MENTAL ILLNESS AMONG NEW SOUTH WALES PRISONERS

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FOREWORD

Anecdotal evidence from staff working in the New South Wales' correctional system has always suggested a high prevalence of mental illness among the prisoner population. However, hard evidence has been lacking and generated the impetus for the projects described in this document. Planning effective services for mentally ill prisoners is problematic in the absence of accurate information on the extent and the types of disorders.

Institutionalised populations are routinely excluded from community surveys such as the National Survey of Mental Health and Wellbeing, hence the need to survey them separately to provide comparative data and to ensure that key population groups are not forgotten.

Two groups of prisoners are considered in this report: those entering the correctional system either for the first time or as repeat offenders, and those who have been sentenced and may have been detained for some time.

What is clear from this report is that the mental health needs of the prisoner population are considerable compared with those of the general community and that a large unmet need exists. These data provide a solid basis on which to plan appropriately targeted mental health services within the correctional system and ensure that appropriate screening and treatment programmes exist both at the point of reception and for those who are sentenced. Psychiatric problems rarely exist in isolation, however in this group the comorbidities are formidable.

While this survey provides benchmark data on mental illness in NSW prisons, it leaves a number of questions unanswered. Of particular importance is the role of community mental health services in keeping the mentally ill out of gaol and the contribution of mental illness to offending behaviour.

The dedication and determination of key mental health and research staff ensured the success of the projects reported in this document. They should be considered as pilot studies which will hopefully be repeated with adequate resources to expand their scope and minimise the number who could not be screened. It would also be appropriate to consider a national survey to examine differences between the various states and to promote national collaboration on prison mental health.

Dr Richard Matthews
Chief Executive Officer

July 2003.

EXECUTIVE SUMMARY

Anecdotal evidence from staff working in the New South Wales' correctional system has always suggested a high prevalence of mental illness among the prisoner population. This perception, along with the lack of reliable epidemiological data on mental illness prompted Corrections Health to conduct two studies to examine this issue.

Limited information on mental illness among NSW prisoners was collected as part of the 1996 Inmate Health Survey. The main reason for undertaking these two projects was to enhance this information and provide more detail in relation to specific psychiatric disorders among the reception and sentenced prisoner populations. The information arising from these surveys can be used to inform service planning and provision.

Study 1 was a sample of male and female inmates screened on reception to the NSW correctional system over a three-month period. Study 2 screened a sample of sentenced inmates from across the state as part of the 2001 Inmate Health Survey.

The same instrument used in the National Survey of Mental Health and Wellbeing was adopted to enable comparisons with the wider community. This instrument is essentially a modified version of the Composite International Diagnostic Interview (CIDI), which yields twelve-month and one-month ICD-10 and DSM-IV diagnoses.

Key Findings

- The prevalence of mental illness in the NSW correctional system is substantial and consistent with international findings.

- The twelve-month prevalence of 'any psychiatric disorder' (psychosis, anxiety disorder, affective disorder, substance use disorder, personality disorder, or neurasthenia) identified in the NSW inmate population is substantially higher than in the general community (74% *vs.* 22%).

- Almost half of reception (46%) and over one-third (38%) of sentenced inmates had suffered a mental disorder (psychosis, affective disorder, or anxiety disorder) in the previous twelve months.

- Female prisoners have a higher prevalence of psychiatric disorder than male prisoners.

- Psychiatric morbidity was higher among reception prisoners compared with sentenced prisoners.

- There was comparatively little difference between the one-month and twelve-month prevalence estimates of mental disorder.

- Two-thirds of reception prisoners had a twelve-month diagnosis of substance use disorder.

- The high rate of mental disorder among inmates cannot be attributed to substance use disorder alone.

- 40% of reception prisoners had a twelve-month diagnosis of opioid use disorder.
- Almost one in ten inmates reported experiencing symptoms of psychosis in the twelve months prior to interview.
- An estimated 4% to 7% of reception inmates suffer from a functional psychotic mental illness.
- The twelve-month prevalence of psychosis in NSW inmates was thirty times higher than in the Australian community.
- 14% of male receptions and 21% of female receptions had a one-month diagnosis of depression.
- The most common group of mental disorders were anxiety disorders with over one-third of those screened experiencing an anxiety disorder in the previous twelve months.
- Post-traumatic stress disorder (PTSD) was the most common anxiety disorder (24%).
- One in twenty prisoners had attempted suicide in the twelve months prior to interview.
- Females were more likely than males to utilise health services for mental health problems.
- Prisoners with a psychiatric diagnosis had higher levels of disability.

Recommendations

- Current screening procedures for reception prisoners should be reviewed and, if necessary updated to improve diagnostic accuracy at the point of reception.
- There should be a case management approach towards mentally ill inmates with high levels of need. Interventions should be adapted to the psychiatric needs of the prisoner with an evidence-based justification.
- There should be co-ordinated pre-release planning involving external agencies in the community.
- Current treatment and rehabilitation programmes for mentally ill prisoners within the prison system should be reviewed to assess whether or not treatment guidelines are adequate.
- Resources should be made available to conduct a more comprehensive survey of prisoners' mental health covering disorders such as, schizophrenia and attention deficit disorder.
- Drug and alcohol rehabilitation should be integrated into the treatment of mentally ill offenders.

- Residential treatment units should be developed within the correctional setting to house mentally ill prisoners who require a therapeutic environment but not hospitalisation. These units should be staffed by skilled mental health workers and appropriately trained custodial officers.

- Social and psychological programmes, such as cognitive behavioural therapy, should be made available to inmates. Treatment should be multidisciplinary and commensurate with that provided in the community.

- Current transportation practices of inmates with severe mental illness should be reviewed

- Establish a forensic mental health directorate to coordinate the treatment, care and rehabilitation of forensic patients in NSW.

- The NSW Forensic Mental Health Strategy should be adopted by CHS to guide service development and resource allocation.

- Court liaison services in NSW should be expanded to include all magistrate courts to facilitate the diversion into mental health care of those with a mental illness who have been charged with minor crimes.

- The number of secure forensic psychiatric beds in the community should be increased.

- All forensic patients should be transferred out of the criminal justice system and into a community forensic mental health system for care, containment, and rehabilitation.

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INTRODUCTION

Prisoner populations are comprised of some of the most disadvantaged and stigmatised individuals in the community. People from disadvantaged backgrounds, poor educational attainment, histories of unemployment, and indigenous populations are over-represented among prisoner populations in Australia.

International studies have found an over-representation of those with a mental illness in prison.[1-5] A recent meta-analysis of sixty-two prison mental health surveys found that inmates were substantially more likely to have a psychotic illness, major depression, and a personality disorder than the general population.[6]

There are few Australian studies measuring the prevalence of mental illness among prisoners. Those which have been conducted have had comparatively small sample sizes and therefore limited generalisability. All found a high prevalence of mental disorder in correctional communities studies.[5;7;8]

In 1996, a wide-ranging survey conducted by the NSW Corrections Health Service (CHS) found that 50% of females and 33% of males self-reported that they had been diagnosed with a mental illness at some time in the past with significant numbers scoring positive for depression according to the Beck Depression Inventory.[9] Using the Referral Decision Scale which was developed by Teplin (1989) to identify prisoners with sufficient symptomology to require further psychiatric assessment, 56% of females and 30% of males were recommended for referral for major depression, 20% of females and 12% of males required referral for manic-depression, and 33% of females and 18% of males required referral for schizophrenia.[10] While the schizophrenia referral rate is high, it is important to be aware that this instrument was designed to include false-positives rather than false-negatives, thus the prevalence of schizophrenia is likely to be somewhat inflated.

This initial survey shed some light on the unknown demand for mental health services in NSW; however it was subject to the limitations of self-report. A decision was made to undertake a more formal assessment to examine the prevalence of mental illness in the NSW correctional system using a recognised psychiatric diagnostic tool.

Further justification for conducting these assessments is that institutionalised populations such as prisoners are routinely excluded from community surveys such as the National Survey of Mental Health and Wellbeing (NSMHWB) and the National Health Survey.[11;12]

The reception assessment, which is conducted on all new admissions into the correctional system ascertains the specific health needs of the inmate in three key health areas: medical status, drugs and alcohol, and mental health including suicide and self-harm. Notably, it does not involve any formal tool for diagnosing mental illness. Concerns had been expressed that the current

approach to assessment was biased towards identifying psychosis and overlooked conditions such as mood and anxiety disorders.

This report presents the results from two correctional populations: (1) those admitted to the correctional system (receptions); and (2) those already serving a custodial sentence (sentenced) as part of the 2001 Inmate Health Survey.[13]

METHODS

Overview

The initial intention of the reception assessment project was to screen all consecutive prison receptions over a one-month period. However, in the male group this was not feasible for a number of reasons: lack of interview staff to screen all new receptions especially on days with large numbers of new intakes, inmates transferred to other gaols before they could be interviewed, lack of custodial staff to assist with inmate retrieval, 'lock downs'[1], inmates who were too mentally unwell to be screened, and those released to freedom prior to screening. In contrast, the female sample presented fewer logistical challenges given the reduced numbers.

Bearing in mind that prisoners could be released following bail appearances or transferred to other gaols at short notice, it was decided to interview prisoners within twenty-four hours of being received into custody.

It was assumed that new receptions place a higher demand on health resources. It was decided to screen all reception inmates rather than just those on remand. The latter group can be held for considerable time in gaol and were deemed to have more in common with sentenced inmates who were to be screened as part of the 2001 Inmate Health Survey (Study 2).

The NSW Inmate Health Survey is a broad based assessment of the physical and mental health status of the state's prisoner population. It was first conducted in 1996 and was repeated in 2001. The design is a cross-sectional, random sample of inmates, stratified by sex, age and Aboriginality. The sample represents approximately 11% of male and 40% of female prisoners.[9] The 1996 survey did not utilise a formal psychiatric screening instrument but relied on self-reported histories of mental illness. It was decided that the 2001 undertaking should incorporate the same approach to mental health assessment as used in Study 1.

Study 1 (Reception Prisoners)

The main reception site used in Study 1 was the Metropolitan Remand and Reception Centre (MRRC) in western Sydney. Over three-quarters of the state's reception prisoners are processed at the MRRC. A number of remote reception sites (Bathurst, Cessnock and Goulburn) also process reception prisoners and were included in Study 1 (Table 1). Almost all female reception prisoners are processed at Mulawa Correctional Centre which is located on the same complex as the MRRC in Sydney.

Each day, the team leader contacted the duty officer from the Department of Corrective Services and obtained a list of receptions processed on the

[1] 'Lock downs' are periods of time when inmates are locked in their cells and access is limited to emergency needs only.

previous night. At the main reception site, prisoners can arrive between 4pm and midnight with the number of new admissions varying between 0 and 50 on any one day. The assessors would systematically work through the list of reception prisoners. This was a particularly difficult task at the MRRC as inmates are held in a series of 'pods' across the complex and therefore required the assistance of custodial officers to escort subjects to the study area for the interview.

Once located, the inmates were given an explanation of the project and invited to participate. Those agreeing to participate were interviewed in a private office by a team member using the screening instruments described above.

The sample of reception prisoners therefore represents a consecutive convenience sample of inmates over a three month period. This approach is not ideal but was the only practicable approach available. A process of randomisation would have been impractical.

Study 2 (Sentenced Prisoners)

In contrast to Study 1, Study 2 screened inmates from all NSW gaols as part of the 2001 Inmate Health Survey.[13] The Metropolitan Reception and Remand Centre (MRRC) was not included in Study 2 as it had been the main centre used in Study 1.

The study sample is designed to be representative of the sentenced prisoner population and to provide prevalence estimates across a wide range of health conditions.[9] Details of the methodology are described elsewhere.[13]

Following the completion of the Inmate Health Survey, a list of participants was forwarded to the project manager who organised for the mental health assessment to be administered to all available inmates within two to three weeks. Inmates were remunerated $5 for participating in the survey as many had to miss work and would have forfeited pay.

