2003 NSW Young People in Custody Health Survey

Key Findings Report

NSW DEPARTMENT OF JUVENILE JUSTICE

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FOREWORD

December 2003

A key responsibility of the NSW Department of Juvenile Justice is to supervise, assist and safeguard those young people sentenced to, or remanded in, custody on criminal charges.

The physical and mental health of these young people is of crucial importance to not only the community concerned with reducing the burden of juvenile offending, but also to those who are committed to working with them to address their offending behaviour and those factors that contribute to offending. Research clearly tells us that only by addressing issues associated with offending can these young people be turned away from further offending and thus gravitating into the adult prison system.

Accurate, detailed information is a prerequisite to improved services and programs for this group. That is why the NSW Government has strongly supported this wide-ranging study, which is the result of a collaborative effort involving the Department of Juvenile Justice, NSW Justice Health and the Health Sciences Faculty of the University of Sydney.

This report presents the key findings of the most comprehensive survey ever undertaken of the physical and mental health of young Australians in custody. The findings show that they are often from disadvantaged backgrounds, characterised by poor educational attainment, disrupted families and undertaking regular risk-taking behaviour.

The information derived from the survey will enable us to clearly understand the health status of young people in custody and allow the study of links between health status and crime-related behaviour. It will also inform the development of further programs and services for young people, not only in custody but also of early intervention programs targeting those young people at risk of becoming entrenched in the criminal justice system.

For both the Department of Juvenile Justice and NSW Justice Health, the survey provides a solid basis for planning future policy and service development between our two agencies.

David Sherlock
Director General
NSW Department of Juvenile Justice

Richard Matthews
Chief Executive Officer
NSW Justice Health

EXECUTIVE SUMMARY

Social Background

- One or more parents of 43% of the participants had been imprisoned, and 11% had a parent who was currently incarcerated.
- Young people minimised and denied experiences of abuse and neglect; nevertheless 42% said they had been physically abused, 11% sexually abused, 38% had experienced emotional neglect, and 34% physical neglect.

Physical Health

- Most young men (91%) and women (76%) rated their health as 'good', 'very good' or 'excellent'.
- Asthma had been diagnosed in 28% of the young men and 56% of the young women.
- Ear infections had been diagnosed in 28% of young men and 39% of the young women. Mild hearing loss was found in 32% of young men and 30% of young women.
- Sleeping problems and energy loss or fatigue were the most common recent symptomatic complaints.
- All of the young women and 99% of the young men had seen a health care provider since admission to custody.

Intellectual and Educational Performance

- The mean WASI Full Scale IQ score was in the low average range.
- Poor educational attainment was common; three quarters had left school before finishing Year Nine, a high proportion had not regularly attended school, and over 90% had been suspended at some time.
- Seventeen percent had cognitive functioning scores consistent with a possible intellectual disability. Ten percent met both culture-fair IQ and adaptive behaviour deficits consistent with DSM-IV criteria for intellectual disability.
- Sixty percent of the subjects could read at a low average level or better, and 50% could spell at a low average level or better. The arithmetic skills of 64% of the subjects were equivalent to those expected of people with intellectual disabilities.

Mental Health

- Eighty-eight percent reported mild, moderate or severe symptoms consistent with a clinical disorder.
- The three most prevalent disorders were Conduct Disorder, Substance Abuse Disorder and Adjustment Disorder.
- Thirty percent reported high or very high psychological distress implying that they may have a greater than 50% chance of an anxiety or depressive disorder.

Risk Behaviours

- Thirty three percent of young men and 44% of young women either never used condoms or used them less than half of the time when they had penetrative sex with casual partners.
- Nineteen percent (16% of young men and 53% of young women) had injected drugs in the twelve months prior to custody.
- Almost 90% had used cannabis.
- Most (94%) had consumed alcohol and been drunk (85%).
- Nineteen percent of males and 24% of females had seriously considered attempting suicide at some time in the past.

BACKGROUND

Young Australians in custody are characterised by disadvantaged backgrounds. Their health is at risk from a range of environmental factors, social stressors and risk behaviours. [1,2,3,4,5,6]

As part of its ongoing efforts to understand the physical and mental health needs of NSW young people in custody, the Department of Juvenile Justice conducted a comprehensive survey.

