t(128)=-2.26, p=.025) and a trend towards higher perceived social support that did not reach significance (M=8.1 compared with M=6.9.) (Figure 21).
Figure 21. Percentage of women who answered ‘yes’ to statements on self-esteem and social support, stratified by Aboriginal status.

Men

563 men answered the social support and self-esteem questions. The mean self-esteem score for men was 9.8 (SD=2.57, Range=0-12). The mean social support score was 8.37 (SD=3.4, Range 0-12). There was no significant difference between Aboriginal and non-Aboriginal men's ratings of their self-esteem (M=10.0 compared with M=9.7) or social support (M=8.7 compared with M=8.2). Figure 22 displays 'yes' responses by Aboriginal status.
Figure 22. Percentage of Aboriginal and non-Aboriginal men who reported ‘yes’ to statements on self-esteem and social support.

Gender differences

Male participants reported a significantly higher mean score for self-esteem ($t(703)=3.307, p=.001$) and social support compared ($t(702)=2.791, p=.005$) with female participants.
3.5 Mental health

3.5.1 Overview of mental disorders

Participants were assessed using the MINI to diagnose mental disorders using DSM IV criteria. Table 16 provides a summary of the proportion of male and female participants fulfilling diagnostic criteria for the disorders assessed. Specific disorders are discussed in detail below.

<table>
<thead>
<tr>
<th>Current DSM IV mental health diagnosis</th>
<th>Women</th>
<th></th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Major depressive episode</td>
<td>44</td>
<td>31.9</td>
<td>117</td>
</tr>
<tr>
<td>Hypomanic episode</td>
<td>2</td>
<td>1.5</td>
<td>4</td>
</tr>
<tr>
<td>Manic episode</td>
<td>9</td>
<td>6.7</td>
<td>14</td>
</tr>
<tr>
<td>Any current mood disorder</td>
<td>50</td>
<td>36.2</td>
<td>125</td>
</tr>
<tr>
<td>Panic disorder</td>
<td>19</td>
<td>13.9</td>
<td>39</td>
</tr>
<tr>
<td>Agoraphobia</td>
<td>62</td>
<td>45.3</td>
<td>134</td>
</tr>
<tr>
<td>Social phobia</td>
<td>32</td>
<td>23.4</td>
<td>68</td>
</tr>
<tr>
<td>Obsessive-compulsive disorder</td>
<td>29</td>
<td>21.6</td>
<td>53</td>
</tr>
<tr>
<td>Generalised anxiety disorder</td>
<td>10</td>
<td>7.8</td>
<td>35</td>
</tr>
<tr>
<td>Any current anxiety disorder</td>
<td>72</td>
<td>53</td>
<td>178</td>
</tr>
<tr>
<td>PTSD</td>
<td>35</td>
<td>26.1</td>
<td>56</td>
</tr>
<tr>
<td>Eating disorder</td>
<td>5</td>
<td>3.9</td>
<td>2</td>
</tr>
<tr>
<td>Any of the above</td>
<td>86</td>
<td>63</td>
<td>228</td>
</tr>
<tr>
<td>Current psychotic disorder</td>
<td>26</td>
<td>20</td>
<td>84</td>
</tr>
</tbody>
</table>

Table 16. Summary of current DSM-IV psychiatric diagnoses.

The average number of mental disorder diagnoses (excluding substance use disorders) was 2.42 (SD=2.55, Range=0-9) for women, and 1.54 (SD=2.03, Range=0-11) for men. This difference was significant ($t(157.269)=-3.550$, $p=.001$).

Figure 23 shows the proportion of Aboriginal and non-Aboriginal men and women with different types of mental disorder.
Figure 23. Proportion of Aboriginal and non-Aboriginal men and women with particular types of mental disorder.
3.5.2 Major Depressive Episode (MDE)

**Lifetime and Current**

138 women and 561 men answered the major depressive episode section. Figures 24 and 25 display the proportion of male and female, Aboriginal and non-Aboriginal participants who fulfilled criteria for lifetime and current major depressive episode. Aboriginal men and women did not differ significantly in the prevalence of current or lifetime major depressive episode from non-Aboriginal men and women (Figure 24 and Figure 25).

**Figure 24. Current major depressive episode in Aboriginal and non-Aboriginal participants by gender.**

**Figure 25. Lifetime Major Depressive Episode in Aboriginal and non-Aboriginal participants by gender.**

**Gender differences**

Female participants were more than two times more likely than men to meet DSM-IV criteria for lifetime prevalence of MDE (OR=2.40, 95% CI: 1.64-3.50); and nearly two
times more likely than men to meet criteria for current MDE (OR=1.78, 95% CI: 1.18-2.68).

3.5.3 Suicidality

Scoring
The suicidality scale consisted of 11 questions assessing thoughts and behaviours relating to suicide in the previous one month and one question relating to past suicide attempts. Each question had a corresponding number of points allocated to it. Suicidality in the last month was scored as none (0 points), low (1-8 points), moderate (9-16 points), or high (17+ points).

3.5.3.1 Suicidality status
Women
137 women answered the suicidality part of the interview. Aboriginal women were less likely to be rated as moderate suicidality than non-Aboriginal women ($\chi^2(1)=4.465$, $p=.035$). Otherwise there was no different in the proportion rated as no, low or high suicidality (Figure 26).

Figure 26. Suicidality status of female participants in the previous month.
Men

559 men answered the section on suicidality. There was no different in the proportion of Aboriginal men scoring none, low, moderate or high compared with the non-Aboriginal men (Figure 27).

Figure 27. Suicidality status of male participants in the previous one month.

Gender differences

Male participants were nearly three times more likely than women to report no suicidality (OR=2.73, 95% CI: 2.05-3.98). Women were more than two times more likely than men to report low suicidality in the previous month (OR=2.25, 95% CI: 1.50-3.35). There were no significant gender differences for moderate or high suicidality in the previous month.
3.5.3.2 Suicidal behaviours and ideation

Table 17 shows the number of men and women reporting particular suicidal thoughts and behaviours.

Table 17. Percentage of participants reporting suicidal thoughts and behaviours.

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th></th>
<th>Men</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Lifetime suicide attempt</td>
<td>61</td>
<td>44.2%</td>
<td>134</td>
<td>24.0%</td>
</tr>
<tr>
<td>Suicide attempt in previous month</td>
<td>8</td>
<td>5.8%</td>
<td>29</td>
<td>5.2%</td>
</tr>
<tr>
<td>Had taken active steps towards suicide in the last month</td>
<td>12</td>
<td>8.7%</td>
<td>22</td>
<td>3.9%</td>
</tr>
<tr>
<td>Had a suicide plan in last month</td>
<td>7</td>
<td>5.1%</td>
<td>22</td>
<td>3.9%</td>
</tr>
<tr>
<td>Wished they were dead in the last month</td>
<td>40</td>
<td>28.6%</td>
<td>106</td>
<td>19.0%</td>
</tr>
<tr>
<td>Suicidal thoughts in last month</td>
<td>37</td>
<td>26.6%</td>
<td>91</td>
<td>16.3%</td>
</tr>
<tr>
<td>Felt hopeless in last month</td>
<td>53</td>
<td>37.9%</td>
<td>118</td>
<td>21.1%</td>
</tr>
<tr>
<td>Self harmed in the last month without intention to kill themselves</td>
<td>9</td>
<td>6.5%</td>
<td>28</td>
<td>5%</td>
</tr>
</tbody>
</table>
3.5.4 Manic & hypomanic episodes

Women
134 women completed this section of the MINI. Figure 28 shows the lifetime and current prevalence of manic and hypomanic episodes.

Men
550 men completed this section of the MINI. Figure 28 shows the lifetime and current prevalence of manic and hypomanic episodes.

Gender differences
Women were nearly two times more likely than men to report symptoms consistent with a lifetime manic episode (OR=1.66, 95% CI: 1.01-2.73). There were no other significant differences between men and women regarding lifetime or current prevalence of manic and hypomanic episodes, nor were there any significant difference in the proportion of Aboriginal and non-Aboriginal men and women with mania or hypomania.

Figure 28. Current and lifetime prevalence of manic/hypomanic disorders, by gender.
3.5.5 Panic Disorder

137 women and 554 men completed this part of the interview. There was no significant difference between Aboriginal and non-Aboriginal women’s prevalence of panic disorder. There was no significant difference between Aboriginal and non-Aboriginal men’s prevalence of panic disorder (Figure 29 and Figure 30).

*Gender differences*

Female participants were more than two times more likely than male participants to meet criteria for lifetime panic disorder (OR=2.36, 95% CI: 1.46-3.82); and more than two times more likely to meet criteria for current panic disorder (OR=2.13, 95% CI: 1.19-3.81).

**Figure 29. Proportion of people fulfilling criteria for current panic disorder.**

**Figure 30. Proportion of people fulfilling criteria for lifetime panic disorder.**
3.5.6 Agoraphobia

137 women and 554 men answered this section. Figure 31 shows the proportion of participants fulfilling criteria for agoraphobia. There were no significant differences in experiences of agoraphobia by Aboriginal and non-Aboriginal women or men.

*Gender differences*

Female participants were more than two times more likely than male participants to meet criteria for current agoraphobia (OR=2.59, 95% CI: 1.75-3.8).

**Figure 31. Proportion of people with agoraphobia.**
3.5.7 Social Phobia (Social Anxiety Disorder)

Women

137 women answered this section. There was no significant difference in the proportion of Aboriginal and non-Aboriginal women who fulfilled the criteria for social phobia.