Interviewers

Study 1 used CHS mental health nurses to screen inmates. All interviewers received training in the use of the screening instruments from senior CHS mental health staff. Interviewers in Study 2 included both CHS nurses and forensic psychology master's degree students. Security awareness training was provided for those not currently working within the correctional system. Furthermore, students were also paired with an experienced team leader who was able to resolve any issues should they arise in the course of the interview.

Screening Instruments

The Composite International Diagnostic Interview (CIDI)

Making diagnostic comparisons with epidemiological studies conducted in the general community, other correctional communities, both nationally and internationally, was a priority. The recent National Survey of Mental Health and Wellbeing (NSMHWB) and the study of psychiatric morbidity in New Zealand prisons had both used the Composite International Diagnostic Interview (CIDI).[12;14]

Following discussions with the developers of the NSMHWB, it was decided to utilise this instrument. This is essentially a modified version of the CIDI-A, which yields both DSM-IV and ICD-10 diagnoses.[12;15-17] This instrument also incorporates several measures of disability (SF-12, BDQ), personality disorder (the International Personality Disorder Examination - IPDE), general psychiatric morbidity (GHQ-12), and psychological distress (K10). Psychosis was diagnosed using a short screener, incorporated into the program. The CIDI is relatively inaccurate in diagnosing particular types of psychotic illness. For the purpose of this report the psychosis screener data is to be regarded as 'any psychosis'.

The psychosis screener is sensitive to the presence of psychotic symptoms due to any cause, but does not differentiate between the different types of psychotic disorders (drug induced psychosis, brief episodic psychosis, and functional psychotic illness). Thus it was not possible to determine the prevalence of functional psychotic mental illness (schizophrenia, schizophreniform psychosis, schizoaffective disorder, delusional and affective psychosis), using the psychosis screener alone. To address this, two clinicians assessed a sub-group of reception inmates who were psychosis screener positive or psychotic according to clinical impression. They applied the *Longitudinal history, Expert [interview by a psychiatrist], All available Data* (LEAD) protocol. This assessment includes a clinical interview, a review of all documentation and longitudinal history. Those with a 'definite', 'possible' diagnosis or 'no diagnosis' of a functional psychotic mental illness were identified using this protocol.

The BDQ was scored according to the Medical Outcomes Study (MOS) as the individual items used to generate the score were regarded as more relevant to the prisoner population.

The advantages of using the NSMHWB instrument are threefold: (1) it enables direct comparisons to be made with both national and international community samples, and (2) it generates both ICD-10 and DSM-IV diagnoses, and (3) it is computer-based and can be administered by a layperson following training.

The 144-item version of Cloninger's Temperament Character Inventory (TCI) was also administered as a measure of personality.[18] This is a dimensional measure which attempts to overcome the limitations of categorical measures of personality disorder. Categorical measures produce multiple diagnoses with

overlapping traits and have limited clinical utility when considering the types of interventions to implement. Dimensional measures of personality are clinically more helpful in that they better describe the nature of the traits that are present in the population and thus better inform treatment needs. The TCI data are not presented in this report.

Data Analysis

Data from the CIDI were imported into SPSS 11 using a program written by staff at the Clinical Research Unit for Affective Disorders, St Vincent's Hospital, Sydney.[19] This program imports the raw data from the automated interview into SPSS and runs a scoring algorithm, which generates the ICD-10 and DSM-IV diagnoses.

Some of the demographic questions administered to the community sample were inappropriate for a prisoner population and phrased in such a way that they could not be used in the analysis. For example, the community group were interviewed in their homes and questions regarding accommodation pertained to the house in which the assessment took place eg. was it being rented or mortgaged? Similarly, the employment questions asked about job seeking in the recent past - it is unlikely that someone facing a prison sentence would be actively seeking work.

For the purposes of this report, demographic data (age, education status, country of birth and source of income) were combined across the reception and sentenced groups. Tables presenting the demographic data use the twelve-month ICD-10 diagnoses.

For the purpose of this report, 'any psychiatric disorder' refers to any psychosis, anxiety disorder, affective disorder, substance use disorder, personality disorder or neurasthenia diagnosed by the CIDI.

Summary statistics presented in this report were calculated in SPSS 11.

RESULTS

Between March and June of 2001, 953 inmates (777 males and 176 females) were screened at four of the five male reception centres and the one female reception centre in NSW. Across male reception centres, over 30% of all reception inmates were screened during the period, and 56% of females.

Table 1: Number and proportion of inmates screened at reception sites in Study 1.

Reception site	Eligible reception inmates	Number screened	% Screened
Site 1 (MRRC)	2310	676	29.3
Site 2 (Bathurst)	146	44	30.1
Site 3 (Cessnock)	67	22	32.8
Site 4 (Goulburn)	86	35	40.7
Female site (Mulawa)	312	176	56.4
Total	**2921**	**953**	

To determine whether the inmates who were screened were broadly representative of prison admissions during the assessment period, comparisons were made between both reception and sentenced inmates across a range of characteristics (Table 2).

In the reception group, the only significant differences between the screened and non-screened groups were among men in terms of a slightly lower proportion of indigenous inmates (11.5% *vs.* 15.1%), and those had been referred to the mental health team (13.0% *vs.* 17.3%). There were no significant differences between the screened and non-screened female reception prisoners.

For the sentenced group, the profile of those screened and those not screened was similar in terms of age, Aboriginality, proportion committing a violent offence, and self-reported history of a previous psychiatric illness for both males and females. For males, however, the median sentence length was longer in the screened group. A likely explanation for this is probably the release of those with short sentences before they could be interviewed. The 2001 Inmate Health Survey is designed to be representative of the NSW prison population.

Based on these data, the sample of reception prisoners is broadly representative of inmates received into the NSW correctional system. Those referred for mental health assessment biased our results in favour of a lower rate of mental illness.

We evaluated the prevalence of all psychiatric disorders present in both the one month and one year prior to assessment. Those with a positive diagnosis in the last month can be regarded as unwell at the time of the assessment and reflects the immediate burden of illness on the service. The prevalence of mental illness in the year prior would be more relevant to those sentenced and reflects the burden of illness over time.

Table 2: Comparison of screened and non-screened inmates for selected characteristics in Study 1 (reception) and Study 2 (sentenced).

	Characteristic	Screened	Non-screened	p-value	
Male	Number	777	1832		Study 1 (Reception)
	Mean age (years)	29.61	29.82	0.57	
	Aboriginality (%)	11.5	15.1	0.02	
	Referrals for detoxification (%)	40.1	43.2	0.19	
	Mental health referrals* (%)	13.0	17.3	0.014	
Female	Number	176	136		
	Mean age (years)	29.10	29.46	0.7	
	Aboriginality (%)	29.0	21.9	0.21	
	Referrals for detoxification (%)	43.2	37.9	0.44	
	Mental health referrals* (%)	16.6	21.6	0.36	
Male	Number	469	279		Study 2 (Sentenced)
	Mean age (years)	33.8	32.2	0.07	
	Aboriginality (%)	30.1%	30.1%	0.94	
	Median sentence length	2.15	1.49	0.001	
	Violent offence (%)	52.6	48.2	0.36	
	Previous psychiatric treatment	41.4%	39.6%	0.69	
Female	Number	110	58		
	Mean age (years)	32.7	33.9	0.42	
	Aboriginality (%)	16.4%	19.0%	0.83	
	Median sentence length	1.5	0.91	0.18	
	Violent offence (%)	35.6%	30.3%	0.81	
	Previous psychiatric treatment	53.3%	54.3%	0.96	

* Mental health referral data available for MRRC only

Overall Prevalence Estimates

Table 3 shows the twelve-month and one-month prevalence of mental illness for male and female, reception and sentenced prisoners.

Table 3: Twelve-month and one-month ICD-10 prevalence estimates of major disorders among male and female prisoners, New South Wales (Australia).

	RECEPTION								SENTENCED							
	MALE (N=756)				FEMALE (N=165)				MALE (N=458)				FEMALE (N=108)			
	12 Month		1 Month		12 Month		1 Month		12 Month		1 Month		12 Month		1 Month	
ICD-10 Diagnosis	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Psychosis	81	10.7	-	-	25	15.2	-	-	19	4.2	-	-	6	5.7	-	-
Affective Disorders																
Depression[1]	121	16.0	102	13.5	39	23.6	34	20.6	43	9.5	23	5.1	15	14.4	8	7.7
Dysthymia	54	7.2	46	6.1	16	9.7	15	9.1	17	3.8	15	3.4	6	5.8	4	3.8
Manic episode[2]	21	2.8	10	1.3	13	7.9	9	5.5	6	1.3	0	0.0	2	1.9	2	1.9
Any Affective Disorder	**158**	**21.1**	**128**	**17.1**	**56**	**33.9**	**50**	**30.3**	**55**	**12.4**	**31**	**7.0**	**21**	**20.4**	**12**	**11.8**
Anxiety Disorders																
Post traumatic stress disorder	164	21.7	128	16.9	72	43.6	62	37.6	73	16.2	43	9.5	46	43.8	30	28.6
Generalised anxiety disorder	101	13.4	94	12.4	37	22.4	33	20.0	56	12.4	40	8.8	16	15.2	13	12.4
Panic disorder	55	7.3	35	4.6	28	17.0	14	8.5	31	6.9	12	2.7	17	16.2	5	4.8
Agoraphobia	23	3.0	22	2.9	5	3.0	4	2.4	9	2.0	6	1.3	6	5.7	4	3.8
Obsessive compulsive disorder	20	2.7	17	2.3	4	2.4	3	1.8	7	1.6	6	1.4	2	2	1	1.0
Social phobia	11	1.5	8	1.1	1	0.6	1	0.6	4	0.9	4	0.9	1	1.0	1	1.0
Any Anxiety Disorder	**250**	**33.9**	**206**	**28.0**	**92**	**55.8**	**78**	**47.3**	**126**	**28.4**	**80**	**18.1**	**56**	**54.4**	**39**	**37.9**
Any Mental Disorder (above)	**314**	**42.0**	**273**	**36.5**	**102**	**61.8**	**89**	**53.9**	**147**	**33.0**	**97.0**	**21.8**	**61**	**59.2**	**45**	**43.7**
Substance Use Disorders																
Alcohol dependence	142	19.2	59	8.0	27	16.5	10	6.1	50	11.3	3.0	0.7	5	4.9	0	0.0
Alcohol abuse	24	3.3	17	2.3	3	1.8	2	1.2	10	2.3	0	0.0	3	2.9	1	1.0
Cannabis dependence	136	18.7	108	14.9	37	23.0	28	17.4	54	12.4	7	1.6	17	16.8	2	2.0
Cannabis abuse	18	2.5	13	1.8	4	2.5	3	1.9	5	1.1	1	0.2	1	1.0	0	0.0
Opioid dependence	251	34.5	189	26.0	86	53.4	60	37.3	64	14.6	7	1.6	38	37.6	2	2.0
Opioid abuse	13	1.8	6	0.8	1	0.6	0	0.0	2	0.5	0	0.0	1	1.0	0	0.0
Sedative dependence	83	11.4	72	9.9	46	28.6	28	17.4	25	5.7	2	0.5	23	22.8	3	3.0
Sedative abuse	2	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	1.0	0	0.0
Stimulant dependence	202	27.8	166	22.8	77	47.8	55	34.2	47	10.8	3	0.7	29	28.7	0	0.0
Stimulant abuse	21	2.9	7	1.0	4	2.5	3	1.9	4	0.9	0	0.0	1	1.0	0	0.0
Any Substance Use Disorder	**466**	**63.7**	**339**	**46.6**	**120**	**74.5**	**92**	**57.1**	**147**	**33.6**	**15**	**3.4**	**58**	**57.4**	**6**	**5.9**
Personality Disorders																
Impulsive	162	21.4	-	-	52	31.5	-	-	86	19.0	-	-	14	13.3	-	-
Paranoid	150	19.8	-	-	46	27.9	-	-	68	15.0	-	-	16	15.2	-	-
Borderline	149	19.7	-	-	51	30.9	-	-	60	13.3	-	-	14	13.3	-	-
Anxious	144	19.0	-	-	38	23.0	-	-	52	11.5	-	-	19	18.1	-	-
Schizoid	123	16.3	-	-	37	22.4	-	-	47	10.4	-	-	16	15.2	-	-
Anankastic	110	14.6	-	-	31	18.8	-	-	11.1	11.1	-	-	17	16.2	-	-
Dependent	83	11.0	-	-	35	21.2	-	-	22	4.9	-	-	9	8.6	-	-
Histrionic	50	6.6	-	-	19	11.5	-	-	14	3.1	-	-	3	2.9	-	-
Dissocial	19	2.5	-	-	4	2.4	-	-	12	2.7	-	-	3	2.9	-	-
Any Personality Disorder	**303**	**40.1**	-	-	**94**	**57.0**	-	-	**166**	**36.7**	-	-	**40**	**38.1**	-	-
Neurasthenia	27	3.6	24	3.2	17	10.3	13	7.9	7	1.5	5	1.1	8	7.6	7	6.7
Any Psychiatric Disorder	**583**	**78.2**	**496**	**66.7**	**146**	**90.1**	**137**	**84.6**	**272**	**61.0**	**172**	**38.7**	**81**	**78.6**	**56**	**54.9**

[1] Includes mild, moderate and severe depression.