The Young People in Custody Health Survey (YPiCHS) examined the physical and mental health needs of young people in custody using a broad definition of health, including social and demographic factors, physical and mental health, and intellectual and educational performance. This survey had the following goals:

- Determine physical health needs, including blood-borne viruses and sexually transmissible infections,
- Determine mental health needs, including intellectual disability and mental health disorders,
- Identify risk behaviours,
- Explore health service utilisation and needs, and
- Inform policy development and service provision.

METHOD

Participants
Between January and March 2003 all young people remanded or sentenced to a period of control in any of the nine juvenile detention centres in NSW were eligible for inclusion in the survey.

Procedures
Registered psychologists and nurses from the Department of Juvenile Justice and Justice Health conducted the interviews and assessments.

Consenting participants were interviewed about a range of physical and psychological health indicators. They were also asked to provide a sample of blood and undertake a brief physical assessment.

Measures
Basic demographics were recorded along with educational background, employment history, living environment, parental characteristics, and family history.

A physical and mental health questionnaire was developed to collect information on self-reported health status, disability, recent symptoms, medication, injury, and health service use. The questionnaire also collected information on:

- Health behaviours, including health education, physical activity, sun protection, nutrition, drug treatment, sexual health and other lifestyle factors
- Risk behaviours, including smoking, alcohol and other drug use, gambling, tattooing and body piercing.

A standardised physical assessment measured blood pressure, height, weight, waist and hip, visual acuity, audiometry and dental health. Serology and urine testing screened for blood-borne and sexually transmissible infections; and other health indicators such as cholesterol, creatinine, glucose and ferritin.

Standardised psychological tests assessed cognitive and intellectual ability (Wechsler Abbreviated Scale of Intelligence), validity of cognitive test administration (Guide to Assessment of Test Session Behaviour), educational achievement (Wechsler Individual Achievement Test II - Abbreviated), psychopathology (Adolescent Psychopathology Scale) and experience of childhood trauma (Childhood Trauma Questionnaire).[7,8,9,10,11]

Further details regarding the measures used in this survey are contained in Appendix one.

Ethics
Ethics approval was independently granted by: the Research Applications Subcommittee of the DJJ Collaborative Research Unit, the Corrections Health Service Human Research Ethics Committee, and the Aboriginal Health and Medical Research Council (AH&MRC).

RESULTS

Sample

A total of 319 young people were eligible for inclusion in the survey. Of this group, 27 refused to participate (21 males and 6 females). All young people under the age of 14 years were required to provide parental consent in order to participate. None of this group (8 individuals) agreed to their parents being contacted, making themselves ineligible to participate. Fifty young people (47 males and 3 females) were excluded from the survey, for the following reasons: mental health problems, substance withdrawal, considered to be too violent or disruptive by centre management, and court appearances or released from custody on the day of the survey.

The sample consisted of 242 young people in custody of whom 223 (92%) were male and 19 (8%) were female. This represents 76% of all available young people in custody. The mean age of the young men was 17 years 2 months (range: 14 to 22 years) and 16 years 11 months (range: 15 to 18 years) for young women. The sample included 102 (42%) young Aboriginal people.

Table 1: Region of birth (%)[a]

Region	Male	Female	Total
Australia	84	95	85
Oceania	7	0	6
Asia	5	5	5
Africa	2	0	2
Europe	1	0	1
Americas	1	0	1

[a] Males = 223; Females = 19; Total = 242

The most serious current offence for young people in custody at the time of interview is listed in Table 2.

Table 2: Offence category (%)[a]

Offence	Male	Female	Total
Robbery	27	32	28
Break and enter	22	5	21
Other assault	17	16	17
Car and other theft	9	26	10
Sexual assault	7	0	7
Other	6	16	7
Aggravated assault	7	0	6
Homicide	5	5	5

[a] Males = 223; Females = 19; Total = 242

Sixty five percent of young people estimated that they had spent six months or more in custody during their lifetime.

Table 3: Self-reported total time spent in custody in lifetime (%)[a]

Total time in custody	Male	Female	Total
Less than 6 months	35	37	35
6 months to 1 year	29	32	29
1 to 2 years	19	32	20
2 to 5 years	16	0	15
5 to 10 years	1	0	1

[a] Males = 223; Females = 19; Total = 242

Social Background

Across several indicators linked to social inequity, many young people in custody have characteristics suggesting highly unstable backgrounds (Table 4).