Men

553 men answered this section. Figure 54 shows the prevalence of social phobia in men. Aboriginal men were nearly two times more likely than non-Aboriginal men to meet criteria for current social phobia (OR=1.80, 95% CI: 1.06-3.04).

Gender differences

Female participants were more than two times more likely than male participants to meet criteria for current social phobia (OR=2.17, 95% CI: 1.36-3.48) (Figure 32).

Figure 32. Proportion of people with social phobia.
3.5.8 Obsessive-Compulsive Disorder (OCD)

**Women**

135 women completed this section. Non-Aboriginal women were almost 3 times more likely to meet criteria for OCD compared with Aboriginal women (OR=2.6, 95% CI: 1.0-6.7).

**Men**

543 men answered this section. There was no difference in the proportion of Aboriginal and non-Aboriginal men meeting the criteria for a diagnosis of OCD.

**Gender differences**

Female participants were more than two times more likely than male participants to meet criteria for current OCD (OR=2.5, 95% CI: 1.5-4.1).

Figure 33 shows the prevalence of OCD by gender.

**Figure 33. Proportion of people with current OCD.**
3.5.9 Generalised Anxiety Disorder

129 women and 546 men completed this section. There were no significant differences in the proportion of men and women with generalised anxiety disorder. Nor were there any differences in the proportion of Aboriginal men and women with generalised anxiety disorder compared with their non-Aboriginal counterparts (Figure 34).

**Figure 34. Proportion of people with generalised anxiety disorder.**

![Proportion of people with generalised anxiety disorder](image-url)
3.5.10 Post-Traumatic Stress Disorder (PTSD)

**Women**
134 women completed this section. There was no significant difference in the proportion of Aboriginal and non-Aboriginal women meeting the criteria for post-traumatic stress disorder.

**Men**
552 men completed this section. There was no significant difference between the proportion of Aboriginal and non-Aboriginal men meeting criteria for PTSD.

**Gender differences**
Female prisoners were three times more likely to meet DSM-IV criteria for PTSD than male prisoners (OR=3.13, 95% CI: 1.95-5.03) (Figure 35).

**Figure 35. Proportion of people meeting criteria for PTSD.**
3.5.11 Psychotic disorders

The MINI psychosis module asks about a series of psychotic symptoms and then uses an algorithm to make a provisional diagnosis of mood disorder with psychotic features or psychotic disorder. 547 men and 130 women completed this section.

Table 18 shows how many people described symptoms suggesting a provisional DSM IV diagnosis of lifetime or current psychotic disorder or mood disorder with psychotic features.

Table 18. Lifetime and current psychotic disorders on MINI screen.

<table>
<thead>
<tr>
<th>MINI DSM IV screening diagnosis</th>
<th>Men</th>
<th></th>
<th>Women</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Psychotic disorder (lifetime)</td>
<td>105</td>
<td>19</td>
<td>28</td>
<td>21</td>
</tr>
<tr>
<td>Psychotic disorder (current)</td>
<td>63</td>
<td>11</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>Mood disorder with psychotic symptoms (lifetime)</td>
<td>31</td>
<td>6</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Mood disorder with psychotic symptoms (current)</td>
<td>21</td>
<td>4</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Any psychotic disorder above(lifetime)</td>
<td>136</td>
<td>25</td>
<td>41</td>
<td>31</td>
</tr>
<tr>
<td>Any psychotic disorder above (current)</td>
<td>84</td>
<td>15</td>
<td>26</td>
<td>20</td>
</tr>
</tbody>
</table>

Women
There were no differences in the proportion of Aboriginal women with any psychotic disorder compared with non-Aboriginal women (20.8% compared with 19.5%).

Men
There were no differences in the proportion of Aboriginal men with any psychotic disorder compared with non-Aboriginal men (17.9% compared with 14.3%).

Gender differences
There were no significant differences between the proportion of women and men with any lifetime or current psychotic disorders.

3.5.11.1 Lifetime psychotic symptoms

Figure 36 shows the proportion of respondents who reported ever having experienced particular psychotic experiences.

Figure 36. Percentage of participants reporting previous lifetime psychotic experiences
3.5.11.2 **Psychotic symptoms in the previous month**

Figure 37 shows the proportion of respondents reporting particular psychotic symptoms in the last month.

**Figure 37. Psychotic symptoms reported by female and male participants in the previous one month.**
3.5.11.3 Estimated lifetime prevalence of schizophrenia and schizophrenia like disorders

As many people as possible who screened positive for lifetime psychotic disorder or mood disorder with psychotic features on the MINI psychosis module were approached to take part in a second interview by an experienced psychiatrist, using the Diagnostic Interview for Psychosis (DIP). It was not possible to approach everyone due to time and space constraints.

Overall 87 people were approached (49% of those with a lifetime psychotic disorder or mood disorder with psychosis as assessed by the MINI), and 56 were interviewed (32% of those with a lifetime psychotic disorder or mood disorder with psychosis as measured by the MINI). Table 19 shows how many people who screened positive were approached and consented to a DIP interview. Table 19 shows the DIP diagnoses based on interview responses.

Table 19. Participants approached for a DIP interview following a positive psychosis screen.

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approached</td>
<td>60</td>
<td>27</td>
</tr>
<tr>
<td>Refused</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Not available</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Too disturbed</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Interviewed</td>
<td>42</td>
<td>14</td>
</tr>
</tbody>
</table>
Table 20. ICD-10 lifetime diagnoses using the DIP.

<table>
<thead>
<tr>
<th>ICD-10 lifetime diagnosis</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schizophrenia</td>
<td>9</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Schizoaffective disorder depressed type</td>
<td>8</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>Schizoaffective disorder bipolar type</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Other non-organic psychotic disorder</td>
<td>4</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Bipolar affective disorder and hypomania</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Severe depressive disorder with psychotic symptoms</td>
<td>5</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Did not fulfil ICD-10 criteria for a psychotic disorder</td>
<td>10</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>42</td>
<td>14</td>
<td>56</td>
</tr>
</tbody>
</table>

3.5.11.4 *Estimated prevalence of lifetime psychotic disorders in the prison population*

Overall, 9 (64%) women 22 (52%) men who had screened as having a psychotic disorder using the MINI had an ICD-10 DIP diagnosis of schizophrenia, schizoaffective disorder or non-organic psychotic disorder.

Assuming these people were representative of all those who screened as having a psychotic disorder on the MINI, then one can estimate the prevalence of ICD-10 schizophreniform disorders (schizophrenia, schizoaffective disorder and non-organic psychotic disorder) and affective disorder with psychosis from the proportion of people who screened positive on the MINI who then fulfilled ICD-10 criteria using the DIP. These estimated percentages are shown below in Figure 38.

Figure 38. Estimated lifetime prevalence of ICD-10 disorders in reception prisoners.
3.5.12 Eating Disorders

Women
129 women answered this section. Five women (3.9%) met DSM-IV criteria for bulimia nervosa. No other eating disorders were present.

Men
547 men answered this section. Two men (0.4%) met criteria for bulimia nervosa. No other eating disorders were present.

3.5.13 Personality Disorder

The MINI screened for antisocial personality disorder. Participants were asked the PDQ-4+ questions about the borderline personality disorder traits along with clinical significance questions. Figure 39 displays gender differences in antisocial and borderline personality disorders, as assessed above.

3.5.13.1 Antisocial Personality Disorder (ASPD)
546 men and 129 women answered the antisocial personality disorder questions. There was significant difference in the prevalence between men and women and between Aboriginal and non-Aboriginal men and women (Figure 39).
3.5.13.2 Borderline Personality Disorder (BPD)

544 men and 128 women answered the questions about borderline personality disorder. There was no significant difference in the prevalence of borderline personality disorder between the men and the women and between Aboriginal and non-Aboriginal men and women (Figure 39).

Figure 39. Prevalence of personality disorder in female and male prisoners.
3.6 Alcohol and other drugs

3.6.1 Recent and past alcohol and other substance use

549 men and 132 women answered this section.

Women

Table 21 displays past and present substance use reported by female participants.

Table 21. Substance use of female participants, ordered by use in past 12 months.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Ever used</th>
<th>Age first used</th>
<th>Ever injected</th>
<th>Used during past 12 months</th>
<th>Used during past 4 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>Range</td>
</tr>
<tr>
<td>Cigarettes</td>
<td>91.7</td>
<td>121</td>
<td>13.8</td>
<td>3.3</td>
<td>7-38</td>
</tr>
<tr>
<td>Alcohol</td>
<td>96.2</td>
<td>127</td>
<td>14.4</td>
<td>3.8</td>
<td>4-40</td>
</tr>
<tr>
<td>Cannabis</td>
<td>86.4</td>
<td>114</td>
<td>14.6</td>
<td>2.6</td>
<td>8-23</td>
</tr>
<tr>
<td>Meth/Amphetamine</td>
<td>76.5</td>
<td>101</td>
<td>19.8</td>
<td>6.1</td>
<td>8-40</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>28.0</td>
<td>37</td>
<td>20.6</td>
<td>6.7</td>
<td>9-34</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>46.2</td>
<td>61</td>
<td>19.8</td>
<td>6.2</td>
<td>13-43</td>
</tr>
<tr>
<td>Cocaine</td>
<td>43.2</td>
<td>57</td>
<td>21.3</td>
<td>5.3</td>
<td>14-37</td>
</tr>
<tr>
<td>Hallucinogens</td>
<td>35.6</td>
<td>47</td>
<td>18.7</td>
<td>5.3</td>
<td>12-37</td>
</tr>
<tr>
<td>Heroin</td>
<td>34.8</td>
<td>46</td>
<td>20.4</td>
<td>7.1</td>
<td>12-45</td>
</tr>
<tr>
<td>Other Opiates</td>
<td>20.5</td>
<td>27</td>
<td>22.4</td>
<td>6.4</td>
<td>13-33</td>
</tr>
<tr>
<td>Other Drug</td>
<td>6.8</td>
<td>9</td>
<td>21.6</td>
<td>7.9</td>
<td>15-41</td>
</tr>
<tr>
<td>Inhalants</td>
<td>17.4</td>
<td>23</td>
<td>16.4</td>
<td>6.1</td>
<td>12-39</td>
</tr>
</tbody>
</table>
Age at first use
There was no significant difference between Aboriginal and non-Aboriginal women in the age of first use for any substances.