[2] Includes Mania, hypomania, and bipolar affective disorder.

Any Psychiatric Disorder[1]

Overall, the majority of male and female reception prisoners were found to have had a psychiatric disorder in the twelve months prior to interview (78% *vs.* 90%).

The twelve-month prevalence of 'any psychiatric disorder' was higher among females than males in both the reception and sentenced groups (86% *vs.* 72%) and higher among reception prisoners compared with those currently serving a sentence (80% *vs.* 64%).

Age
In both males and females, the prevalence of 'any psychiatric disorder' declined with age. The highest prevalence of 'any psychiatric disorder' was in females under 25 years old and was lowest was for men over 40 years of age (Figure 1).

Marital Status
For males, the prevalence of 'any psychiatric disorder' was similar across all categories of marital status. In females, the prevalence of 'any psychiatric disorder' was highest amongst the married/defacto group (Table 4).

Country of Birth
The prevalence of 'any psychiatric disorder' was highest in men and women born in Australia.

Source of Income
The prevalence of 'any psychiatric disorder' was lowest in males reporting other sources of income compared with females in which it was highest.

Highest qualification
Overall, females with post-school qualifications had the highest levels of 'any psychiatric disorder' and for males the lowest prevalence was among those with a secondary school qualification.

[1] Note: this refers to any psychosis, anxiety disorder, affective disorder, substance use disorder, personality disorder or neurasthenia.

Figure 1: Prevalence of 'Any Psychiatric Disorder' (% positive) by age and sex (twelve-month diagnosis).

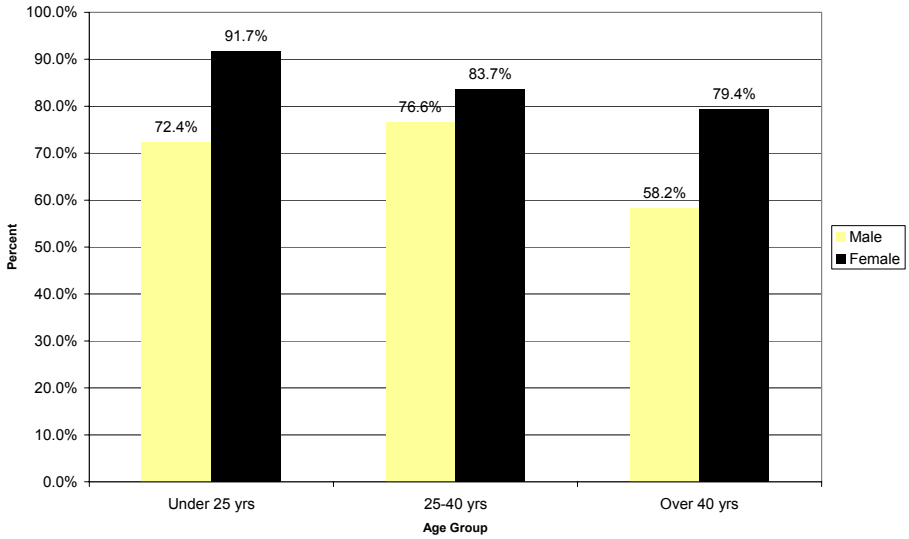


Table 4: Prevalence (%) of 'any psychiatric disorder' among male and female prisoners by marital status, country of birth, income, and highest qualification (twelve-month diagnosis).

Demographic Characteristic	**Male**	**Female**
Marital Status	**%**	**%**
Married/ defacto	70.6	90.0
Divorced / separated/ widowed	73.5	85.5
Never married	71.8	81.3
Country of Birth		
Australia	74.4	87.7
Other English speaking country	66.7	81.8
Other country	66.4	77.8
Source of Income		
Wage or salary	62.6	81.5
Pension or benefit	80.2	88.2
Other source of income	50.8	92.3
Highest qualification		
No qualification	72.3	84.7
Secondary school qualification	50.0	80.0
Post-school qualification	71.5	87.3

Comment

These data support the view that inmates in NSW are an extremely psychologically disturbed group. The overall burden of mental illness that these findings suggest for both the Corrections Health Service and the Department of Corrective Services is staggering.

Any Mental Disorder (psychosis, anxiety or affective disorder)[1]

Almost half (46%) of the receptions and 38% of the sentenced group had at least one mental disorder in the year prior to interview. Anxiety disorder was the most common complaint in both the reception and sentenced groups (38% and 33%). Affective disorder was the second most common mental disorder (23% among receptions and 14% among sentenced). Psychosis prevalence among reception and sentenced prisoners was 12% and 5% respectively.

Demographic Correlates of Any Mental Disorder

Age

The prevalence of any mental disorder was higher for women than men across all age groups. For women, the rate slightly increased after the age of 40 but decreased for men over 40 years (Figure 2).

Marital Status

The prevalence of any mental disorder was similar across all categories in males. In women, the prevalence of mental disorder was highest in those who were divorced/separated/widowed (Table 5).

Country of Birth

The lowest prevalence of any mental disorder in both males and females was found in those born in non-English speaking countries.

Source of Income

In males, the lowest prevalence of any mental disorder was found among those with other sources of income whereas the opposite was true for females. Approximately two-thirds of women with other income sources had an anxiety disorder, affective disorder or psychosis.

Highest qualification

The prevalence of any mental disorder was similar across educational groups in females whereas for males it was lowest among those with secondary school qualifications.

[1] Note: 'any mental disorder' refers to any of the following: psychosis, anxiety disorder or affective disorder.

Figure 2: Prevalence of any mental disorder (anxiety disorder, affective disorder or psychosis) (% positive) by age and sex (twelve-month diagnosis).

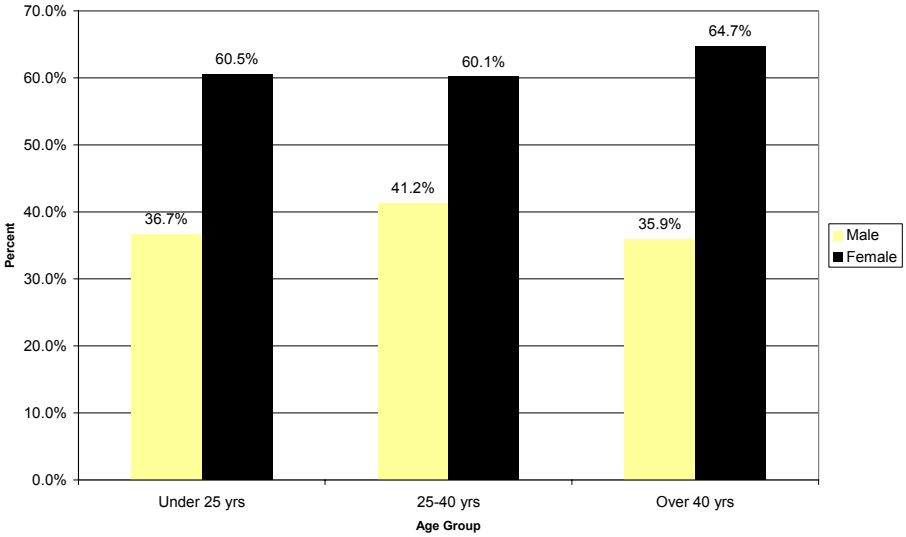


Table 5: Prevalence (%) of any psychosis, anxiety or affective disorders among male and female prisoners by marital status, country of birth, income, and highest qualification (twelve-month diagnosis).

Demographic Characteristic	Male	Female
Marital Status	**%**	**%**
Married/ defacto	40.0	54.5
Divorced / separated/ widowed	40.7	73.9
Never married	36.7	58.2
Country of Birth		
Australia	40.9	62.6
Other English speaking country	31.7	72.7
Other country	30.0	22.2
Source of Income		
Wage or salary	34.6	61.5
Pension or benefit	44.1	61.6
Other source of income	27.9	69.2
Highest qualification		
No qualification	37.8	59.5
Secondary school qualification	28.6	60.0
Post-school qualification	40.0	62.7

Comment

The prevalence of 'any mental disorder' is very high and significantly higher than in the general community.[12] It is possible that concurrent/co-morbid substance abuse and dependence contributes to the high prevalence of mental disorder amongst prisoners in NSW. Nonetheless, this reflects the reality for this population group and, at minimum reflects the degree of suffering due to psychiatric disturbance, from any cause. Females had the highest prevalence of mental disorder compared with males.

Psychosis

Psychotic disorders are extremely disabling and are characterised by symptoms such as hallucinations, delusions and a severe inability to make realistic and rational decisions. These kinds of symptoms can have a profound effect on judgement. Individuals with psychosis are vulnerable to exploitation in environments that are not therapeutic. Psychosis can occur briefly (for example when the person is high on certain drugs) or can remain for the duration of a person's life (for example in people who suffer from chronic schizophrenia).

There are many types of psychotic disorders including schizophrenia, schizoaffective disorder, mood disorders with psychosis, and drug induced psychosis. Schizophrenia is a chronic, recurrent and debilitating mental illness from which a minority recover. Psychosis, whether induced by drugs or caused by mental illness is the most severe form of psychological disturbance.

Overall, 9% of respondents (receptions and sentenced) had experienced psychotic symptoms in the year prior to interview. Psychosis was more common among reception prisoners than sentenced inmates (12% *vs.* 5%). Psychosis was higher among females than males (12% *vs.* 8%).

Eighty-seven inmates who screened positive for psychosis were assessed using the LEAD protocol described above. The prevalence of 'definite' and 'probable' schizophrenia among those screening positive for psychotic mental illness was estimated to be between 4% and 7%.

Demographic Correlates of Psychosis

Age

The prevalence of psychosis was higher in females under 25 and over 40 compared with males in the same age groups, but similar to males in the 25-40 year old group. There was a marked decline in the prevalence of psychosis in males over 40 years of age (Figure 3).

Marital status

The prevalence of psychosis was similar across all marital categories within the male and female groups (Table 6).

Country of Birth

Among females, the prevalence of psychosis was highest among those born in Australia. The lowest rate of psychosis was found among males and females from non-English speaking countries.

Source of income
In males, those who were receiving a pension or benefit had the highest prevalence of psychosis whereas for females, the highest prevalence was found in those with other income sources.

Highest Qualification
In the female group, those with post-school qualifications had the highest prevalence of psychosis. In the male group, those with secondary school qualifications had the lowest prevalence of psychosis. No one with symptoms of psychosis was found among those reporting secondary school qualifications.

Figure 3: Prevalence of psychosis (% positive) by age and sex (twelve-month diagnosis).