Table 4: Social factors (%)[a]

Social Indicator	Male	Female	Total
Deceased parent	10	6	9
History of parental imprisonment	42	50	43
Parent currently in prison	10	22	11
History in care	28	39	28
Not living in the family home prior to custody	35	17	33
Parent of one or more children	11	6	10
Has close friends to talk to	70	82	71
Living with a person who has a physical or mental health problem affecting their daily life	19	17	19

[a] Males= Range: 198 to 209; Females= Range: 17 to 18; Total=Range: 215 to 227.

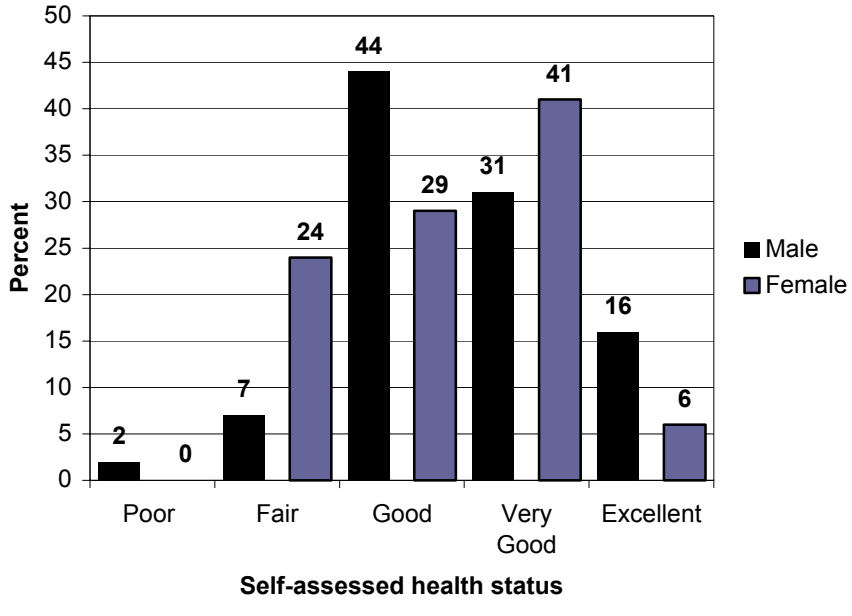
Physical Health

Self-reported health status

The Short Form-12 Health Survey (SF-12)[12] measures health from the patient's perspective on eight health dimensions: physical functioning, role functioning (physical), bodily pain, general health, vitality, social functioning, role functioning (emotional) and mental health. Results are expressed in terms of two scores: the Physical Component Summary (PCS) and the Mental Component Summary (MCS).

Question one of the SF-12 rates health on a scale ranging from 'poor' to 'excellent' (Figure 1). Self-rated health status has been found to agree with objective measures of health.[13] Most young men (91%) and women (76%) rated their health as 'good', 'very good' or 'excellent'.

Figure 1: Rating of own health from question one of the SF-12 (%)[a]



[a] Males=208; Females=17; Total=225

The mean PCS and MCS scores were 36 and 26, implying significantly less positive views of their physical and mental health than the US standardisation sample. Females had higher scores than males on both the PCS (44 *versus* 36) and MCS (30 *versus* 26) suggesting that young women in custody's perceptions of their physical and mental health are better than those of young men in custody.

Health conditions

Young people were asked if they had ever been told by a health professional that that they had been diagnosed with a health problem.

Table 5: Conditions most frequently diagnosed by a doctor* (%)[a]

Health Condition	Male	Female	Total
Asthma	28	56	30
Ear infections	28	39	29
Back problems	20	33	21
Heart problems	5	6	5
Hepatitis (A, B or C)	4	28	6
Cancer	1	0	1
Diabetes	0	11	1
HIV	0	0	0

* Multiple responses permitted
[a] Males = 173; Females = 18; Total = 191.