Lifetime substance use
Aboriginal women were more likely than non-Aboriginal women to report having used cannabis before (OR=4.05, 95% CI: 1.1-14.8).

Non-Aboriginal women were more likely to have ever used ecstasy (OR=6.98, 95% CI: 3.1-15.7), hallucinogens (OR=4.75, 95% CI: 2.0-11.0), cocaine (OR=3.03, 95% CI: 1.4-6.4) and amphetamines or methamphetamines (OR=2.5, 95% CI: 1.1-5.7).

There were no other significant differences between Aboriginal status and non-Aboriginal women in lifetime substance use.

Lifetime injecting behaviours
Non-Aboriginal women were more likely than Aboriginal women to report previously injecting ecstasy (OR=5.47, 95% CI: 1.53-19.57). There were no other significant differences between Aboriginal and non-Aboriginal women in injecting drug use.

Substance use in previous 12 months
Aboriginal women were more likely than non-Aboriginal women to report using cannabis in the previous 12 months (OR=2.57, 95% CI: 1.19-5.53). Non-Aboriginal women were more likely than Aboriginal women to report using hallucinogens (OR=4.74, 95% CI: 1.31-17.08), ecstasy (OR=2.94, 95% CI: 1.01-8.49), and heroin in the previous 12 months (OR=7.80, 95% CI:1.73-35.21). There were no other significant differences between Aboriginal and non-Aboriginal women in substance use in the previous 12 months.

Substance use in previous 4 weeks
Aboriginal women were more likely than non-Aboriginal women to report consuming alcohol in the previous four weeks (OR=2.32, 95% CI:1.14-4.72). There were no other significant differences between Aboriginal and non-Aboriginal women in self-reported substance use in the previous 4 weeks.
**Men**

Table 22 displays past and present substance use reported by male participants.

**Table 22. Substance use of male participants, ordered by use in past 12 months.**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Ever used</th>
<th>Age first used</th>
<th>Ever injected</th>
<th>Used during past 12 months</th>
<th>Used during past 4 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>Range</td>
</tr>
<tr>
<td>Cigarettes</td>
<td>94.2</td>
<td>517</td>
<td>14.2</td>
<td>4.0</td>
<td>3-37</td>
</tr>
<tr>
<td>Alcohol</td>
<td>98.0</td>
<td>538</td>
<td>14.3</td>
<td>3.3</td>
<td>2-31</td>
</tr>
<tr>
<td>Cannabis</td>
<td>91.8</td>
<td>504</td>
<td>14.4</td>
<td>3.5</td>
<td>4-40</td>
</tr>
<tr>
<td>Meth/Amphetamine</td>
<td>76.1</td>
<td>418</td>
<td>18.8</td>
<td>5.3</td>
<td>10-46</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>58.7</td>
<td>322</td>
<td>19.5</td>
<td>5.8</td>
<td>8-53</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>28.1</td>
<td>154</td>
<td>19.4</td>
<td>5.5</td>
<td>12-46</td>
</tr>
<tr>
<td>Cocaine</td>
<td>43.9</td>
<td>241</td>
<td>21.9</td>
<td>6.2</td>
<td>12-48</td>
</tr>
<tr>
<td>Hallucinogens</td>
<td>49.4</td>
<td>271</td>
<td>17.7</td>
<td>4.0</td>
<td>8-47</td>
</tr>
<tr>
<td>Other Opiates</td>
<td>23.7</td>
<td>130</td>
<td>20.1</td>
<td>6.7</td>
<td>10-50</td>
</tr>
<tr>
<td>Heroin</td>
<td>30.1</td>
<td>165</td>
<td>20.0</td>
<td>5.8</td>
<td>8-38</td>
</tr>
<tr>
<td>Other Drug</td>
<td>10.6</td>
<td>58</td>
<td>24.4</td>
<td>8.7</td>
<td>9-47</td>
</tr>
<tr>
<td>Inhalants</td>
<td>14.6</td>
<td>80</td>
<td>15.1</td>
<td>4.0</td>
<td>6-30</td>
</tr>
</tbody>
</table>
Age at first use

There were no significant differences between Aboriginal and non-Aboriginal men regarding age of first use for any substances.

Lifetime substance use

Aboriginal men were more likely than non-Aboriginal men to report having used cannabis before (OR=2.30, 95% CI: 1.00-5.27). Non-Aboriginal men were more likely than Aboriginal men to report having ever used hallucinogens (OR=4.80, 95% CI: 3.16-7.31), ecstasy (OR=3.96, 95% CI: 2.68-5.85), cocaine (OR=3.68, 95% CI: 2.42-5.62), benzodiazepines (OR=2.75, 95% CI: 1.70-4.46), heroin (OR=1.57, 95% CI: 1.02-2.40), other opiates (OR=2.19, 95% CI: 1.33-3.59), and other drugs (OR=2.35, 95% CI: 1.12-4.90).

Lifetime injecting behaviours

Non-Aboriginal men were more likely than Aboriginal men to report having injected hallucinogens (OR=3.67, 95% CI: 1.42-9.45), ecstasy (OR=2.70, 95% CI: 1.48-4.92), and benzodiazepines (OR=3.50, 95% CI: 1.04-11.75).

Substance use in previous 12 months

Aboriginal men were more likely than non-Aboriginal men to report having smoked cigarettes in the previous 12 months (OR=1.92, 95% CI: 1.02-3.62). Non-Aboriginal men were more likely than Aboriginal men to report having used hallucinogens (OR=4.10, 95% CI: 1.83-9.17), ecstasy (OR=1.80, 95% CI: 1.11-2.93), cocaine (OR=2.06, 95% CI: 1.14-3.72), benzodiazepines (OR=2.87, 95% CI: 1.58-5.22), and other opiates in the previous 12 months (OR=1.93, 95% CI: 1.00-3.72). There were no other significant differences between Aboriginal and non-Aboriginal men in their substance use in the previous 12 months.

Substance use in previous 4 weeks

Aboriginal men were more likely than non-Aboriginal men to report smoking cigarettes in the previous 4 weeks (OR=1.88, 95% CI: 1.04-3.41). Non-Aboriginal men were more likely than Aboriginal men to report having used benzodiazepines in the previous four weeks (OR=2.54, 95% CI: 1.17-5.50). There were no other significant differences between Aboriginal status and substances used in the previous four weeks.
Gender Differences

Age at first use
Women participants reported significantly younger age than men for first using hallucinogens (M= 6.65 years compared with 8.71 years; t(676)=2.264, p=.024), and ecstasy (M=9.08 years compared with 11.41 years; t(678)=2.262, p=.024). There were no other significant differences between men and women in age of first use for other substances.

Lifetime substance use
Male participants were more likely than female participants to report having ever used hallucinogens (OR=1.76, 95% CI:1.19-2.61), and ecstasy (OR=1.65, 95% CI:1.55-2.42). There were no other significant differences between men and women in terms of lifetime substance use.

Lifetime injecting behaviours
Female participants were more likely than male participants to report having injected amphetamines/methamphetamines (OR=1.60, 95% CI: 1.09-2.37), and cocaine (OR=2.71, 95% CI: 1.71-4.27). There were no other significant differences between men and women in their injecting behaviours.

Substance use in previous 12 months
Male participants were more likely than female participants to report consuming alcohol in the previous 12 months (OR=1.85, 95% CI:1.16-2.94). There were no other significant differences between men and women in terms of substances used in the previous 12 months.

Substance use in previous 4 weeks
Male participants were more likely than female participants to report consuming alcohol (OR=1.79, 95% CI:1.22-2.63), and ecstasy in the previous four weeks (OR=3.00, 95% CI:1.06-8.47). There were no other significant differences between men and women in substances used in the previous four weeks.
3.6.2 Diagnosis of Alcohol and Other Drug Dependence/Abuse Disorders

Participants were assessed using the MINI to determine if they fulfilled DSM-IV diagnostic criteria for a substance use disorder. The proportion of men and women with substance use disorders is shown below in Figure 40 and Figure 41.

Figure 40. Alcohol and substance use disorders of Aboriginal and non-Aboriginal women.

![Figure 40](image)

Figure 41. Alcohol and substance use disorders of Aboriginal and non-Aboriginal men.

![Figure 41](image)
3.6.3 Alcohol

Women
131 women completed the alcohol questions. Aboriginal women were more likely than non-Aboriginal women to meet DSM-IV criteria for alcohol dependence (OR=3.00, 95% CI: 1.35-6.67). There were no significant differences between Aboriginal and non-Aboriginal women with regards to prevalence of alcohol abuse (Figure 40).

Men
549 men answered the questions relating to alcohol dependence and 546 completed those related to alcohol abuse. Aboriginal men were more likely than non-Aboriginal men to meet DSM-IV criteria for alcohol dependence (OR=2.66, 95% CI: 1.81-3.91) (Figure 41).