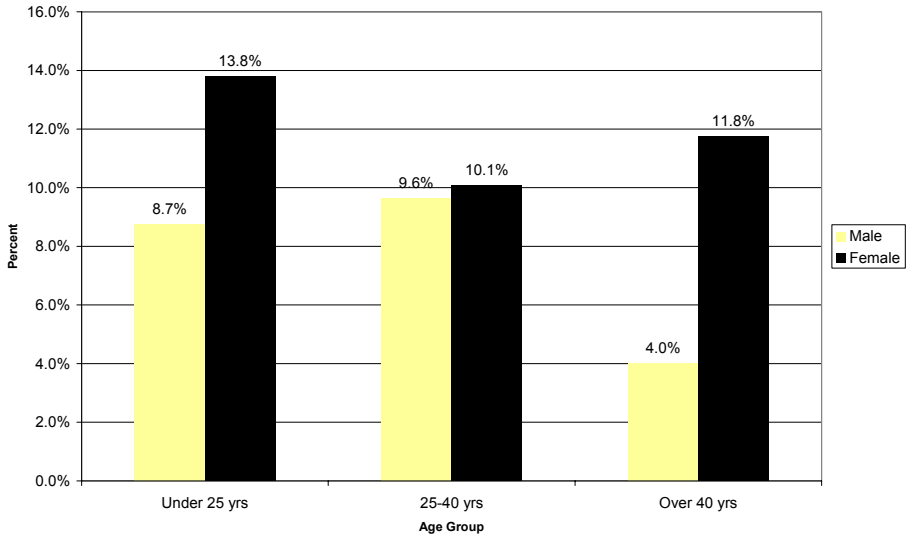


Table 6: Prevalence (%) of psychosis among male and female prisoners by marital status, country of birth, income, and highest qualification (twelve-month diagnosis).

Demographic Characteristic	Male	Female
Marital Status	**%**	**%**
Married/ defacto	8.7	11.9
Divorced / separated/ widowed	5.6	11.4
Never married	9.2	11.1
Country of Birth		
Australia	8.6	12.1
Other English speaking country	9.0	11.1
Other country	6.3	5.6
Source of Income		
Wage or salary	3.7	7.6
Pension or benefit	11.1	13.8
Other source of income	9.7	15.4
Highest qualification		
No qualification	9.3	10.3
Secondary school qualification	0.0	0.0
Post-school qualification	7.0	13.6

Comment

Psychotic inmates can make significant demands on resources within the correctional environment and are difficult to manage as a consequence of their unique needs.

The prevalence of psychosis, as described above, may include psychosis caused by substance use and/or mental illness. One in ten people received into the correctional system had experienced psychotic symptoms in the previous year. Seven percent of receptions probably had schizophrenia according to the follow-up using the LEAD protocol. In NSW 18,000 receptions occur annually meaning that on an average day around four people suffering schizophrenia will enter 'the system'.

One in twenty sentenced inmates had been actively psychotic in the previous year. While some of these sentenced inmates may have been in the community, many would have been in prison at the time they were unwell.

The higher prevalence of psychosis among females with post-school qualifications may reflect the later onset of psychosis in females in general who are thus able to complete tertiary studies prior to onset.

The twelve-month prevalence of psychosis in NSW inmates was 30 times higher than in the Australian community. The prevalence of schizophrenia and related disorders approximates that found in the New Zealand survey of prisoners (6%) but higher than reported in a recent meta-analysis of psychiatric illness among prisoner populations (3.7% - 4.0%).[6]

Affective Disorders

Affective disorders are disturbances of mood and include depression, dysthymia and mania. It is normal for a person's mood to fluctuate with 'highs' and 'lows'. When a high or low mood persists and affects functioning at home, work or socially then the person has a mood disorder.

Depressive disorder is a mood disturbance that is persistently and markedly low or sad, as compared to normal. It persists for at least two weeks, and affects the person's appetite, sleeping patterns, concentration, motivation, drive and energy levels. *Dysthymia* is a longstanding lower grade mood disturbance than depression that has persisted for years. It is distinguished from depression by its long-term presence with relatively less severe disturbance in functioning. *Mania* is an elevated mood persisting for at least one week and can affect appetite, sleeping patterns, concentration, motivation, drive and energy levels in an opposite way to depression. It can occur alone or can alternate with low moods in patterns of extreme highs and lows and is often known as *Manic Depression* or *Bipolar Disorder*.

Twenty percent (20%) of all those surveyed reported suffering at least one type of mood disorder in the prior twelve months (Table 7). The prevalence of any affective disorder was higher among females than males (29% *vs.* 18%). Mood disorders were more common among reception prisoners than sentenced (23% *vs.* 14%).

The most common type of mood disorder in both the reception and sentenced groups was depression (17% and 10%). Any depressive illness was 1.5 times more common for reception males and females than those who had been sentenced.

Mania was the least prevalent mood disorder. Four percent of the reception group reported at least one manic episode compared with 1% in the sentenced group.

The prevalence of dysthymia was higher among reception prisoners compared with sentenced (8% *vs.* 4%).

Table 7: Twelve-month ICD-10 prevalence estimates of affective disorder.

	RECEPTION			SENTENCED		
	Male	Female	Total	Male	Female	Total
Affective Disorder	%	%	%	%	%	%
Depression[1]	16.0	23.6	17.4	9.5	14.4	10.4
Dysthymia	7.2	9.7	7.7	3.8	5.8	4.2
Manic episode[2]	2.8	7.9	3.7	1.3	1.9	1.4
Any Affective Disorder	**21.1**	**33.9**	**23.4**	**12.4**	**20.4**	**14.0**

[1] Includes mild, moderate and severe depression.

[2] Includes mania, hypomania, and bipolar affective disorder.

Demographic Correlates of Affective Disorders

Age
The prevalence of affective disorders across all age groups showed the same patterns for females and males. The prevalence was highest in the 25-40 age group (Figure 4).

Marital Status
In men and women those who were divorced/separated/widowed had the highest prevalence of mood disorders (Table 8).

Country of Birth
The lowest rate of mood disorders was in males born in non-English speaking countries and highest in women born in other English speaking countries.

Source of Income
For males, the prevalence of mood disorders was highest among those receiving pensions or benefits, and for females it was highest in those with other sources of income. Conversely, for males mood disorders were lowest among those with other income sources.

Highest Qualification
Interestingly, males and females with post-school qualifications had the highest prevalence of affective disorder. There was a large difference between males and females in the proportion of those with secondary school qualifications who had a mood disorder diagnosis.

Figure 4: Prevalence of any affective disorder (% positive) by age and sex (twelve-month diagnosis).

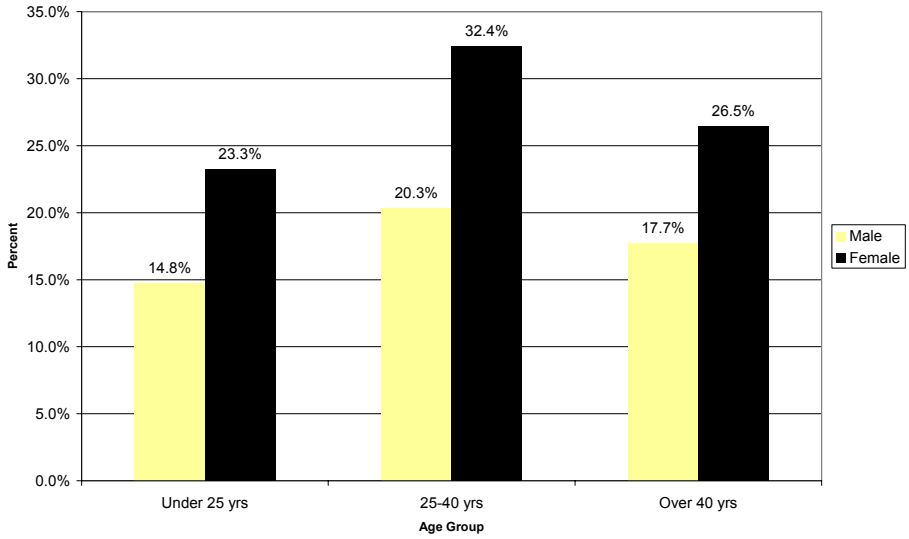


Table 8: Prevalence (%) of affective disorders among male and female prisoners by marital status, country of birth, income, and highest qualification (twelve-month diagnosis).

Demographic Characteristic	Male	Female
Marital Status	**%**	**%**
Married / defacto	17.2	27.7
Divorced / Separated / Widowed	24.4	31.9
Never married	15.5	27.6
Country of Birth		
Australia	19.0	30.0
Other English speaking country	16.7	36.4
Other country	13.5	22.2
Source of Income		
Wage or salary	17.3	23.1
Pension or benefit	19.5	30.4
Other source of income	9.8	38.5
Highest qualification		
No qualification	17.7	26.1
Secondary school qualification	0.0	20.0
Post-school qualification	18.6	32.7

Comment

Incarceration results in the loss of many personal freedoms taken for granted in the community, including social supports, inter-personal relationships, employment, social status, and social role. These losses are commonly correlated with depressive disorder. At the time of reception almost one-quarter were diagnosed with a mood disorder, which is more severe than simply feeling 'down' about their circumstances.

Along with schizophrenia, depression is associated with an increased risk for suicide and could be ameliorated through effective screening, diagnosis and treatment.

Having had any affective disorder in the year prior to interview was 3.4 times more common among NSW prisoners than in the Australian community (20% vs. 5.8%).

The low rate of mania is similar to that reported in a recent study of New Zealand prisoners.[14]

Anxiety Disorders

Anxiety is a common experience in everyday life. Feeling anxious about certain things is normal and important for adaptation and survival. However, the degree of anxiety that some people feel is sometimes excessive and impacts on their functional capacity and can be debilitating. Anxiety disorders are diagnosed when anxiety is either persistent or persistently recurrent, and affects a person's ability to work, have relationships or interact with others in social situations.

Over 36% of all those screened experienced an anxiety disorder in the twelve months prior to interview (Table 9). The prevalence was substantially higher among females than males in both the reception (56% *vs.* 34%) and sentenced (54% *vs.* 28%) groups. Interestingly, the prevalence of anxiety disorders did not differ markedly between the reception and sentenced prisoners in both males and females (34% *vs.* 28% for receptions, and 56% *vs.* 54% for sentenced).

Post-traumatic Stress Disorder (PTSD) was the most common anxiety disorder, with 26% of reception prisoners and 21% of sentenced prisoners meeting the diagnostic criteria in the previous twelve months.

Generalised Anxiety Disorder (GAD) was the second most common disorder, occurring in 15% of reception and 13% of sentenced prisoners. Panic disorder was more common in females than males (17% *vs.* 7% for reception prisoners; and 16% *vs.* 7% for sentenced prisoners). Agoraphobia, obsessive-compulsive disorder (OCD), and social phobia were relatively rare (3%, 2% and 1%).

Table 9: Twelve-month ICD-10 prevalence estimates of anxiety disorders.

	RECEPTION			SENTENCED		
	Male	Female	Total	Male	Female	Total
Anxiety Disorder	%	%	%	%	%	%
Post traumatic stress disorder	21.7	43.6	25.6	16.2	43.8	21.4
Generalised anxiety disorder	13.4	22.4	15.0	12.4	15.2	12.9
Panic disorder	7.3	17.0	9.0	6.9	16.2	8.6
Agoraphobia	3.0	3.0	3.0	2.0	5.7	2.7
Obsessive compulsive disorder	2.7	2.4	2.7	1.6	2.0	1.7
Social phobia	1.3	0.6	1.3	0.9	1.0	0.9
Any Anxiety Disorder	**33.9**	**55.8**	**37.9**	**28.4**	**54.4**	**33.3**

Demographic Correlates of Anxiety Disorders

Age
Among males, the prevalence of anxiety disorder was similar across all age groups. However, in females the prevalence increased with age from 52% in those under 25 to 65% in those over 40 years (Figure 5).

Marital Status
In males, the prevalence of anxiety disorders did not differ between categories of marital status; however, in the female group those who were widowed/ divorced/separated had a highest prevalence (Table 10).

Country of Birth
Males and females born in non-English speaking countries were less likely to have had an anxiety disorder in the previous twelve months.

Source of Income
In males, anxiety disorder was highest in those receiving a pension or benefit and lowest among those with other sources of income. In females the prevalence was similar across all income groups.

Highest Qualification
In males, the prevalence of anxiety disorder was similar across all levels of education. For women it was lower in those with no qualifications.