Recent symptoms and health complaints

Recent health complaints (occurring in the past four weeks) were assessed using a modified version of an instrument developed for drug users by Darke (1995).[14] This instrument provides information on recent ailments and symptoms covering cardio-respiratory, genito-urinary, psychological and neurological, gastrointestinal, injection related, general and women's health issues.

Sleep problems and energy loss/fatigue were the most common recent complaints in both young men and women.

Table 6: Most common recent symptoms and health complaints occurring in the past four weeks* (%)[a]

Symptom / health complaint	Male	Female	Total
Trouble sleeping	40	67	42
Tiredness / energy loss	34	33	34
Forgetting things	25	33	26
Headaches	23	39	24
Night sweats	22	28	22
Teeth problems	21	28	21
Muscle pain	20	17	20
Sore throat	18	17	18
Poor appetite	17	17	17
Chest pain	12	11	12
Shortness of breath	12	22	12
Ear problems	11	17	11
Dizziness	11	17	11
Vision troubles	11	17	11

* Multiple responses permitted
[a] Males = Range: 208 to 209; Females = 18; Total = Range: 226 to 227.

Vision and Hearing

Of the 191 males who had their hearing tested, 32% (61) had a mild hearing loss, while 3% (5) had a moderate to profound hearing loss. Three out of the ten females tested (30%) had a mild hearing loss.

Seven young people (3%) had visual acuity below the normal limits using the Snellen chart.

Asthma

Twenty-eight percent (59) of young men and 56% (10) of young women had been diagnosed with asthma. Over half (51%) of those with asthma had their last attack over one year ago; 28% had an attack in the one month prior to interview. A high proportion of those with asthma had been hospitalised for the condition (45% of young men and 40% of young women). Fifty-four percent (14) of those who had attended hospital for asthma had done so only once; 27% (7) had over five hospital visits for asthma.

Blood-Borne Viruses and Sexually Transmissible Infections

The prevalence of blood-borne and sexually transmissible infections was high, particularly for hepatitis B and hepatitis C.

Table 7: Blood-borne viruses and sexually transmitted infections (%)

Marker	Male	Female	Total
Hepatitis B Core Antibody [a]	11	18	11
Hepatitis B Surface Antigen [b]	3	12	4
Hepatitis C Core Antibody [b]	8	18	9
Hepatitis A Antibody [b]	0	0	0
HIV antibody [a]	0	0	0
Herpes Simplex Virus Type 1 [a]	66	82	67
Herpes Simplex Virus Type 2 [a]	6	18	7
Chlamydia [c]	6	7	6
Gonorrhoea [c]	2	0	2

[a] Males = 180; Females = 17; Total = 197
[b] Males = 181; Females = 17; Total = 198
[c] Males = 162; Females = 14; Total = 178

Creatinine, Ferritin and Haemoglobin

Several biological markers (creatinine, ferritin and haemoglobin) were used to test kidney function and iron deficiency.

Creatinine is a protein produced by muscle and released into the blood. The creatinine level in the serum is an estimate of kidney function. If kidney function falls (e.g., as a result of kidney removal), the creatinine level will rise. Creatinine levels also vary according to a person's size and muscle mass. Eight percent of males and none of the females had a creatinine level above the normal range.

Iron deficiency (anaemia) was measured by checking haemoglobin and ferritin. Three young men had iron deficiency anaemia. One female was iron depleted but had a normal haemoglobin.

Dietary and Nutritional Behaviour

Young people were asked about their regular eating habits before they were admitted to custody.

Table 8: Dietary/nutritional behaviour (%)[a]

How often they ate:	Males				Females			
	Never	1-2 per week	3-4 per week	Every day	Never	1-2 per week	3-4 per week	Every day
Breakfast	35	12	13	40	41	24	6	29
Fresh fruit	20	33	19	29	24	59	0	18
Fresh vegetables	15	27	22	36	18	18	18	47
Pies, burgers, hot dogs	8	38	26	28	12	41	12	35
Chips or crisps	10	45	23	22	18	29	18	35
Biscuits, chocolates, donuts, cake	10	41	20	29	12	53	0	35
Takeaway food	9	42	26	22	6	53	6	35

[a] Males = 205; Females = 17; Total = 222.