Gender Differences
Men were more likely than women to meet DSM-IV criteria for alcohol abuse (OR=2.75, 95% CI: 1.35-5.60). There were no significant differences between rates of alcohol dependence across male and female participants.

3.6.4 Other drugs

Women
129 women answered the questions relating to drug dependence, and 125 completed those relating to drug abuse. Aboriginal women were more likely than non-Aboriginal women to meet DSM-IV criteria for drug dependence (OR=2.19, 95% CI: 1.05-4.59). There was no significant difference between Aboriginal and non-Aboriginal women in the prevalence of drug abuse (Figure 40).

Men
547 men completed the questions related to drug dependence, and 542 completed those related to drug abuse. Aboriginal men were more likely than non-Aboriginal men to meet DSM-IV criteria for drug dependence (OR=1.94, 95% CI: 1.33-2.83), whereas non-Aboriginal men were more likely than Aboriginal men to meet DSM-IV criteria for drug abuse (OR=2.02, 95% CI: 1.07-3.80) (Figure 41).
Gender Differences

There were no significant differences in the proportion of men and women who fulfilled diagnostic criteria for illicit drug dependence or abuse.
3.7 Previous service use

3.7.1 Overview of previous service use
Table 23 summarises the self reported psychiatric history of all participants in the study.

Table 23. Summary of self reported psychiatric history of participants.

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th></th>
<th>Men</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Ever sought help for mental health</td>
<td>90</td>
<td>62.1%</td>
<td>279</td>
<td>48.6%</td>
</tr>
<tr>
<td>Ever sought help for drugs and/or alcohol</td>
<td>64</td>
<td>45.1%</td>
<td>287</td>
<td>50.5%</td>
</tr>
<tr>
<td>Ever diagnosed with a mental disorder</td>
<td>93</td>
<td>64.1%</td>
<td>292</td>
<td>50.9%</td>
</tr>
<tr>
<td>On psychiatric medication prior to reception</td>
<td>54</td>
<td>37.2%</td>
<td>92</td>
<td>16.0%</td>
</tr>
<tr>
<td>Ever admitted to inpatient psychiatric unit</td>
<td>44</td>
<td>30.3%</td>
<td>99</td>
<td>17.2%</td>
</tr>
</tbody>
</table>

3.7.2 Previous mental health treatment

Figure 42 summarises the overall mental health history of all participants.

Figure 42. Proportion of Aboriginal and non-Aboriginal women and men who have ever sought help for mental health problems.
Women

Non-Aboriginal women were almost three times more likely to have previously sought mental health treatment compared with Aboriginal women (72% compared with 49.2%). (OR=2.68, 95% CI: 1.33-5.39). Figure 43 indicates when the most recent attendance was for the women who had previously sought mental health treatment, and Figure 44 demonstrates the type of treatment attended.

Men

Non-Aboriginal men were more than two times more likely than Aboriginal men to report previously seeking mental health treatment (55.2% compared with 34.4%) (OR=2.35, 95% CI: 1.61-3.44). Figure 43 indicates when the most recent attendance was for the men who had previously sought mental health treatment, and Figure 44 demonstrates the type of treatment attended.

Figure 43. Time since the last attendance for help with mental health.
Figure 44. Types of mental health professional previously seen by participants.

Gender differences

Women were nearly two times more likely than men to report previously seeing a professional for mental health reasons (OR=1.75, 95% CI: 1.20-2.56).
3.7.3 Previous drug and alcohol treatment

Figure 45 summarises the percentage of women and men who reported having had previous treatment for drug and alcohol problems. Figure 46 shows the type of treatment, and Figure 47 the time since they sought help.

There was no significant difference between Aboriginal and non-Aboriginal men or women in the proportion who had sought help for drug and alcohol problems.

**Figure 45. Proportion of Aboriginal and non-Aboriginal women and men who have ever sought help for alcohol and/or drug problems.**

**Figure 46. Types of previous drug and alcohol treatment sought as a percentage of those who sought treatment.**
Figure 47. Time since last saw a professional about drug and/or alcohol problems.

Gender differences
There was no significant association between gender and previously seeking a professional for drug and/or alcohol problems.
3.7.4 Needing mental health treatment but not attending

Women

59.3% (n=86) of women reported needing to seek treatment for mental health needs in the previous 12 months but not doing so. There was no significant difference in the proportion of Aboriginal and non-Aboriginal women who felt they needed treatment but did not seek it. Figure 48 shows the reasons given for not seeking the treatment they thought they needed, expressed as a percentage of those who reported they needed treatment but had not sought it.

Figure 48. Reasons stated by Aboriginal and non-Aboriginal women as to why they did not attend needed mental health treatment in the previous 12 months.

Men

37.8% (n=217) of men reported needing to seek treatment for mental health needs in the previous 12 months but not doing so. There was no significant difference in the proportion of Aboriginal and non-Aboriginal men who felt they needed treatment but did not seek it (Figure 49).
**Figure 49. Reasons stated by Aboriginal and non-Aboriginal men as to why they did not attend needed mental health treatment in the previous 12 months.**

**Gender differences**

Women were more than two times more likely than men to report not seeking mental health treatment when they needed to (OR=2.44, 95% CI: 1.68-3.55).
3.7.5 Previous mental health diagnoses

Women

Table 24 shows the previous diagnoses reported by Aboriginal and non-Aboriginal women.

Table 24. Previous mental health diagnoses reported by women.

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Aboriginal (n=63)</th>
<th>Non-Aboriginal (n=82)</th>
<th>Total women (N=145)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Any diagnosis</td>
<td>31</td>
<td>50</td>
<td>62</td>
</tr>
<tr>
<td>Depression</td>
<td>25</td>
<td>39.7</td>
<td>54</td>
</tr>
<tr>
<td>Anxiety</td>
<td>19</td>
<td>30.2</td>
<td>41</td>
</tr>
<tr>
<td>Drug dependence</td>
<td>9</td>
<td>14.3</td>
<td>23</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>8</td>
<td>12.7</td>
<td>10</td>
</tr>
<tr>
<td>Alcohol dependence</td>
<td>9</td>
<td>14.3</td>
<td>9</td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>4</td>
<td>6.3</td>
<td>12</td>
</tr>
<tr>
<td>Personality disorder</td>
<td>2</td>
<td>3.2</td>
<td>9</td>
</tr>
<tr>
<td>Post-Traumatic Stress Disorder</td>
<td>5</td>
<td>7.9</td>
<td>5</td>
</tr>
<tr>
<td>Attention Deficit Disorder</td>
<td>0</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Psychosis</td>
<td>2</td>
<td>3.2</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
</tbody>
</table>

*Percentages do not add to 100% as some women reported more than one diagnosis.

Non-Aboriginal women were more than 3 times more likely to report having been diagnosed with a mental disorder than Aboriginal women (OR=3.26, 95% CI: 1.6-6.7).
Previous service use

Men

Table 25 shows the previous diagnoses reported by Aboriginal and non-Aboriginal men.

Table 25. Previous mental health diagnoses reported by men.

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Aboriginal (n=165)</th>
<th>Non-Aboriginal (n=409)</th>
<th>Total (N=574)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any diagnosis</td>
<td>67</td>
<td>225</td>
<td>292</td>
</tr>
<tr>
<td>Depression</td>
<td>36</td>
<td>142</td>
<td>178</td>
</tr>
<tr>
<td>Anxiety</td>
<td>19</td>
<td>107</td>
<td>126</td>
</tr>
<tr>
<td>Attention Deficit Disorder (with or without hyperactivity)</td>
<td>13</td>
<td>84</td>
<td>97</td>
</tr>
<tr>
<td>Drug dependence</td>
<td>21</td>
<td>64</td>
<td>85</td>
</tr>
<tr>
<td>Alcohol dependence</td>
<td>16</td>
<td>30</td>
<td>46</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>13</td>
<td>20</td>
<td>33</td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>5</td>
<td>28</td>
<td>33</td>
</tr>
<tr>
<td>Personality disorder</td>
<td>4</td>
<td>25</td>
<td>29</td>
</tr>
<tr>
<td>Psychosis</td>
<td>3</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td>Post-Traumatic Stress Disorder</td>
<td>0</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

*Percentages do not add to 100% as some men reported more than one diagnosis.

Non-Aboriginal men were nearly two times more likely to have previously received a mental health diagnosis compared with Aboriginal men (OR=1.79, 95% CI: 1.24-2.59).

Gender differences

Women were nearly two times more likely than men to report a previous mental health diagnosis (OR=1.76, 95% CI: 1.20-2.57).
3.7.6 Admission to a psychiatric unit or ward

Women

30.3% (n=44) of women had previously been admitted to a psychiatric unit or hospital ward. Of these 27.3% (n=12) had been admitted within the last year. There was no difference in the proportion of Aboriginal and non-Aboriginal women who had been admitted to a psychiatric unit.

Men

17.2% (n=99) of men had previously been admitted to a psychiatric unit or hospital ward. Of these 37.4% (n=37) had been admitted within the last year. Non-Aboriginal men were two times more likely than Aboriginal men to report a previous psychiatric admission (OR=2.02, 95% CI: 1.17-3.49).

Gender differences

Women were two times more likely than men to report admission as a psychiatric patient (OR=2.12, 95% CI: 1.40-3.22).

3.7.7 Psychiatric medication

Women

54 (37.2%) women reported a current psychiatric medication prescription, regardless of whether they were receiving the medication within the prison. There was no significant association between Aboriginal status and being prescribed psychiatric medication. Pharmacological treatments for substance dependence were also included.