Figure 5: Prevalence of any anxiety disorder (% positive) by age and sex (twelve-month diagnosis).

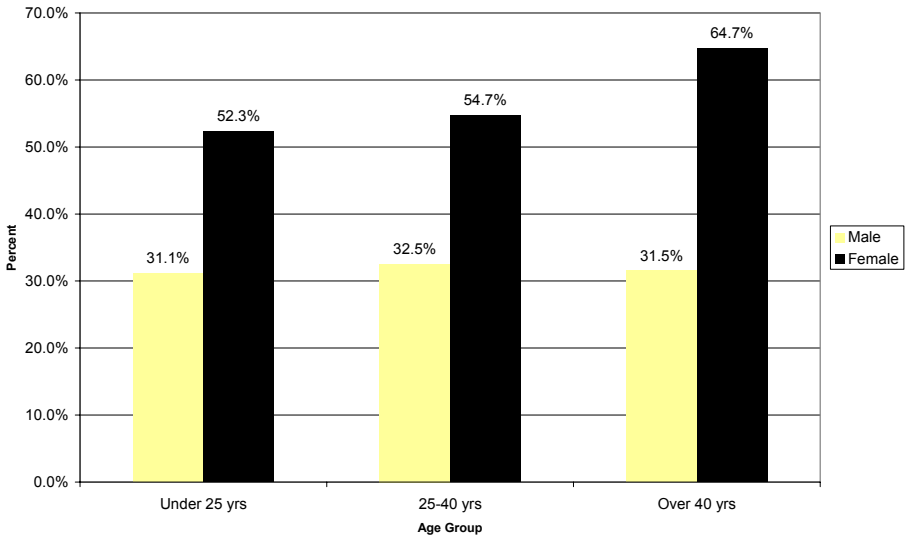


Table 10: Prevalence (%) of anxiety disorders among male and female prisoners by marital status, country of birth, income, and highest qualification (twelve-month diagnosis).

Demographic Characteristic	Male	Female
Marital Status	**%**	**%**
Married / defacto	31.7	50.5
Divorced / Separated / Widowed	33.9	68.1
Never married	31.0	51.0
Country of Birth		
Australia	34.5	57.0
Other English speaking country	20.0	63.6
Other country	21.1	22.2
Source of Income		
Wage or salary	30.1	56.9
Pension or benefit	35.3	55.8
Other source of income	23.3	53.8
Highest qualification		
No qualification	31.3	53.6
Secondary school qualification	28.6	60.0
Post-school qualification	32.6	57.3

Comment

These data suggest that almost every second NSW inmate has experienced some form of anxiety disorder in the previous twelve months.

The prevalence of anxiety disorders did not differ markedly between the reception and sentenced prisoners.

The twelve-month prevalence of PTSD in NSW inmates (24%) was substantially higher than that found in the general Australian community (3%). This is interesting because most people view prisoners as 'traumatisers' rather than having been traumatised themselves. It also supports the notion that inmates are more vulnerable to having experienced serious psychological trauma in the past, likely associated with their upbringing, lifestyle and temperament.

The high rate of Generalised Anxiety Disorder (GAD) confirms that this population are burdened by substantial anxiety and worry about their life circumstances.

It is likely that both PTSD and GAD are under-diagnosed in the prisoner population. Both conditions are difficult to treat with medication alone and require a combination of both medication and psychological intervention over a fairly lengthy period of time.

Suicidal Ideation

Suicide is a fatal outcome associated with mental illness. Risk factors for suicide are common among prisoner populations including: younger age, male, psychological distress, recent substance abuse, history of violence, single marital status, multiple losses, poor social supports, and previous suicide attempts. There are different motives for self-harm including attempts to make others take notice, to relieve internal psychological tension, and intent to actually take one's life. Self-harm behaviour, driven by the intent to take one's own life, is suicidal intent and behaviour. It can be difficult to distinguish between self-harm behaviour driven by other motives and suicidal behaviour.

Overall, 16% of all inmates had suicidal thoughts in the previous twelve months, 10% had made a suicide plan and 5% had attempted suicide.

Among receptions, 18% had thought about suicide in the previous twelve months, 59% of these had made a plan to commit suicide with over half of the planners attempting suicide. In the sentenced group, 11% had thought about suicide in the previous twelve months, 67% of these had made a plan to commit suicide with almost half of the planners attempting suicide.

Between 1999 and 2002, the rate of completed suicide in NSW prisons was approximately 80 per 100,000 compared with approximately 12 per 100,000 for all ages in the NSW community.

Suicidal ideation, plans and attempts in the twelve months prior were all more common among reception prisoners, and more common among females than males (Table 11).

Table 11: Suicidal ideation plans and attempts.

	RECEPTION			SENTENCED		
	Male	Female	Total	Male	Female	Total
	%	%	%	%	%	%
Suicidal ideation	15.3	31.5	18.2	9.7	17.3	11.1
Suicide plan	7.8	24.2	10.8	6.8	10.6	7.5
Suicide attempts	5.3	9.7	6.1	3.2	5.8	3.7

Comment

The prevalence of suicidal thoughts and behaviours among NSW inmates are approximately four times higher than in the general population (16% and 3.4%).[20]

Based on the number of successful suicides in NSW correctional centres, these data suggest that, proportional to the number of inmates that report thoughts of suicide, fewer attempt suicide and even fewer are successful. Nonetheless, the rate of completed suicide among NSW prisoners is

significantly higher than the general population, suggesting that this is a high-risk population

The presence of suicidal thoughts and plans were higher in the reception group in both sexes and higher in females than males.

Substance Use Disorders

Substance use disorders describe abuse of, and dependence on substances. They refer to the misuse of substances to the extent that the person's functioning is effected. People who abuse substances are preoccupied with thinking, procuring and using substances such that relationships, work performance and social interaction suffer. Substance use disorders exclude moderate use of drugs (ie. casual, experimental or social). Substance dependence means that over time the person has become tolerant (ie. requires larger quantities of the substance to have the same effect) to, or dependent on (unable to cope without), the substance or both tolerant and dependent. Abuse and dependence are on a spectrum with each other. Abuse precedes dependence. Dependence creates a drive to obtain substances to avoid withdrawal symptoms. This drive often forms the basis of the motives for general offending in this population thus increasing the risk of arrest often for minor property crimes.

Substance use disorders were the most common diagnostic group among male and female prisoners (55%). Two-thirds (66%) of receptions and 38% of sentenced prisoners were diagnosed with a substance use disorder in the previous twelve months (Table 12). Substance use disorders were more common among females than males in both the reception (75% *vs.* 64%) and sentenced groups (57% *vs.* 34%). Further, the majority of those with a diagnosis of a substance use disorder were dependent on substances rather than just abusing them, indicating the severity of drug problems among prisoners.

Opioid use disorders were the most common substance use disorder among both reception and sentenced prisoners (40% and 20%). Stimulant use disorders were the second most common diagnosis (34% and 15%). In both the reception and sentenced groups, alcohol use disorders were higher in males than females, whereas use of cannabis, opioids, sedatives, and stimulants were higher among females.

Table 12: Twelve-month ICD-10 prevalence estimates for substance use disorders.

	RECEPTION			SENTENCED		
	Male	Female	Total	Male	Female	Total
Substance use disorder	%	%	%	%	%	%
Alcohol dependence	19.2	16.5	18.7	11.3	4.9	10.1
Alcohol abuse	3.3	1.8	3.0	2.3	2.9	2.4
Cannabis dependence	18.7	23.0	19.5	12.4	16.8	13.2
Cannabis abuse	2.5	2.5	2.5	1.1	1.0	1.1
Opioid dependence	34.5	53.4	38.0	14.6	37.6	19.0
Opioid abuse	1.8	0.6	1.6	0.5	1.0	0.6
Sedative dependence	11.4	28.6	14.5	5.7	22.8	8.9
Sedative abuse	0.3	0.0	0.2	0.0	1.0	0.2
Stimulant dependence	27.8	47.8	31.4	10.8	28.7	14.1
Stimulant abuse	2.9	2.5	2.8	0.9	1.0	0.9
Any Substance Use Disorder	**63.7**	**74.5**	**65.7**	**33.6**	**57.4**	**38.0**

Demographic Correlates of Substance Use Disorder

Age
The prevalence of any substance use disorder declined with age in females. For men it slightly increased for those aged 25-40 and then decreased markedly for persons over 40 years (Figure 6).

Marital Status
In females and males, the prevalence of substance use disorders were lowest among those who were divorced/separated/widowed (Table 13).

Country of Birth
For both males and females, substance use disorders were higher among those born in Australia, particularly among females.

Source of Income
In both sexes, the prevalence of substance use disorders were higher in those receiving a pension or benefit.

Highest Qualification
In both sexes, the lowest prevalence of substance use disorders occurred in those with secondary school qualifications.

Figure 6: Prevalence of any substance use disorder (% positive) by age and sex (twelve-month diagnosis).

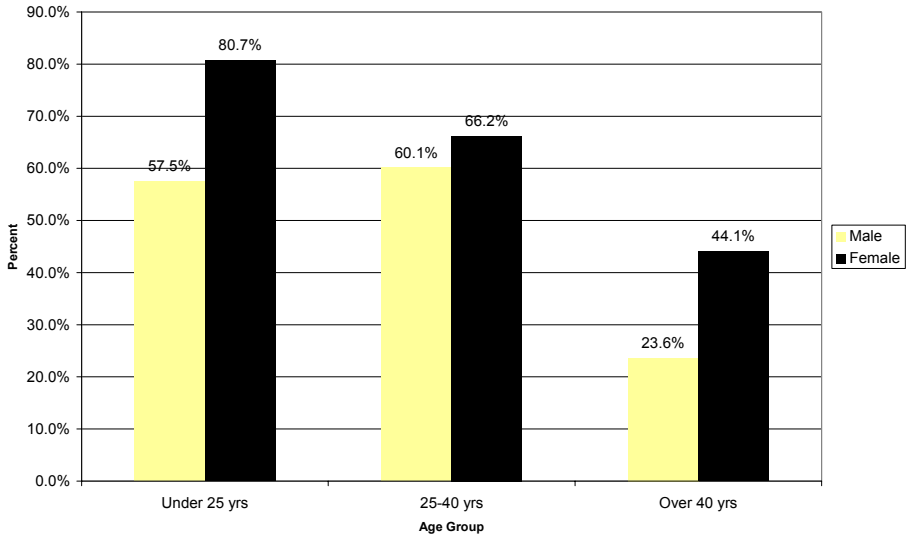


Table 13: Prevalence (%) of any substance use disorder among male and female prisoners by sex, marital status, country of birth, income, and highest qualification (twelve-month diagnosis).

Demographic Characteristic	Male	Female
Marital Status	**%**	**%**
Married/ defacto	52.4	73.7
Divorced / separated/ widowed	45.4	60.9
Never married	55.6	67.0
Country of Birth		
Australia	55.9	73.7
Other English speaking country	54.2	36.4
Other country	45.9	44.4
Source of Income		
Wage or salary	41.2	60.3
Pension or benefit	65.0	73.3
Other source of income	33.3	69.2
Highest qualification		
No qualification	55.2	69.1
Secondary school qualification	21.4	40.0
Post-school qualification	49.4	67.6

Comment

Substance use disorder was the most common psychiatric diagnosis among NSW inmates. Incarceration results in the sudden limitation of access to substances. Thus, withdrawal from substances is common and places significant demand on resources in terms of detoxification and maintenance. In addition, dependence creates an internal market for illicit substances within the prison environment.

According to these data, approximately one-half of inmates received into prison are at risk of substance withdrawal and require treatment. Considering there are about 18,000 receptions into the NSW correctional system each year, this suggests that each day twenty five new receptions are likely to require detoxification.

When compared with the Australian community, the reception population had an extraordinarily high prevalence of opioid (40% vs. 1%) and stimulant (34% vs. 1%) use disorders. The high levels of stimulant use disorder may reflect the well-recognised and recent heroin drought that was a feature of the Australian drug scene in 2001.