Body Mass Index

Body Mass Index (BMI) was determined by weight in kilograms divided by (height in metres^2) for all ages. However, the BMI is reported differently for those under the age of 18 years, using centile ranking as opposed to the standard ranges of underweight, normal, overweight and obese, which are employed for adult BMI classification.[15]

Table 9 reports BMI results for young people in custody 18 years and under. The 95th centile is regarded as a cut-off point for childhood obesity, with the cut-off point for being considered extremely underweight at the 5th centile.[15]

Table 9: Body Mass Index for young people 18 years or under (%)

Age range	Body Mass Index centile			
	≥95th centile		≤5th centile	
	Male	Female	Male	Female
15 years [a]	5	50	5	0
16 years [b]	13	0	4	0
17 years [c]	13	0	3	0
18 years [d]	10	0	6	0

[a] Males = 22; Females = 2 [c] Males = 70; Females = 3
[b] Males = 46; Females = 1 [d] Males = 31; Females = 3

Table 10 reports BMI ranges for those over the age of 19 years. There were no females in custody for this age range.

Table 10: Body Mass index for young people in custody over the age of 18 years (%)[a]

Ranges	Adults (19 years and over)		
	Male	Female	Total
Underweight (BMI=19 or less)	0	0	0
Normal (BMI=20 to 25)	65	0	65
Overweight (BMI=26 to 30)	14	0	14
Obese (BMI=31 and over)	21	0	21

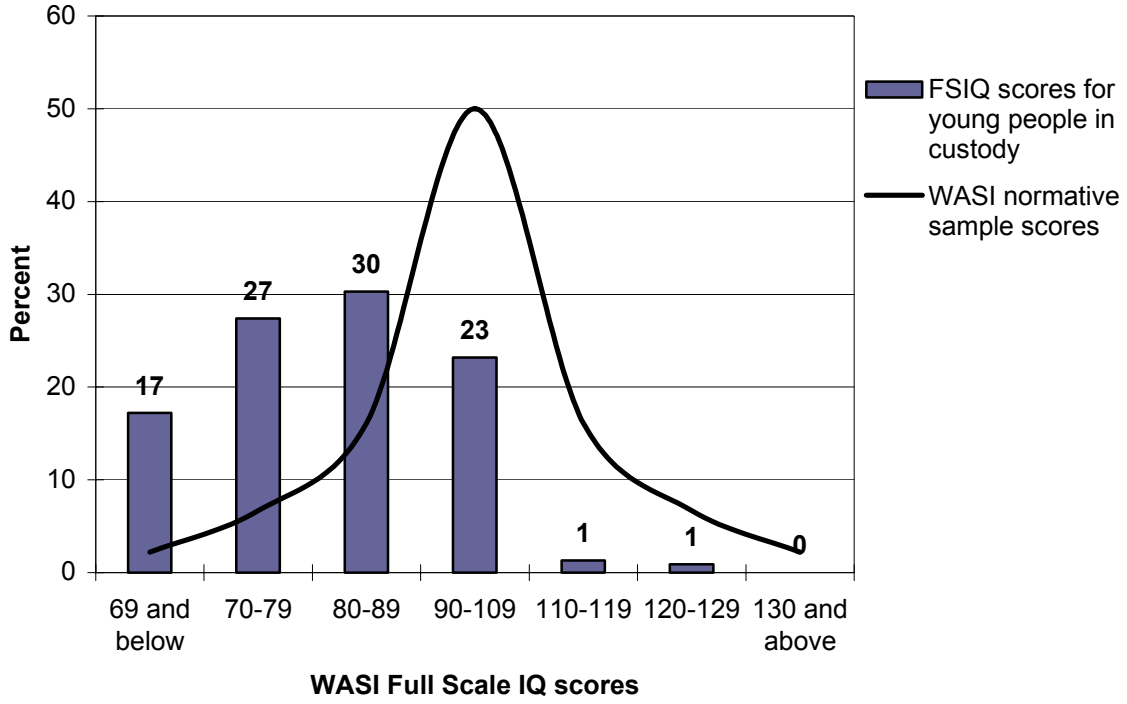
[a] Males = 14; Females = 0; Total = 14.