55.8% (n=29) of the 54 women on prescribed medication reported always taking it as prescribed in the four weeks prior to imprisonment. 26.9% (n=14) indicated their use of the medication varied from the prescription, 7.7% (n=4) reported they had stopped taking the medication/it had not been continued in prison, and 9.6% (n=5) reported only receiving the prescription since their term of imprisonment.

Men

93 (16.2%) men reported a current psychiatric medication prescription. Non-Aboriginal men were nearly two times more likely than Aboriginal men to report a current prescription for psychiatric medication (OR=1.84, 95% CI: 1.06-3.18). 61.8% (n=55) of the 93 men on prescribed medication reported always taking it as prescribed in the four weeks prior to imprisonment. 12.4% (n=11) indicated their use of the medication varied from the prescription, 19.1% (n=17) reported they had stopped taking the medication/it had not been continued in prison, and 6.7% (n=6) reported only receiving the prescription since their term of imprisonment.
**Gender differences**

Women were three times more likely than men to report a current psychiatric medication prescription (OR=3.13, 95% CI: 2.09-4.69).

**Type of medication**

Figure 50 depicts the types of medication being prescribed.

**Figure 50. Type of psychiatric medication prescribed to participants.**
3.8 Met and unmet needs – health, social, clinical and functional

Participants were asked if they had a problem in a range of areas in the previous 4 weeks. Their needs were rated as ‘met’, ‘unmet’ or ‘no’ need:

- ‘No need’ indicated the participant had no problem and was not getting help in that specific area.
- ‘Met need’ indicated the participant currently had problems in that area but effective help was being received.
- ‘Unmet need’ indicated that the participant had problems in that area but was either not receiving help, or was not receiving effective help.

Due to the four-week time frame, the needs reported include those prior to imprisonment and during imprisonment. It was not possible to differentiate between the two.

129 women and 543 men answered the CANFOR questions.

3.8.1 Breakdown of needs
Figure 51 shows the most commonly reported needs of men and women. This includes all those who reported having a need in a particular area, whether met or unmet.
Figure 51. Most commonly reported areas of need (met and unmet) of men and women in the previous 4 weeks.

Women

Figure 52 shows the proportion of women who reported met and unmet needs in each area.
Figure 52. Met and unmet needs of women in the previous four weeks.

There were no significant differences between Aboriginal and non-Aboriginal women regarding types of met needs.

Non-Aboriginal women significantly more likely to report unmet needs relating to physical health (OR=2.8, 95% CI: 1.03-7.5) and company/social life (OR=3.0, 95% CI: 1.2-7.7).
Aboriginal women were significantly more likely than non-Aboriginal women to report unmet needs in relation to alcohol needs (OR=3.8, 95% CI: 1.5-9.7) and to information about psychiatric treatment (OR 3.18; 95% CI:1.1-9.3).

Men

Figure 53 shows the proportion of men who reported met and unmet needs in each of the areas. Non-Aboriginal men were significantly more likely than Aboriginal men to report unmet accommodation needs (OR=2.38, 95% CI: 1.6-3.7). Aboriginal men were significantly more likely than non-Aboriginal men to report unmet alcohol needs (OR=2.05, 95% CI: 1.06-3.9). There were no other significant differences between Aboriginal and non-Aboriginal men in reported unmet needs.
Figure 53. Met and unmet needs of men in the previous 4 weeks.
Gender Differences

Female participants were more significantly more likely than men to report met needs relating to:

- receiving information about a psychiatric condition (OR=9.97, 95% CI: 3.70-26.78),
- food (OR=8.67, 95% CI: 1.24-15.24),
- accommodation (OR=4.96, 95% CI: 2.14-11.51),
- company (OR=4.35, 95% CI: 1.24-15.24),
- benefits (OR=4.18, 95% CI: 1.86-9.39),
- education (OR=3.26, 95% CI: 1.11-9.57),
- safety to self (OR=3.31, 95% CI: 1.11-9.57),
- childcare (OR=3.18, 95% CI: 1.25-8.07),
- and treatment (OR=3.18, 95% CI: 1.64-6.02).

Women participants were significantly more likely than men to report unmet needs relating to:

- accommodation (OR=2.6, 95% CI: 1.6-4.1),
- information about a psychiatric condition (OR=2.4, 95% CI: 1.3-4.4),
- psychological distress (OR=2.5, 95% CI: 1.7-3.7),
- treatment (OR=2.7, 95% CI: 1.6-4.4),
- daytime activities (OR=2.3, 95% CI: 1.4-3.6),
- physical health (OR=2.19, 95% CI: 1.32-3.66),
- psychotic symptoms (OR=2.1, 95% CI: 1.2-3.8),
- childcare (OR=1.8, 95% CI: 1.08-3.2),
- and intimate relationships (OR=1.8, 95% CI: 1.1-2.8).
3.8.2 Number of needs

Table 26. Numbers of needs of male and female participants.

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th></th>
<th></th>
<th></th>
<th>Men</th>
<th></th>
<th></th>
<th></th>
<th>Total</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>Range</td>
<td></td>
<td>M</td>
<td>SD</td>
<td>Range</td>
<td></td>
<td></td>
<td>SD</td>
<td>Range</td>
<td></td>
</tr>
<tr>
<td>Unmet Needs</td>
<td>3.58</td>
<td>3.43</td>
<td>0-17</td>
<td></td>
<td>2.46</td>
<td>2.57</td>
<td>0-13</td>
<td></td>
<td>2.69</td>
<td>2.79</td>
<td>0-17</td>
<td></td>
</tr>
<tr>
<td>Met Needs</td>
<td>1.03</td>
<td>1.85</td>
<td>0-11</td>
<td></td>
<td>0.55</td>
<td>0.97</td>
<td>0-6</td>
<td></td>
<td>0.65</td>
<td>1.21</td>
<td>0-11</td>
<td></td>
</tr>
<tr>
<td>Total Needs</td>
<td>4.61</td>
<td>4.09</td>
<td>0-18</td>
<td></td>
<td>3.01</td>
<td>2.84</td>
<td>0-14</td>
<td></td>
<td>3.33</td>
<td>3.19</td>
<td>0-18</td>
<td></td>
</tr>
</tbody>
</table>

Female participants had a significantly higher mean average of total needs (M=4.61, SD=4.09) compared with men (M=3.01, SD=2.84); t(180.515)=-4.463, p=.000 (Table 26).

Aboriginal women did not differ from non-Aboriginal women in the number of total, met or unmet needs.

Aboriginal men did not differ from non-Aboriginal men in their mean number of met, unmet and total needs.
3.8.3 Needs contributing to current imprisonment

Participants who reported a need in a particular area were asked whether that need contributed to their coming to prison.

Below is the number of participants who reported each need as contributing to their coming to prison. For ease of understanding, this has been expressed as a percentage of all those who completed the CANFOR, even though not everyone was asked every question (Figure 54).

**Figure 54. Needs that participants perceived contributed to their imprisonment.**
3.9 Co-occurring mental disorders and substance use disorders

3.9.1 Prevalence of co-occurring disorders

Figure 55 shows the proportion of men and women who had co-occurring mental illness diagnoses (i.e. a current mood disorder, anxiety disorder, PTSD or eating disorder) and a substance use disorder (i.e. substance abuse or dependence and/or alcohol abuse or dependence). There was complete data on all the MINI sections and the alcohol and substance misuse section on 119 women and 536 men. Percentages are expressed as a proportion of these numbers.

Figure 55. Proportion of men and women with co-occurring disorders
3.9.2 Co-occurring disorders and needs

Figure 56 demonstrates the relationship between co-occurring disorders and number of unmet needs and Figure 57 demonstrates the relationship between co-occurring disorders and total needs.

**Unmet Needs**

**Figure 56. The effect of co-occurring mental illness and substance use disorders on unmet needs.**

![Graph showing the relationship between co-occurring disorders and unmet needs for both female and male participants.](image)

**Women**

Co-occurring mental illness and substance use disorders had a significant effect on unmet needs for female participants ($\chi^2(3)=38.9$, p=.000). Pairwise comparisons determined that women with mental illness and a substance use disorder had a significantly greater number of unmet needs than women with mental illness only (p=.000) and women with a substance use disorder only (p=.002). Women with a substance use disorder only also had a greater number of unmet needs than women with no mental illness or substance use disorder (p=.000).
Men
Co-occurring mental illness and substance use disorders had a significant effect on Unmet Needs for male participants ($\chi^2(3)=162.629$, $p=.000$). Pairwise comparisons determined that men with a mental illness and substance use disorder had significantly greater numbers of unmet needs than men with: no mental illness or substance use disorder ($p=.000$); a substance use disorder only ($p=.000$); and a mental illness only ($p=.000$). Men with a substance use disorder only had a significantly greater number of unmet needs than men with no mental illness or substance use disorder ($p=.000$). Men with a mental illness only had significantly greater number of unmet needs than men with no mental illness or substance use disorder ($p=.003$)

Total Needs

Figure 57. The effect of co-occurring mental illness and substance use disorders on total needs.

Women
Co-occurring mental illness and substance use disorders had a significant effect on total needs for female participants ($\chi^2(3)=44.582$, $p=.000$). Pairwise comparisons determined that women with mental illness and substance use disorder had a
Co-occurring mental disorder and substance use disorder

significantly greater number of total needs than women with: no mental illness or substance use disorder (p=.000); mental illness only (p=.000); and substance use disorder only (p=.002).