The prevalence of substances commonly used in the Australian community (alcohol and cannabis) was markedly higher among reception prisoners. Approximately one-fifth (22%) of those received into the correctional system had a twelve-month diagnosis of an alcohol use disorder, compared with 6.5% in the Australian community.[21] The twelve-month prevalence of cannabis use disorder was 22% which was higher than that reported in the Australian community (1.7%).

The large difference in the twelve-month diagnosis of substance use disorders between males and females in the sentenced group likely reflect the shorter sentences in the female group and also reflect the incarceration of females primarily for drugs related offences.

Predictably, the prevalence of substance use disorders in the sentenced group was lower than among receptions due to limited access to drugs such as heroin and amphetamine during incarceration.

Personality Disorders

Personality disorder is not a mental illness but is regarded under the broad definition of psychiatric disorder. Personality describes a collection of relatively fixed traits that are difficult to change and in combination define the person. These traits are patterns of thinking, feeling, behaving and interacting with others that are fixed and inflexible. When these traits manifest as difficulties in functioning and are maladaptive the person may have a personality disorder. These difficulties generally become evident in adolescence, continue through life and occur in a wide range of situations. Personality disorder diagnoses are therefore lifetime rather than twelve or one-month. People with a personality disorder exhibit a wider range of emotional expression, have more difficulty controlling their impulses and delaying gratification of needs. They have more difficulty managing interpersonal relationships and often their behaviour causes distress to others.

The overall lifetime prevalence of 'any personality disorder' in this survey was 41% (Table 14). Personality disorder was higher among females than males (50% *vs.* 39%) and higher in the reception than the sentenced groups (43% *vs.* 37%).

Common personality disorders in males and females were impulsive (21% and 24%), borderline (17% and 24%), paranoid (18% and 23%), anxious (16% and 21%) and schizoid (14% and 20%).

Notably, dissocial personality disorder, which relates to antisocial personality in the DSM IV, had a surprisingly low prevalence suggesting the IPDE screener is poor in identifying this disorder. Previous studies have shown a high prevalence of antisocial personality among prisoner populations.[22] It is interesting to note that in the Australian National Survey of Mental Health and Wellbeing, nobody received a diagnosis of dissocial personality.[23]

Table 14: Personality disorders.

	RECEPTION			SENTENCED		
	Male	Female	Total	Male	Female	Total
Affective Disorder	%	%	%	%	%	%
Impulsive	21.4	31.5	23.2	19.0	13.3	18.0
Paranoid	19.8	27.9	21.3	15.0	15.2	15.1
Borderline	19.7	30.9	21.7	13.3	13.3	13.3
Anxious	19.0	23.0	19.8	11.5	18.1	12.7
Schizoid	16.3	22.4	17.4	10.4	15.2	11.3
Anankastic	14.6	18.8	15.3	11.1	16.2	12.0
Dependent	11.0	21.2	12.8	4.9	8.6	5.6
Histrionic	6.6	11.5	7.5	3.1	2.9	3.1
Dissocial	2.5	2.4	2.5	2.7	2.9	2.7
Any Personality Disorder	**40.1**	**57.0**	**43.1**	**36.7**	**38.1**	**37.1**

Demographic Correlates of Personality Disorder

Age
The prevalence of any personality disorder remained fairly constant over the age groups in both males and females (Figure 7).

Marital Status
The prevalence of personality disorder was higher among persons who were separated, divorced or widowed (Table 15).

Country Of Birth
The prevalence of any personality disorder was lowest in those born in non-English speaking countries.

Source of Income
For males and females, the prevalence of personality disorder was highest among those receiving a pension or benefit. Among females, the lowest prevalence was in the wage/salary group.

Highest Qualification
In males, the prevalence of any personality disorder was similar across qualification categories. However, in females, it was lowest in the secondary school qualification group and highest among those with post-school qualifications.

Figure 7: Prevalence of any personality disorder (% positive) by age and sex (twelve-month diagnosis).

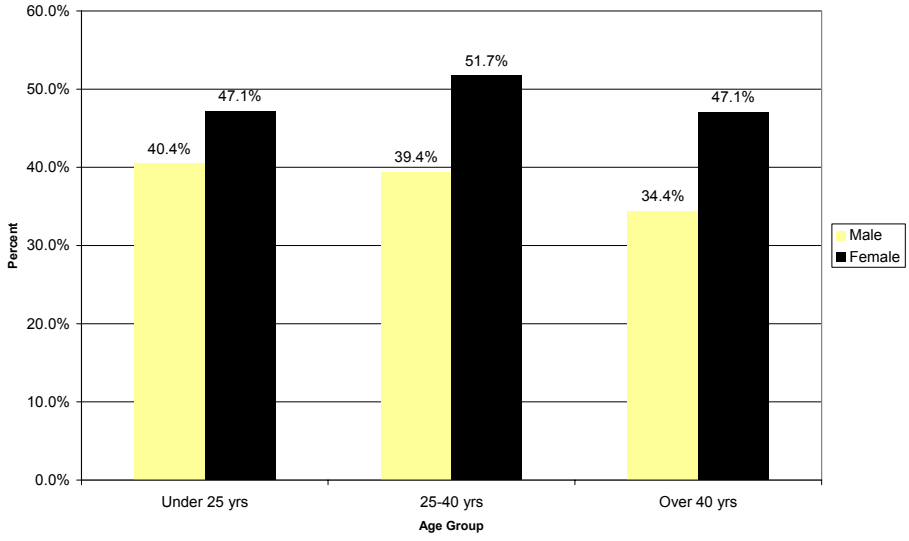


Table 15: Prevalence (%) of any personality disorder among male and female prisoners by marital status, country of birth, income, and highest qualification (twelve-month diagnosis).

Demographic Characteristic	Male	Female
Marital Status	**%**	**%**
Married / defacto	37.6	50.5
Divorced / separated/ widowed	43.1	54.3
Never married	37.8	45.5
Country of Birth		
Australia	42.0	50.2
Other English speaking country	31.7	58.3
Other country	24.8	44.4
Source of Income		
Wage or salary	34.1	37.9
Pension or benefit	43.4	55.8
Other source of income	27.4	53.8
Highest qualification		
No qualification	40.9	44.5
Secondary school qualification	35.7	20.0
Post-school qualification	36.0	58.2

Comment

As expected, the prevalence of personality disorder was high in the prisoner population and was higher in females. This supports the view that prisoners are a difficult population group to manage even in the absence of serious mental illness. While the IPDE screener probably under-diagnosed antisocial/dissocial personality disorder in this study, there is an extensive literature confirming high rates of this personality disorder among prisoners.[22] *What is interesting is the high prevalence of other personality disorders such as paranoid, anxious and schizoid.*

Neurasthenia

Neurasthenia is a condition characterised by persistent feelings of fatigue after quite minor mental and physical effort. Common symptoms are muscular aches, dizziness, tension headaches, sleep problems, an inability to relax, and irritability.

Overall, 4% of NSW inmates were diagnosed with Neurasthenia in the twelve months prior to interview. The prevalence was higher in females than males in both the reception (10% *vs.* 4%) and sentenced (8% *vs.* 2%) groups.

Demographic Correlates of Neurasthenia

Age
The highest prevalence of neurasthenia was found among females aged 25-40 years. In males, the prevalence of neurasthenia was similar across all age groups (Figure 8).

Marital Status
Neurasthenia was highest in the divorced/separated/widowed group in both males and females (Table 16).

Country of Birth
The prevalence of neurasthenia was similar in all categories of country of birth in both males and females.

Source of Income
The prevalence of neurasthenia was lowest in those with another source of income in both males and females.

Highest Qualification
Among males, the prevalence of neurasthenia was highest in those with a secondary school qualification whereas in female it was lowest in this category.

Figure 8: Prevalence of neurasthenia (% positive) by age and sex (twelve-month diagnosis).

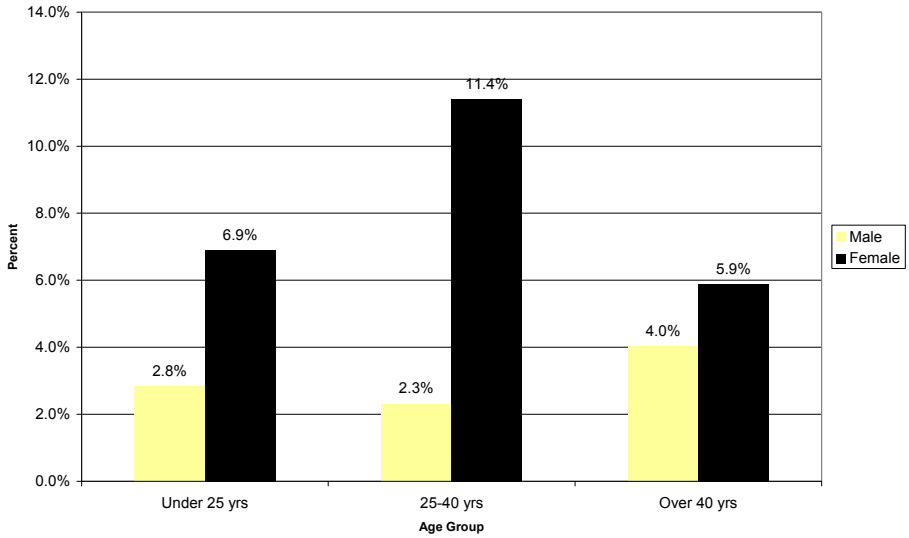


Table 16: Prevalence (%) of any personality disorder among male and female prisoners by marital status, country of birth, income, and highest qualification (twelve-month diagnosis).

Demographic Characteristic	Male	Female
Marital Status	**%**	**%**
Married / defacto	1.4	8.9
Divorced / separated/ widowed	5.2	12.9
Never married	2.8	7.1
Country of Birth		
Australia	3.1	9.1
Other English speaking country	2.6	11.1
Other country	1.7	11.1
Source of Income		
Wage or salary	2.3	10.6
Pension or benefit	4.0	10.1
Other source of income	1.6	0.0
Highest qualification		
No qualification	3.2	10.3
Secondary school qualification	7.1	0.0
Post-school qualification	2.2	8.2

Comment

Neurasthenia was found to be the higher in the prisoner population (4%) than in the Australian community 0.5%.[24]

Health Service Usage

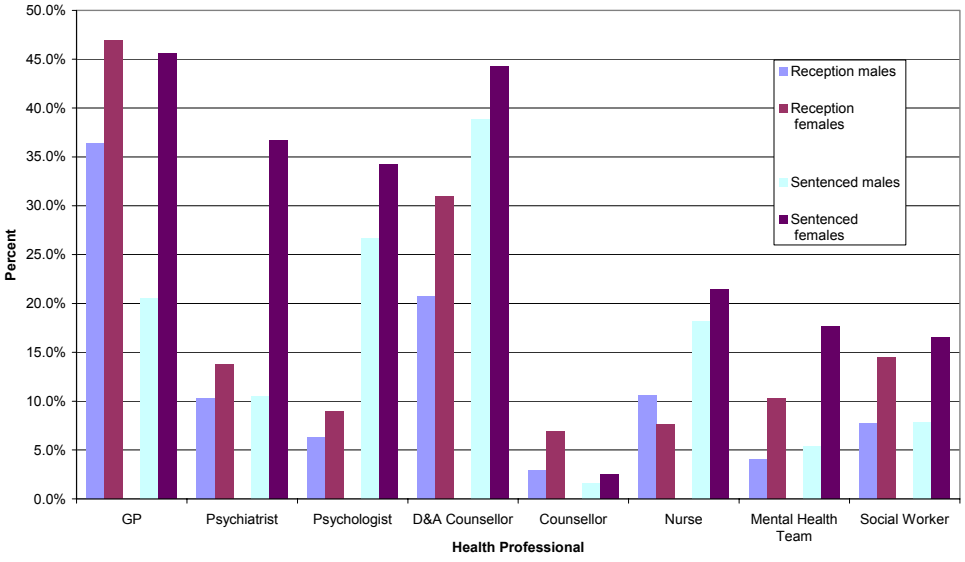
Overall, sentenced prisoners were more likely to have utilised health services for mental health problems than reception prisoners in the previous twelve months (Figure 9). This suggests that prisons have a role to play in treating those with a mental illness during incarceration.