Cognitive Ability

Intelligence tests were administered to estimate reasoning ability and academic potential. The Wechsler Abbreviated Scale of Intelligence (WASI) scores are measured against a normative sample with an average score of 100 and a standard deviation (*SD*) of 15.[7]

Full Scale IQ

Figure 2: WASI Full Scale IQ scores and the WASI normative sample scores (%)[a]



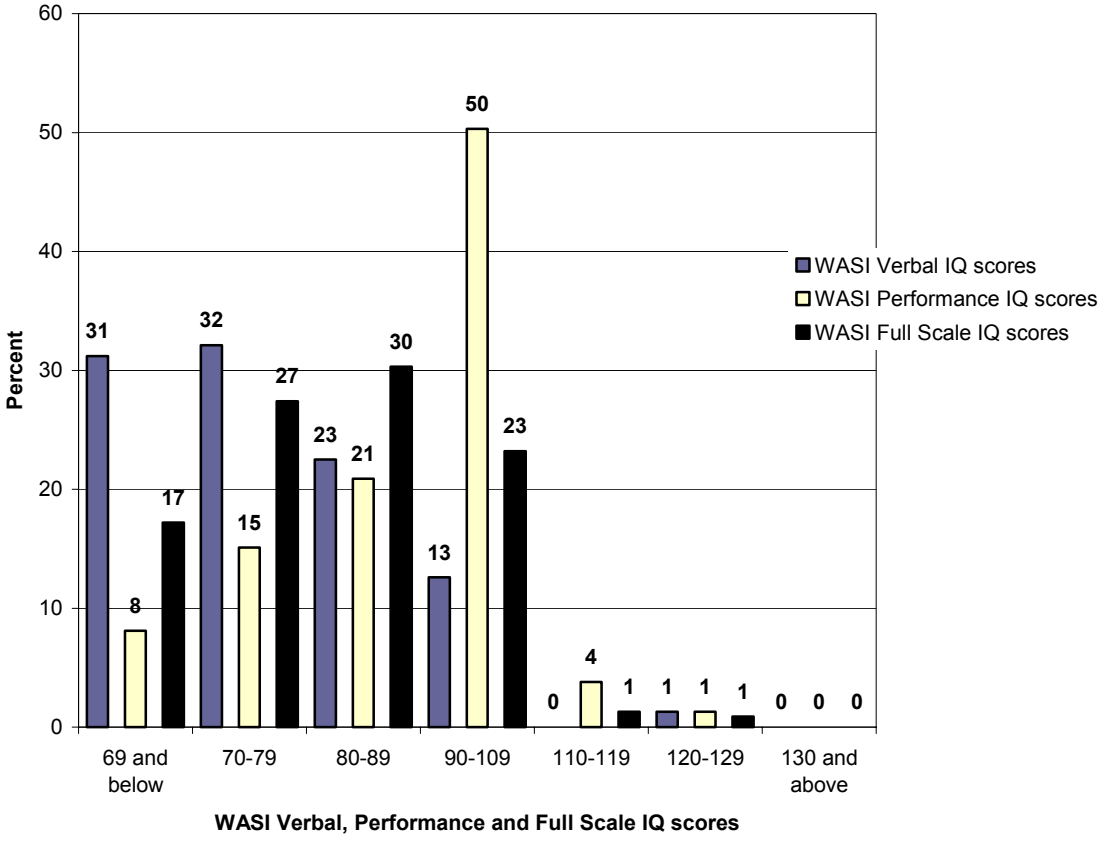
[a] Males=211; Females=19; Total=230

The average WASI Full Scale IQ (FSIQ) score for young people in custody was 82 (*SD*: 13, range: 52 to 125). Seventy four percent scored below the average range, compared to 25% from the standardisation sample.

Comparison of Verbal IQ (VIQ), Performance IQ (PIQ) and Full Scale IQ (FSIQ) scores

The mean FSIQ score of 82 suggests that the average score for this group fell in the Low Average range. The mean VIQ score of 76 suggests that the average Verbal score fell in the Borderline range. The mean PIQ score of 91 suggests the average Performance score fell in the Average range.

Figure 3: WASI Full Scale, Verbal and Performance IQ scale scores (%)[a]



[a]Males=211; Females=19; Total=230

Educational Achievement

Educational history

The young people assessed by the survey had poor educational attainment (Table 11). A high proportion had left school without achieving a minimal qualification; had not regularly attended school prior to custody, and many had been suspended.