Men

Co-occurring mental illness and substance use disorders had a significant effect on total needs for male participants ($\chi^2(3)=158.291$, p=.000. Pairwise comparisons determined that men with a mental illness and substance use disorder had significantly greater numbers of total needs than men with: no mental illness or substance use disorder (p=.000); a substance use disorder only (p=.000); and mental illness only (p=.000). Men with a substance use disorder only had a significantly greater number of total needs than men with no mental illness or substance use disorder (p=.000); and men with mental illness only had a significantly greater number of total needs than men with no mental illness or substance use disorder (p=.000).
4 Discussion

This is the first comprehensive survey of mental health in WA reception prisoners using validated diagnostic psychiatric instruments. It has gone beyond replicating studies that show the high prevalence of mental disorder in prisons, and has examined need across health and social domains relevant to mental health. It shows that reception prisoners have high rates of mental disorder, alcohol and other drug problems and a range of complex social and health needs and life stressors, both in the community and in prison.

Reception prisoners have very high rates of co-occurring alcohol and other drugs disorders and mental disorders. Women, although in a minority in the prison system, have even higher rates of mental health problems and needs than male prisoners. Aboriginal prisoners had similar high rates of mental disorder to non-Aboriginal prisoners, but were less likely to have been in contact with mental health services previously. Aboriginal women show some indicators of resilience and have higher self-esteem and perceived social support than their non-Aboriginal counterparts. Aboriginal prisoners report a slightly different profile of social needs than non-Aboriginal prisoners.

4.1.1 Was the sample representative?

We tried to obtain as representative a sample as possible of reception prisoners in WA. We were not able to approach all consecutive reception prisoners, as the number we could approach and the days we could approach them were constrained by availability of interview rooms and prison staffing and security. We were, however, able to recruit a large sample of over 600 men and 145 women. When compared with all male reception prisoners to the four prisons we studied during that time period, our male participants did not differ in age, proportion on remand or the proportion who were Aboriginal. The women who participated in our study were slightly less likely to be on remand and less likely to be Aboriginal than the overall number of female receptions during the study, but were otherwise broadly representative.

We had hoped to study all the regional prisons who receive prisoners in WA. This was not possible due to resource constraints. However, we did manage to recruit large samples from the two main reception prisons who receive the great majority of prisoners and from two regional prisons in very different parts of WA to get as good a cross section as possible.
4.1.2 Are the findings valid?

We used the MINI Neuropsychiatric Interview to capture data on the prevalence of mental disorders, and the CANFOR to measure need. The MINI Neuropsychiatric interview is a well validated instrument that has been used in prison settings (47-49). It was originally designed for use by clinicians, but the authors state it can be used by non-clinician interviewers with extra training. We trained the interviewers in its use, and an experienced clinician checked through questionnaires and spoke to the interviewers where there appeared to be coding issues. We had a further training session after the first few interviews to clarify any issues that had arisen.

In terms of need, the CANFOR can look at the perceived needs from the consumer’s point of view and/or from a carer’s. As prisoners were new into prison, there were no staff or family available to ask about needs, so we asked the prisoners themselves about their perceived needs. The questionnaire asks about problems in the previous four weeks. As prisoners had been in prison on average a week prior to interview, there was some ambiguity about whether the needs reported were in prison or outside. This should not invalidate the results, as the aim was to find out what areas the participants felt they needed help with in order to plan services in prison and the community.

4.1.3 Are the findings consistent with other studies?

We found high rates of mental disorder as diagnosed by the MINI. We found that 63% of women and 40% of men currently fulfilled the criteria for a diagnosis of mood disorder, anxiety disorder, Post Traumatic Stress Disorder and/or eating disorder. If substance use was included as a mental disorder, then 87% of women and 83.7% of men were found to be experiencing a mood disorder, anxiety disorder, PTSD or a substance use disorder.

This is consistent with other prison findings. The NSW survey found that 46% of reception prisoners had psychosis, an anxiety disorder or a mood disorder. When substance use disorders were included, then 90% of female reception prisoners and 78% of male reception prisoners had a psychiatric disorder (i.e. mood disorder, anxiety disorder, psychosis and/or substance use disorder) (17). The New Zealand prison survey found that of the remand male prisoners surveyed, over half (54.1%) had a lifetime diagnosis of psychotic, mood or anxiety disorder. The prevalence increased to 89.7% when substance use was included (18).

We found high rates of suicidal thoughts and behaviours in the previous month, with over a quarter (26.6%) of women and 16.3% of men reporting having had suicidal thoughts in the last month. 5% of men and women reported having attempted suicide in the last month. These finding are comparable to those in the NSW prison survey, where 31.5% of reception female prisoners and 15.3% of male reception prisoners reported suicidal ideation in the previous twelve months, and 5.3% of male reception
prisoners and 9.7% of female reception prisoners had attempted suicide in the past year (17). The New Zealand prison survey found that 20.5% of prisoners had thought of suicide since being in prison, with only 6.9% of prisoners saying they had reported these thoughts to anyone. 2.6% reported having made a suicide attempt in prison (18).

We found high rates of symptoms suggestive of a psychotic disorder using the MINI screening instrument. A quarter of men (25%) and nearly a third of women (31%) reported experiencing psychotic symptoms at some time during their life, and 15% of men and 20% of women had experienced these symptoms within the previous four weeks. Using a diagnostic interview in a subsample of prisoners, the figures suggest that 20% of women and 13% of men had a lifetime diagnosis of a psychotic disorder (i.e. schizophrenia, schizoaffective disorder or organic psychotic disorder). The rates found by the MINI are higher, as they were screening questions administered by non-clinicians, and captured people who may have had psychotic symptoms at any time. The diagnostic interview was more in-depth, using full diagnostic criteria for psychotic disorders, and administered by an experienced forensic psychiatrist.

The survey of Aboriginal and Torres Strait Islander people in Queensland prisons found similar rates of psychosis to our study, with 23% of women and 8% of men having a psychotic disorder (50). The rates of schizophrenia and related disorders is higher than that estimated in Fazel’s meta-analysis of many prison studies which suggested a pooled prevalence of 3.6% in men and 3.9% in women (51). However studies consistently show that rates of mental disorder are higher in remand populations than sentenced populations. The UK ONS survey of prisoners found a rate of psychosis of 10% in male remand prisoners and 14% of female remand prisoners (14); and the NSW survey of prisoners found rates of psychosis of 10% in male remand prisoners and 15% in female remand (17).

The higher rates of psychosis may also be partly explained by local conditions where few people with psychotic illnesses are diverted out of the prison system in WA. This is due to the very low numbers of people found not guilty by reason of mental impairment and admitted to hospital under the Criminal Law Mentally Impaired Accused Act, compared with other States in Australia.

Our study found much higher rates of mania and hypomania than other studies. We found that a quarter of women and 16% of men reported symptoms that fulfilled criteria suggesting they had experienced a manic or a hypomanic episode in their lifetime. 8.2% of women and 3.2% of men reports symptoms fulfilling criteria for a current manic or hypomanic episode. The British prisoner survey (14) found that 1% of men and women had experienced a manic episode in the previous year, and the New Zealand survey (52) found a lifetime prevalence of bipolar affective disorder of 1.2% in women and 2.3% in male remand prisoners.

It is not clear why our results are so different, but it could relate to the very high rates of methamphetamine use in our sample, and the fact that hypomanic symptoms
overlap with symptoms of ADHD and borderline personality disorder that are also common in this population. The questions on the MINI ask people about periods of feeling hyper, or persistently irritable and needing less sleep, having racing thoughts, being easily distracted and wanting to engage in pleasurable activities so they ignored the risks and consequences. Despite the fact that participants were asked to reflect about these symptoms when they were not taking drugs, they and the interviewers may not have been able to disentangle whether such symptoms were due to drugs or to a bipolar illness. The results highlight that, whatever the cause, many people have experienced or are experiencing symptoms and behaviours that can present as part of a serious mental illness.

The high prevalence of alcohol and drug use disorders is consistent with other prison studies. We found that about two thirds of men and women had drug dependence or abuse, and a third of women and half of men fulfilled criteria for alcohol dependence or abuse. These findings are consistent with the NSW and New Zealand survey of prisoners (17, 52).

The prevalence of borderline and antisocial personality disorders were broadly consistent with those found in the New Zealand study. Our study found that a quarter of women (25.6%) and nearly a third of men (30.4%) met DSM IV criteria for antisocial personality disorder, and nearly a quarter of women (23%) and 15.8% of men fulfilled criteria for borderline personality disorder. The New Zealand study found that 35.4% of women and 44.7% of men on remand fulfilled criteria for antisocial personality disorder on self-report and 20.3% of women and 25.7% of men fulfilled the criteria for borderline personality disorder (52).

The prevalence of antisocial personality disorder is much lower than in some previous studies such as the British prison study (14). We used self-report questions to ask about personality disorder, which can be problematic as respondents may wish to portray themselves in a positive light, and not endorse some of the more maladaptive traits. They might not be aware of their impact on others. Also, diagnosing personality disorder involves examining a life story longitudinally to look for enduring tendencies. This is difficult to capture in a self-report questionnaire.

4.1.4 Are the results meaningful for the Aboriginal participants?

The MINI neuropsychiatric interview and the CANFOR have been used in a number of cultures and languages. However, they have not been specifically validated for use with Aboriginal people. Our steering group involved several experienced Aboriginal people to ensure that cultural safety and understanding was embedded in all stages of the project. We were not able to recruit any Aboriginal interviewers, but our interviewers had training about interviewing Aboriginal people yarning-style from a member of our steering group who is a very experienced Aboriginal researcher. A representative number of Aboriginal men agreed to be interviewed, and a reasonable
(but not completely representative number) of Aboriginal women also agreed. We incorporated the social and emotional wellbeing module from the NATSIHS which was especially developed for surveying Aboriginal and Torres Strait Islander people. The results from this module were consistent with the findings on the MINI and the CANFOR. We also had an Aboriginal reference group to whom we could refer if necessary where there was some question about whether an experience described by a participant was part of a mental disorder or culturally appropriate. Our results are consistent with those of Heffernan et al in a survey of mental illness among Aboriginal and Torres Strait Islander people in Queensland prisons (12).