Females were more likely than males to utilise services for mental health problems in both the reception and sentenced groups. This was most notable in the sentenced group, suggesting that females have greater access than males to mental health services during incarceration.

Sentenced females were more likely than reception females to have seen either a psychiatrist (37% *vs.* 14%) or a psychologist (34% *vs.* 9%) in the previous twelve months. Sentenced males were more likely to have seen a drug and alcohol counsellor than reception males (39% *vs.* 21%). This suggests that for many males, prison represents an opportunity to address drug and alcohol issues.

In contrast to the general pattern of male health service usage, reception males were more likely to have consulted with a GP about a mental health problem than sentenced males. This could reflect either a greater access to GPs in the community for this group or that GPs are the preferred point of contact with community health services for men with mental health problems.

Figure 9: Health service usage for a mental health problem in the previous twelve months by 'any psychiatric disorder' (twelve-month diagnosis).



Note: 'Any psychiatric disorder' includes: psychosis, anxiety, affective, substance abuse, personality disorder and neurasthenia

Comment

Females tend to use mental health services more than males. Sentenced females were more likely than sentenced males to have seen a mental health professional.

Disability

The Brief Disability Questionnaire (BDQ) was used to assess the degree to which respondents are limited by health problems in a number of activities, and the degree to which they have cut down or stopped activities they were expected to do as part of their normal routine. This screener also asks how many days in the previous four weeks respondents were unable to carry out their usual activities (days out of role) because of illness.

Overall, those with a psychiatric diagnosis were more likely to have higher disability scores than those without a diagnosis (Table 17). Males tended to have similar disability scores in both the reception and sentenced groups, whereas female receptions had higher scores than sentenced females.

Table 17: Mean score on the Brief Disability Questionnaire (BDQ).

		Reception		Sentenced	
ICD-10 Diagnosis		**Male**	**Female**	**Male**	**Female**
Psychosis	**Positive**	4.3	5.0	3.8	3.0
	Negative	2.5	3.3	2.1	3.1
Affective disorder	**Positive**	4.4	4.4	4.7	3.1
	Negative	2.4	3.2	1.9	3.1
Anxiety disorder	**Positive**	4.3	4.7	4.3	2.8
	Negative	2.1	2.6	1.6	3.6
Any mental disorder*	**Positive**	4.1	4.7	4.4	3.5
	Negative	2.0	2.3	1.4	2.7
Substance use disorder	**Positive**	3.0	3.8	3.4	2.3
	Negative	2.5	3.2	2.0	3.1
Personality disorder	**Positive**	3.8	4.2	3.2	4.0
	Negative	2.0	2.8	1.8	2.7
Neurasthenia	**Positive**	6.4	5.7	7.8	6.0
	Negative	2.6	3.4	2.1	2.9
Any psychiatric illness**	**Positive**	3.3	3.9	3.2	3.5
	Negative	1.6	1.9	1.4	2.6

* 'Any mental disorder' refers to any psychosis, anxiety disorder or affective disorder.

** 'Any psychiatric illness' refers to any psychosis, anxiety disorder, affective disorder, substance use disorder, personality disorder or neurasthenia.

Overall, those with psychiatric diagnoses had more days out of role than those with no diagnosis (Table 18). This was consistent for both males and females and reception and sentenced prisoners. Male and female receptions, irrespective of whether a disorder was present or not, had more days out of role than the sentenced group.

Table 18: Number of days in previous month affected by disability.

		Reception		Sentenced	
ICD-10 Diagnosis		**Male**	**Female**	**Male**	**Female**
Psychosis	**Positive**	11.1	10.3	5.9	2.5
	Negative	5.5	6.5	1.7	1.6
Affective disorder	**Positive**	11.3	8.2	5.4	3.7
	Negative	5.1	6.6	1.6	1.4
Anxiety disorder	**Positive**	10.0	8.5	3.4	3.1
	Negative	4.6	5.9	1.5	0.8
Any mental disorder*	**Positive**	10.0	7.8	3.7	3.0
	Negative	4.0	6.3	1.4	0.7
Substance use disorder	**Positive**	8.4	8.4	2.1	3.2
	Negative	4.0	5.3	1.8	1.6
Personality disorder	**Positive**	10.0	8.6	3.3	3.1
	Negative	3.6	5.2	1.3	1.1
Neurasthenia	**Positive**	13.8	10.5	26.6	5.5
	Negative	5.9	6.8	1.6	1.4
Any psychiatric disorder	**Positive**	8.0	7.8	2.9	2.4
	Negative	2.3	3.2	1.2	0.8

* 'Any mental disorder' refers to any psychosis, anxiety disorder or affective disorder.

** 'Any psychiatric illness' refers to any psychosis, anxiety disorder, affective disorder, substance use disorder, personality disorder or neurasthenia.

Comment

As expected, those with a mental illness manifest greater levels of disability and more days out of role. Sentenced inmates had lower levels of disability than reception inmates and fewer days out of role, possibly reflecting improved access to treatment services in prison and abstinence from drugs.

One-month Prevalence Estimates

The data presented above reports the twelve-month prevalence estimates. However, the CIDI can also generate a one-month diagnosis. The twelve-month diagnosis is valuable in terms of describing the overall level of psychiatric morbidity in this population. The one-month estimates are more likely to reflect the direct burden of illness exerted on the correctional system at the time of reception.

The psychosis screener used in this study does not generate a one-month diagnosis. Similarly, the personality disorder diagnosis is based on the presence of long-term traits and therefore does not generate a one-month diagnosis.

Among male receptions, 67% had a one-month diagnosis of 'any psychiatric disorder', 17% affective disorder, 28% anxiety disorder, and 47% substance use disorder (Table 19). In female receptions, 85% had a one-month diagnosis of 'any psychiatric disorder', 57% substance use disorder, 47% anxiety disorder, and 30% affective disorder.

Overall, the one-month prevalence of 'any psychiatric disorder in both male and female receptions was similar to the twelve-month estimates (67% *vs.* 78% in males, and 85% *vs.* 90% in females). Similarly, in male and female reception inmates, the one and twelve-month estimates were similar for anxiety disorder (28% *vs.* 34%, and 47% *vs.* 56%), and affective disorder (17% *vs.* 21%, and 30% *vs.* 34%).

Predictably, for substance use disorders the twelve-month and one-month prevalence estimates differed. For both male and female reception and sentenced inmates, the twelve-month prevalence was higher than the one-month prevalence (47% *vs.* 64%, and 57% *vs.* 75%).

Table 19: One-month ICD-10 prevalence estimates of major disorders among male and female reception prisoners, New South Wales (Australia).

ICD-10 One-month Diagnosis	MALE		FEMALE	
Affective Disorders	**N**	**%**	**N**	**%**
Depression	102	13.5	34	20.6
Dysthymia	46	6.1	15	9.1
Manic episode	10	1.3	9	5.5
Any Affective Disorder	**128**	**17.1**	**50**	**30.3**
Anxiety Disorders				
Post traumatic stress disorder	128	16.9	62	37.6
Generalised anxiety disorder	94	12.4	33	20.0
Panic disorder	35	4.6	14	8.5
Agoraphobia	22	2.9	4	2.4
Obsessive compulsive disorder	17	2.3	3	1.8
Social phobia	8	1.1	1	0.6
Any Anxiety Disorder	**206**	**28.0**	**78**	**47.3**
Any Mental Disorder*	**273**	**36.5**	**89**	**53.9**
Substance Use Disorders				
Alcohol dependence	59	8.0	10	6.1
Alcohol abuse	17	2.3	2	1.2
Cannabis dependence	108	14.9	28	17.4
Cannabis abuse	13	1.8	3	1.9
Opioid dependence	189	26.0	60	37.3
Opioid abuse	6	0.8	0	0.0
Sedative dependence	72	9.9	28	17.4
Sedative abuse	0	0.0	0	0.0
Stimulant dependence	166	22.8	55	34.2
Stimulant abuse	7	1.0	3	1.9
Any Substance Use Disorder	**339**	**46.6**	**92**	**57.1**
Neurasthenia	24	3.2	13	7.9
Any Psychiatric Disorder**	**496**	**66.7**	**137**	**84.6**

* 'Any mental disorder' refers to any psychosis, anxiety disorder or affective disorder.

** 'Any psychiatric disorder' refers to any psychosis, anxiety disorder, affective disorder, substance use disorder, personality disorder or neurasthenia.

Comment

Overall, there was comparatively little difference between the twelve-month and one-month prevalence estimates among reception prisoners. Over three-quarters of females and two-thirds of males were diagnosed with at least one psychiatric disorder in the month prior to interview. At reception, over one-third of males and over half of the females had either an anxiety or affective disorder in the previous month. This suggests that the demand for psychiatric services at the point of reception is likely to be high.

Predictably, the prevalence of certain substance use disorders, particularly current use, was higher in the reception group in both sexes for alcohol dependence, opioid dependence, and in women alone: sedative and stimulant dependence.

The similarity of the one-month and twelve-month prevalence estimates provides support for the assumption that, in this population, the twelve-month diagnosis can be used as a reasonable estimate of recent mental illness.

Substance Use disorder and Psychiatric Diagnosis

Given the high rates of psychiatric disorder reported above, particularly substance use, it is reasonable to suggest that some mental illness may have been due to drug use. The twelve-month prevalence estimates of mental illness (psychosis, affective disorder and anxiety disorder) in those with and without a substance use disorder diagnosis are shown in the Table 20. Mental illness among those with no diagnosis of substance use disorder was lower than those with co-morbid substance use disorder. However, the prevalence remained high in the absence of drug use.

Table 20: Twelve-month ICD-10 prevalence estimates of major disorders among prisoner with and without a substance use disorder diagnosis.

	No Substance Use Disorder Diagnosis				Substance Use Disorder Diagnosis			
	MALE (N=265)		FEMALE (N=41)		MALE (N=466)		FEMALE (N=120)	
ICD-10 Diagnosis	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Psychosis	17	6.4	5	12.2	60	12.9	20	16.7
Affective Disorders								
Depression	29	10.9	11	26.8	86	18.5	28	23.3
Dysthymia	13	4.9	3	7.3	39	8.4	13	10.8
Manic episode	6	2.3	3	7.3	14	3.0	10	8.3
Any Affective Disorder	**42**	**15.8**	**15**	**36.6**	**108**	**23.2**	**41**	**34.2**
Anxiety Disorders								
Post traumatic stress disorder	41	15.5	12	29.3	123	26.4	59	49.2
Generalised anxiety disorder	27	10.2	12	29.3	70	15.0	24	20.0
Panic disorder	12	4.5	5	12.2	38	8.2	23	19.2
Agoraphobia	3	1.1	0	0.0	18	3.9	5	4.2
Obsessive compulsive disorder	2	0.8	1	2.4	18	3.9	3	2.5
Social phobia	2	0.8	0	0.0	9	1.9	1	0.8
Any Anxiety Disorder	**47**	**23.4**	**18**	**46.3**	**183**	**39.4**	**72**	**60.0**
Any Mental Disorder*	**79**	**29.8**	**21**	**51.2**	**221**	**47.5**	**80**	**66.7**

* 'Any mental disorder' refers to any psychosis, anxiety disorder or affective disorder.

Comment

The high rate of mental disorder among inmates cannot be attributed to substance use disorder alone.

Mental Illness And Offence Category

Overall, males were more likely than females to have been convicted for violent offences (homicide and assault) (Table 21). The most common convictions for both males and females were assaults, robbery and property offences. Homicide, sexual and driving offences were less common among females than males.

Overall, females convicted of either a violent or non-violent crime had a higher prevalence of psychiatric disorder than males across all diagnostic categories. The exception was among females with psychosis convicted of non-violent crimes that had a prevalence of psychosis similar to that of males convicted of a non-violent crime. This suggests that females with psychosis charged with a non-violent crime may be less likely to be incarcerated than males with psychosis charged with a non-violent crime.