We asked a number of questions from the NATSIHS social and emotional wellbeing module so we could compare our findings with those relating to the social and emotional wellbeing of Indigenous people in the wider community. We found that Aboriginal prisoners reported higher levels of distress, anger and life stressors than Aboriginal people in the community and lower levels of positive wellbeing (Table 27).

Table 27. Figures from NATSIHS survey compared with current study findings for Aboriginal prisoners.

<table>
<thead>
<tr>
<th></th>
<th>Aboriginal women in the general population(44)</th>
<th>Aboriginal female reception prisoners</th>
<th>Aboriginal men in the general population(44)</th>
<th>Aboriginal male reception prisoners</th>
</tr>
</thead>
<tbody>
<tr>
<td>High/very high distress</td>
<td>32.2%</td>
<td>67.2%</td>
<td>21.4%</td>
<td>54.1%</td>
</tr>
<tr>
<td>Feeling calm and peaceful most of the time</td>
<td>53%</td>
<td>45.9%</td>
<td>61%</td>
<td>39.4%</td>
</tr>
<tr>
<td>Wanted to smash and break things a lot</td>
<td>3.4% *</td>
<td>9.8%</td>
<td>3.4% *</td>
<td>11.8%</td>
</tr>
<tr>
<td>At least one life stressor in the last year</td>
<td>76.9%*</td>
<td>96.6%</td>
<td>76.9%*</td>
<td>96.2%</td>
</tr>
</tbody>
</table>

*The NATSIHS survey did not report separately on women and men with life stressors or anger.

4.1.4.1 Comparison to general community

This study confirmed the much higher rates of all mental disorders in the prison population, compared with the wider community. The table below shows how our findings compare with those of the National Survey of Mental Health and Wellbeing 2007 (9, 15) (Table 28).
Table 28. Current study findings about mental health, compared with national figures.

<table>
<thead>
<tr>
<th></th>
<th>Women reception prisoners in WA</th>
<th>Women in general population age 16-85(7, 9)</th>
<th>Male reception prisoners in WA</th>
<th>Men in general population age 16-85(7, 9)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current disorder</td>
<td>12 month prevalence</td>
<td>Current disorder</td>
<td>12 month prevalence</td>
</tr>
<tr>
<td>Anxiety disorders</td>
<td>53%</td>
<td>17.9%</td>
<td>32%</td>
<td>10.8%</td>
</tr>
<tr>
<td>Mood disorders</td>
<td>36.2%</td>
<td>7.1%</td>
<td>22.7%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Substance use disorders</td>
<td>74%</td>
<td>3.3%</td>
<td>77%</td>
<td>7%</td>
</tr>
<tr>
<td>Suicidal ideation in last month</td>
<td>26.6%</td>
<td>2.7%</td>
<td>16.3%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Schizophrenia and related disorders</td>
<td>20%**</td>
<td>0.35*%</td>
<td>13%**</td>
<td>0.54%*</td>
</tr>
</tbody>
</table>

*12 month treated prevalence (7)

** Lifetime prevalence

These are rough comparisons at this stage, as we have not compared the prevalence of mental disorder in this study with that in a community sample of the same gender, age and cultural background. They do highlight the large concentration of people with mental health problems in prison. The differences are consistent with other studies that have compared the rate of mental disorder in prisoners with the rates found in community surveys of people of the same age, gender and educational level. Butler et al (4) in NSW and Brugha et al (53) in the UK found that the rate of psychosis was about ten times higher in prisoners than the community. Butler et al also found that the prevalence of anxiety disorders including PTSD was three times higher in reception prisoners than a community weighted sample, and any affective disorder was five times more prevalent.

Teplin (54) in the US compared the prevalence rates of schizophrenia and major affective disorders in a random stratified sample of remand prisoners with data from the epidemiologic catchment area study. She found that after controlling for age and race, the current prevalence of major depression, schizophrenia and any severe disorder were three times the rate of that of the general population. The Inside Out study of Indigenous men in custody in Queensland found the prevalence of anxiety disorders was twice that of males in the Australian community, depressive disorder three times higher, substance misuse nine times higher, and psychosis 17 times higher (12, 50). For Indigenous women, the rates of anxiety disorder were three
times higher, depression four times higher, substance misuse disorder more than 20 times higher and psychotic disorders 50 times higher than women in the Australian population.

Our findings in relation to substance abuse also confirm very high rates of drug use amongst reception prisoners. The proportion of prisoners, both male and female who have used tobacco, cannabis, amphetamine/methamphetamine and/or any other drugs in the last 12 months is much greater than the use within the general population. The table below compares our figures with those of the National Drug Strategy Household Survey (10). This is a rough comparison as it is compared with the whole population and it is known that more young people use substances. Nonetheless it suggests that a far greater number of prisoners have used substances in the previous 12 months, especially amphetamine and methamphetamine (Table 29).

### Table 29. Comparison of substance use in last 12 months between prisoners in our survey and the National Drug Strategy Household Survey (10).

<table>
<thead>
<tr>
<th>Used in last 12 months</th>
<th>Women in general population(10)</th>
<th>Women reception prisoners</th>
<th>Men in general population(10)</th>
<th>Men reception prisoners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobacco</td>
<td>11.2%</td>
<td>85.6%</td>
<td>14.5%</td>
<td>87.1%</td>
</tr>
<tr>
<td>Cannabis</td>
<td>7.6%</td>
<td>63.6%</td>
<td>12.8%</td>
<td>44.1%</td>
</tr>
<tr>
<td>Amphetamine</td>
<td>1.5%</td>
<td>62.1%</td>
<td>2.7%</td>
<td>60.8%</td>
</tr>
</tbody>
</table>

With relation to physical health, our results are consistent with findings that prisoners have more physical health problems than the general community. More prisoners rated their health as fair or poor than the general population, and fewer rated their health as excellent or very good (55). Their self assessed health status resembled more closely those of the most socioeconomically disadvantaged (fifth quintile) in the general population and those people in the community who have been unemployed for more than one year (55) (Table 30).
Table 30. Comparison of self assessed health status of prisoners and results from the National Health Survey 2007-2008 (55).

<table>
<thead>
<tr>
<th>Self assessed health rating</th>
<th>Excellent/very good</th>
<th>Good</th>
<th>Fair/poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>WA prison study</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female prisoners</td>
<td>20.7%</td>
<td>44.1%</td>
<td>33.8%</td>
</tr>
<tr>
<td>Male prisoners</td>
<td>34.5%</td>
<td>43.9%</td>
<td>21.1%</td>
</tr>
<tr>
<td>ABS National Health Survey 2007-2008(55)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men and women over 15</td>
<td>56%</td>
<td>29%</td>
<td>15%</td>
</tr>
<tr>
<td>Most socioeconomically disadvantaged</td>
<td>46.1%</td>
<td>30.4%</td>
<td>23.5%</td>
</tr>
<tr>
<td>Unemployed for more than 1 year</td>
<td>25.4%</td>
<td>35.7%</td>
<td>38.9%</td>
</tr>
</tbody>
</table>

4.1.5 Service implications

This study confirms the very high levels of complex needs of prisoners in relation to their mental health. Time in custody presents an opportunity for health services to engage with a group who do not otherwise access these services, with potential to improve not only individual health outcomes but those of the families and communities to which they return. It also highlights the need to develop supports and services in the community to break the cycle of coming in and out of prison.

Tackling the problems faced by prisoners, especially those with severe mental health problems and substance misuse, may:

- improve the mental and physical health and wellbeing of the individuals, their children, family and communities which they come from and return to;
- reduce the risk of suicide and other preventable causes of death;
- reduce re-offending; and
- reduce the harm to the individual, their family and community due to alcohol and drug misuse, mental disorder, social problems and crime.

4.1.5.1 High prevalence of mental health problems and co-occurring disorders

Prisoners coming into the system have multiple problems and vulnerabilities with high rates of mental illness, substance misuse, life stressors, trauma and social problems. Only 13% of women and 16.3% of men had neither a mental disorder nor
a substance use disorder. Two thirds of prisoners fulfilled the criteria for a drug use disorder. 52.9% of women and 37.9% of men had a co-occurring mental illness and a substance use disorder. Those with co-occurring mental illness and substance use disorder had significantly more treatment and psychosocial needs than others confirming the complexity of their needs.

The challenge is for services in the community and in prison to address the high prevalence of complex needs of this group and in particular tackle effectively the high rate of co-occurring mental disorders and alcohol and other drug disorders. Neither mental illness nor alcohol and drug use can be treated in isolation in this group, and the challenge is to develop comprehensive treatment programmes tackling both areas. This might help to break the cycle of repeated offending and imprisonment, and has significant resource implications.

4.1.5.2 Anxiety, depression and PTSD
The high prevalence of anxiety disorders, mood disorders and PTSD as well as substance use disorders has major implications for the provision of appropriate primary and specialist mental health care and structured psychological therapies as part of that care. With one quarter of women and one in ten men fulfilling criteria for PTSD, there is a need for trauma specific treatments such as trauma-focused CBT and EMDR.

4.1.5.3 Suicidal thoughts
Prisons receive a very vulnerable group of individuals. The high prevalence of suicidal thoughts in the previous month and of lifetime suicide attempts confirms this. The New Zealand prison survey found that fewer than a third of people with suicidal thoughts told professional prison staff about them. This means it can be difficult for staff to pick up on this. It is also not clear what factors might predict those who will go on to attempt suicide, as the vast majority do not go on to commit suicide. There is a real challenge for services to understand better the relationship between thoughts and actions; respond constructively and supportively; and manage the risk in ways that do not overwhelm prison services or restrict prisoners so much it increases the long term risk.

4.1.5.4 Psychosis
The very high prevalence of schizophrenia and related disorders also has significant resource implications. These are serious disorders that often are associated with ongoing disability. Those with active psychotic symptoms are currently unwell and will need assessment and treatment. Some may need inpatient care and some may need active intensive and assertive multidisciplinary care from a specialist mental health team. They may need a more supportive environment than is available on an ordinary prison unit. Many of those with a lifetime diagnosis of schizophrenia and related disorders who are not currently psychotic still need ongoing psychiatric treatment to stay well.
If 20% of women and 13% of men have a lifetime diagnosis of schizophrenia then using current prison statistics, then there would be approximately 619 men and 95 women with schizophrenia and related psychotic disorders needing ongoing specialist mental health care in WA prisons. The actual numbers may be smaller, as the prevalence in sentenced prisoners is likely to be lower, but nonetheless these represent a large number needing multidisciplinary specialist mental health services both in prison and also during the transition back to the community.

4.1.5.5 Women
Women are in a minority in a system designed for men. Services need to address the specific needs of women including the very high rates of mental disorder and substance misuse; the needs of mothers; the high rates of sexual and physical victimisation; as well as their high rates of reported unmet needs in the areas of psychological distress, accommodation, treatment, daytime activities, physical health, psychotic symptoms and intimate relationships. As there are fewer women in prison than men, there are fewer female establishments, so women are more likely to be placed far from home, making it more challenging to help them maintain their community and family supports.

4.1.5.6 Aboriginal people
The results suggest that Aboriginal people experience similarly high rates of mental disorder to their non-Aboriginal counterparts in prison, but are less likely to have accessed mental health services previously. Prisons provide an opportunity for healthcare for a population who under-use services in the community (11, 12). Aboriginal participants also reported more unmet needs in relation to problems with alcohol and psychiatric treatment. Paying attention to their particular reported areas of unmet need, and drawing on strengths such as self-esteem and social support, would be a starting point for starting a dialogue with the Aboriginal community about how to address these issues in culturally appropriate ways both in prison and in the community.

4.1.5.7 Trauma
We did not ask about childhood and lifetime trauma, but our results showed that even in the previous twelve months, reception prisoners had experienced very high rates of life stressors, including bereavement and other traumatic experiences such as the suicide of a loved one, and being abused, raped and beaten up. These life stressors are significant in causing, shaping, maintaining and understanding many different mental health and substance use problems. This reinforces that, in line with the current emphasis on the recovery model within mental health, effective services need to be trauma-informed.
4.1.5.8 Multi-agency working

Prisoners reported life stressors and unmet needs in a range of areas including housing, work, family, money, daytime activities as well as in clinical physical and mental health areas. This illustrates the fact that no single service or agency can effectively meet their needs alone. The challenge is for different agencies to work in partnership across different disciplines (e.g. GPs, psychiatrists, psychologists, community managed organisations, resettlement officers, custodial staff, mental health nurses), different sectors, and across the prison and community.

Times of transition make prisoners vulnerable, so attention needs to be paid not only to reception into prison but to the time of transition back to the community, when it is known that mortality and morbidity are very high.

4.1.5.9 The way forward

This comprehensive study provides sufficient epidemiological data to begin planning improved forensic mental health and drug and alcohol services in Western Australia. It also contains indicators where further and more in-depth research is needed to help to target specific problems and pilot new interventions.
References

Appendix A - Instruments

The interview collected the following data:

**Demographic, health, psychiatric history and offending history**

Custom questions were developed to record basic demographic, health, psychiatric and offending history details. Where possible the questions aimed to be comparable with data collected by ABS.

**Mental health and substance misuse diagnoses**

*Mini International Neuropsychiatric Interview version 6 (MINI) (40, 41)*

The MINI is a short structured diagnostic interview which assesses the presence of the most common DSM-IV disorders (17 axis I disorders and 1 axis II disorder (antisocial personality disorder) and suicidal ideas and actions. It was developed to meet the need for a short, reliable and valid diagnostic tool. It takes between 15 and 30 minutes to administer. It was developed for use in epidemiology studies and clinical practice. It has been shown to have good validity and reliability when compared to other well established instruments and to expert opinion. It has good inter-rater and test-retest reliability (56). It has been used in a range of countries and in several prison studies (47, 49, 57-59). Its use has been previously piloted in a clinical setting in a regional prison in WA. It can be used by clinicians after a brief training session but lay interviewers require more extensive training (41).

It assesses the following DSM-IV disorders:

- Major Depressive Episode (lifetime and current)
- Suicidality - i.e. suicidal thoughts, feelings and actions (in the last month)
- Mania and hypomania (lifetime and current)
- Panic disorder (current)
- Agoraphobia (current)
- Social phobia (current)
- Obsessive Compulsive Disorder (current)
- Post-Traumatic Stress Disorder (in the last 12 months)
- Alcohol dependence and abuse (current)
- Substance dependence and abuse (current)
- Psychotic disorders (lifetime and current)
- Eating disorders (current)
- Generalised Anxiety Disorder (current)
• Antisocial Personality Disorder (current)

**PDQ-4+ Borderline Personality Disorder questions (PDQ-4+) (42)**

Self reported borderline personality disorder traits were assessed using the borderline PD questions from the Personality Disorder Questionnaire-4+ (PDQ-4+) and the clinical significance scale. The PDQ-4+ is a 99 item self report questionnaire that assesses criteria for the types of personality disorder in DSM-IV. Each question corresponds to a single DSM-IV criterion is scored as pathological if it is answered as true. In addition there is a clinical significance scale which determines whether each self reported disorder that reaches the diagnostic threshold fulfils the general criteria for PD: duration, persistence, functional impairment and distress. Research has found that it has utility as a screening instrument for personality disorders in prison populations (60, 61).

**Alcohol and substance misuse**

In addition to the DSM-IV diagnoses of alcohol dependence and abuse and drug dependence and abuse, we asked about the frequency and amount of misuse of different substances over their lifetime, the last year and the last four weeks. The questions were derived from the Australian Institute of Criminology DUMA project questions (43).

**Social and Emotional Wellbeing**

The following modules were included from the social and emotional wellbeing module of the 2004-2005 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) (44). The social and emotional wellbeing module was designed to capture the holistic and whole of life view of health of Aboriginal and Torres Strait Islander people. It consisted of the following domains:

- **Psychological distress** domain (K-5) - a modified version of the Kessler Psychological Distress Scale-10 (K-10)
- **Impact of psychological distress** domain to detect the impact of psychological or emotional distress on the respondent’s life
- **Positive wellbeing** domain to identify positive emotional states such as happiness and vitality, in order to provide balance with the first two items
- **Anger** domain to capture various manifestations of anger that could be analysed against other dimensions of the module
- **Life stressors** to identify other factors potentially affecting social and emotional wellbeing
• **Discrimination** that was recognised as having an adverse effect on social and emotional wellbeing

• **Cultural identification** to recognise the importance Indigenous people place on a sense of belonging

• **Removal from natural family** to capture significant events that are likely to have impacted on an individual’s social and emotional wellbeing.

We also included the following modules that ABS added to the 2012-2013 NATSIHS social and emotional wellbeing module.

• **Self esteem**- 6 statements taken from the WA Aboriginal Child health Survey (WAACHS) (62).

• **Multi-dimensional scale of perceived social support (MSPSS) (63)** a subset of 6 positive statements relating to perceived support from friends and family.

• **New questions developed for the NATSIHS 2012 about whether they needed to see a counsellor in the last 12 months but did not go and the reason for this.**

Only people identifying themselves as Aboriginal were asked the cultural identification questions and discrimination questions. All participants, Aboriginal and non-Aboriginal were asked all the other questions.

**Met and unmet needs**

**Camberwell Assessment of Need – Forensic Version CANFOR (45)**

The CANFOR short version (34) was used to assess need. It is an individual needs assessment scale designed to identify the needs of people with mental health problems who are in contact with forensic services. It covers 25 domains of need including health, social, clinical and functional needs. We used the short summary version (CANFOR-S) for this study. The CANFOR-S asks about the last month so that if someone we interviewed had an unmet need it was not possible to differentiate whether that need was unmet in the community or prison.

The CANFOR can assess a carer’s rating of need and a consumer’s rating of need. Because reception prisoners are not yet well known to prison staff and were not seen with a carer, only the consumer perception of need was examined.
Psychosis

Inmates who screened positive for lifetime psychosis on the MINI were approached to take part in a second interview with the Principal Investigator (SD), a Consultant Psychiatrist using the Diagnostic Interview for Psychoses (DIP) (46). This is a semi-structured clinical research interview. It was first used in the 1997-1998 Australian survey of psychosis (8) and in the recent National Survey of Psychosis (7). The DIP contains selected interview questions and probes from the WHO Schedules for Clinical Assessment in Neuropsychiatry (64) mapped onto the 90 diagnostic items of the OPCRIT (a suite of computer programs that allow data entry and generate diagnoses according to 12 operational diagnostic systems) (65). The DIP scores are inputted into a computer algorithm which provides a diagnostic classification of the case in accordance with ICD-10 and DSM-IV.