Among females, there was a higher prevalence of mental disorder (psychosis, affective disorder, and personality disorder) in those convicted for violent crimes compared with non-violent offenders. However, among males there was little difference in the levels of mental disorder between violent and non-violent offenders. The exception was substance use disorder, which was more commonly associated with non-violent crimes in males.

In both males and females, anxiety disorder was the most common mental disorder (ie. psychosis, anxiety or affective disorder) across all offence categories except for fraud in the males.

Males with a diagnosis of substance use disorder were most likely to have been convicted for property, robbery and assault. Among females, substance use disorder was most common in those convicted for property and driving offences. Personality disorder in males and females was common among those with a conviction for property offences which is consistent with the notion that many property offenders are incarcerated for drug related crimes.

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Table 21: Most serious offence and ICD-10 twelve-month diagnosis for reception and sentenced prisoners (combined).

					Psychosis				Affective Disorder				Anxiety Disorder				Substance use disorder				Personality disorder			
	Male		Female		Male		Female		Male		Female		Male		Female		Male		Female		Male		Female	
Offence	**N**[***]	**%**	**N**[***]	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Homicide	59	5.0	7	2.7	2	3.4	1	14.3	8	13.6	0	0.0	18	31.0	6	85.7	7	12.1	3	42.9	22	37.3	3	42.9
Assault	223	19.0	39	15.3	20	9.0	8	20.5	46	20.9	18	47.4	63	29.6	23	60.5	124	58.5	27	71.1	87	39.0	27	69.2
Sexual	61	5.2	4	1.6	6	9.8	1	25.0	16	26.7	2	50.0	23	39.0	3	75.0	7	12.3	3	75.0	19	31.1	3	75.0
Robbery	262	22.3	54	21.2	24	9.2	7	13.0	33	12.7	11	20.4	74	28.8	32	59.3	155	60.3	34	68.0	102	38.9	27	50.0
Fraud	32	2.7	15	5.9	3	9.4	1	6.7	10	31.3	5	33.3	9	28.1	7	46.7	11	35.5	9	64.3	10	31.3	5	33.3
Property	187	15.9	57	22.4	16	8.6	3	5.3	35	19.1	13	23.2	66	35.9	28	50.0	118	65.2	47	83.9	86	46.0	31	54.4
Driving	132	11.3	13	5.1	10	7.6	2	15.4	20	15.2	3	23.1	45	34.6	8	61.5	72	55.4	11	84.6	52	39.4	7	53.8
Drugs	97	8.3	37	14.5	8	8.2	1	2.7	9	9.4	7	18.9	23	24.0	18	48.6	42	44.2	14	37.8	32	33.0	8	21.6
Order	120	10.2	29	11.4	8	6.7	4	13.8	27	23.1	11	37.9	40	33.9	14	48.3	61	53.0	22	78.6	45	37.5	15	51.7
Violent[*]	*282*	*23.4*	*46*	*17.3*	*22*	*7.8*	*9*	*19.6*	*54*	*19.4*	*18*	*40.0*	*81*	*29.9*	*29*	*64.4*	*131*	*48.5*	*30*	*66.7*	*109*	*38.7*	*30*	*65.2*
Non-Violent[**]	*830*	*68.8*	*205*	*77.1*	*69*	*8.3*	*18*	*8.8*	*134*	*16.4*	*50*	*24.5*	*257*	*31.5*	*107*	*52.5*	*459*	*56.7*	*137*	*69.2*	*327*	*39.4*	*93*	*45.4*

[*] Homicide and assault.
[**] Robbery, fraud, property, driving, drugs, and order offences.
[***] Note: percentages may not be exact due to missing offence data in certain diagnostic categories.

DISCUSSION

This is the first large-scale survey of the prevalence of psychiatric disorder among Australian prisoners.

Overall, 74% of those assessed had at least one psychiatric disorder (psychosis, affective disorder, anxiety disorder, substance use disorder, personality disorder or neurasthenia) in the twelve-months prior to interview. For most diagnostic categories, the prevalence of 'any psychiatric disorder' was higher in those recently received into custody (80% *vs.* 64% in the sentenced group) and higher among females than males (86% *vs.* 71%).

Forty-six percent (46%) of reception and 38% of sentenced inmates were diagnosed with having had at least one 'mental disorder' (psychosis, affective disorder, or anxiety disorder) in the twelve months prior to interview.

Substance use disorder was the most common diagnostic group with 66% of reception inmates and 38% of sentenced inmates meeting the diagnostic criteria in the previous twelve months.

The prevalence of psychiatric disorder was significantly higher than that found in the Australian community using the same diagnostic tool (the CIDI). In the National Survey of Mental Health and Wellbeing (NSMHWB) the twelve-month prevalence for 'any psychiatric disorder' was 22% (*vs.* 77% among inmates), for 'any mental disorder' it was 15% (*vs.* 42% among inmates), for psychosis it was 0.42% (*vs.* 9% among inmates), for affective disorder it was 6% (*vs.* 22% among inmates), for anxiety disorder it was 10% (*vs..* 43% among inmates), for substance use disorder it was 5% (*vs.* 57% among inmates), for personality disorder it was 7% (*vs.* 43% among inmates), and for neurasthenia it was 2% (*vs.* 6% among inmates).

Given the number of full-time inmates in NSW in 2000/2001 was 7,735, it is possible to extrapolate the diagnostic data to the wider prisoner population to ascertain the number of inmates with a psychiatric disorder.[25] The number of sentenced inmates who would have been diagnosed with 'any psychiatric disorder' in the previous month would have been approximately 3,077 and 1,799 with 'any mental disorder' in the previous month. Three hundred and thirty three (333) would have reported having experienced psychotic symptoms in the previous twelve months.

While the static population was 7,735, approximately 12,483 males and 1,566 females were received into the NSW correctional system in 2000/2001. Based on these figures, 9,693 would have been diagnosed with having had 'any psychiatric disorder' in the previous month; 5,427 with 'any mental disorder'; and 6,739 with a substance use disorder in the previous month. Approximately 1,581 reception inmates would have reported experiencing psychotic symptoms in the previous twelve-months.

The use of the psychosis screener prevented the accurate measurement of the different psychotic disorders. However, we utilised a separate clinical

assessment protocol (the LEAD) to provide further insight into the prevalence of functional psychotic illness in a sub-set of reception prisoners. We are satisfied that the prevalence of functional psychotic illness is in the order between 4% and 7%.

Following cardiovascular disease and cancer, mental disorder ranks third in terms of disability adjusted life years (DALYs) in NSW for both males and females in the general community.[26] Given the relatively higher rates of mental disorder in the NSW inmate population, this suggests that a substantial 'burden of disease' due to mental disorder exists in this population.

Further investigation is warranted into the possible unmet mental health needs of the NSW prisoner population to identify those suffering from less severe forms of mental illness who would nonetheless benefit from psychiatric treatment. The data also makes a cogent argument for the need for screening systems and diagnostic instruments to better identify inmates with these problems at the point of reception. Once identified, there will likely be an increased demand for multidisciplinary mental health services to manage these conditions and to co-ordinate linkage with community mental health services on release to freedom.

Mentally ill inmates are more disabled than those with no mental illness. However when resources are allocated there is little distinction made between the needs of the mentally ill inmate and the non-mentally ill. Inmates suffering mental illness and forensic patients have different and frequently greater need and in many cases require management in specialist units.

There are numerous probable explanations for the high number of mentally ill people in prison including: homelessness, a lack of adequate diversionary options in the community, inadequate specialist community forensic psychiatric services, deinstitutionalisation of the mentally ill, inadequate rehabilitation of forensic psychiatric in-patients, the high threshold for admission to general psychiatric facilities, the reluctance of general psychiatric services to accept mentally ill patients from the courts, society's intolerance of deviant behavior by the mentally ill, and the greater likelihood of the mentally ill being arrested. The increased use of illicit substances in the general population and among the mentally ill has likely made a significant contribution to an increase in all types of offending.[2;27]

The most common offences are those associated with substance misuse highlighting the link between drugs and incarceration. There is also a relationship between mental illness and offending.[3-5;28-30] Substance abuse can mimic, trigger or exacerbate symptoms of mental illness. Co-morbid substance abuse and mental illness substantially increases the risk of offending. Among the mentally ill, substance abuse may increase the risk of non-compliance to medication and interfere with the effectiveness of medication.

Further, incarceration results in a sudden disruption in the individual's life, characterised by loss of freedom and liberty, loss of social and family support, exposure to an unfamiliar and sometimes threatening environment, frequent and unexpected transfers to new correctional environments, loss of control,

and a highly regimented daily routine. Such an environment poses a challenge, particularly for those inmates with a mental illness who have a higher likelihood of cognitive disability, poor insight, and problem solving skills. Mentally ill inmates may experience increased feelings of paranoia, anxiety, and despair, which can exacerbate a mental illness. They may have difficulty accessing regular psychiatric follow-up due to frequent transfers, and in some cases, less likely to assert themselves to obtain treatment out of fear of stigmatisation.[31]

The mentally ill often revolve through prisons, with periods of incarceration interspersed with spells in the community and place high demand on services.[32] Mentally ill prisoners are doubly stigmatised, suffering from a psychiatric illness in addition to labelling as an 'offender'. They are often disenfranchised, frequently itinerant, suffer chronic illness with acute symptoms, have poor physical health, lack social supports, have co-morbid substance abuse, and are frequently without community care.

The majority of mental health providers within the NSW correctional environment are obligated to operate in accordance with the correctional ethos. This is fertile ground for conflicting priorities between clinical needs (the health priority) and security (the custodial priority). The correctional approach to the management of difficult behaviour can be the antithesis of the mental health approach.

An examination of those inmates who either declined to be interviewed or were unavailable for interview and those who were screened failed to identify any significant differences between the two groups. However, in the sentenced group, males with longer sentences were more likely to be screened. There was an under-representation in the reception sample of indigenous males and those males who had been referred to the mental health team for assessment. This latter group were not assessed because they were determined to be too mentally unwell. This is likely to have produced slight underestimates of the prevalence of mental illness. Notwithstanding these considerations we believe that the sample is generally representative of the NSW prisoner population.

Using the same version of the CIDI as the National Survey of Mental Health and Wellbeing (NSMHWB) prevented the collection of certain demographic data. The substance use module did not include a diagnosis of possible cocaine use disorder which is likely to be fairly common in this population.

Internationally and nationally, strategies have been adopted to address the seemingly disproportionately high number of offenders with a mental illness.[33] These include: diverting mentally ill offenders out of the criminal justice system who have been charged with relatively minor offences, admission of inmates requiring involuntary psychiatric treatment, admission of those found 'not guilty by reason of mental illness' and admission of those found 'unfit to stand trial' to secure forensic mental health facilities, and follow-up in the community of 'high risk' and forensic psychiatric patients. Screening new

receptions for mental illness and developing targeted treatment programmes in correctional centres is essential.

Mental health services in NSW are delivered under the 'Charter for Mental Health Care in New South Wales'. This charter outlines the mental health care entitlements of people in NSW. It stipulates fostering positive attitudes to mental health, effective treatment, and accessibility to appropriate care, cultural sensitivity, and the promotion of quality of life. This includes prison inmates.

The NSW Forensic Mental Health Strategy outlines plans for the development of forensic psychiatric services across the state. Currently, a new, secure forensic psychiatric hospital is being planned. This will provide a more appropriate environment for the rehabilitation and treatment of forensic patients and inmates requiring involuntary psychiatric treatment. Court liaison services have been developed with mental health expertise provided to eleven magistrate courts throughout NSW. This enables magistrates to divert offenders with minor offences into community psychiatric care.

While specialised community forensic psychiatric services are yet to be developed in NSW, general community psychiatric services provide ongoing oversight to high-risk patients. However, given the level of public concern about high-risk and forensic patients and the medico-legal complexities associated with this group of offenders, specialised services need to be developed. Establishing a forensic mental health directorate and the realisation of the NSW Forensic Mental Health Strategy will, in all likelihood address many of the current demands on correctional mental health resources.

Arrest and detention can provide an opportunity for intervention and treatment, and in some cases may be the only time certain individuals receive mental health care.[34] This treatment needs to be consistent with international best practice.

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