Table 11: Educational history (%)

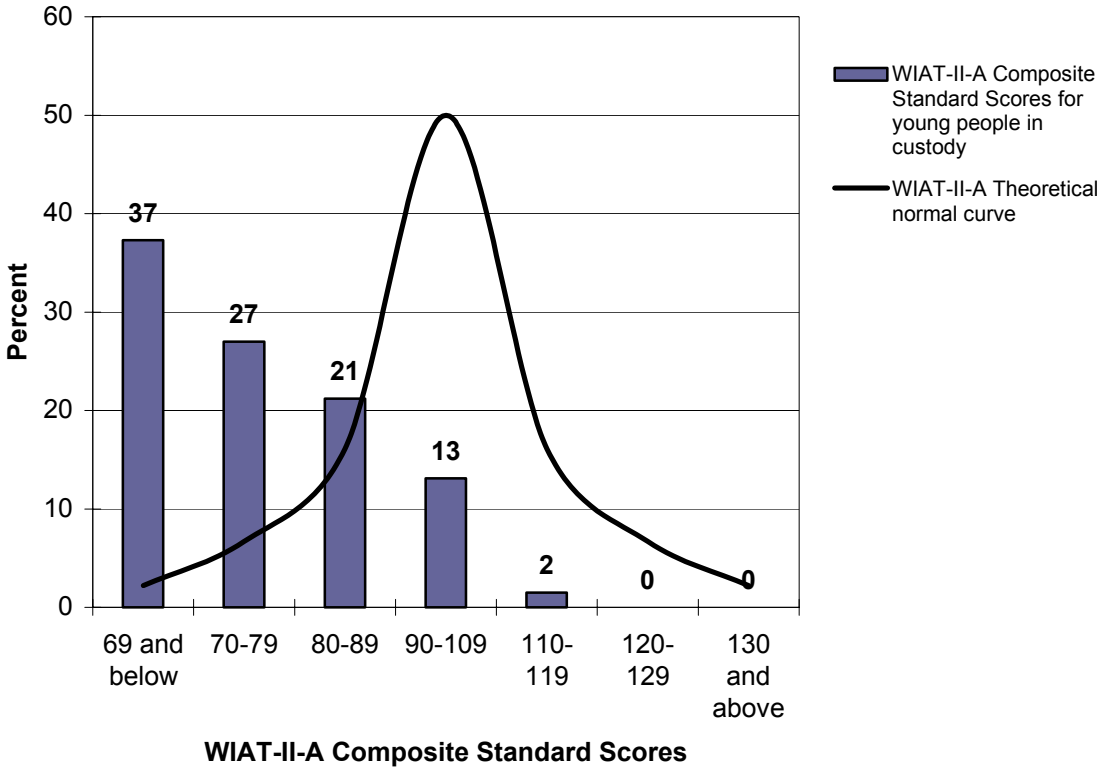
	Males	Female	Total
Mean age left school (years)	14.5 yrs	14.6 yrs	14.5 yrs
Not attending school (6 months before custody)	81	83	82
Left school in: Year 6	1	0	1
Year 7	16	20	16
Year 8	24	33	25
Year 9	34	20	33
Year 10	16	27	17
Year 11	8	0	7
Year 12	1	0	1
Suspended from school	90	100	91
Ever attended a special school/special class*	39	50	40
Victim of bullying at school	19	29	20
Perpetrator of bullying	50	59	51
Both victim and perpetrator of bullying	12	29	13

* Includes special schools; tutorial centres; special classes in mainstream schools; and alternative community based programs
[a] Males=Range: 156 to 209; Females=Range: 12 to 18; Total=Range: 168 to 227.

Academic Achievement

The Composite Standard Score on the Wechsler Individual Achievement Test-II-Abbreviated (WIAT-II-A) is an estimate of overall academic achievement in reading, spelling and mathematics.[9] The WIAT-II-A is based on a normative sample with an average score of 100 and standard deviation of 15.

Figure 4: WIAT-II-A Composite Standard Scores and the WIAT-II-A normative sample scores (%)[a]



[a] Males=194; Females=18; Total=212

The average WIAT-II-A composite standard score was 75 (range 46 to 116), indicating that young people in custody fall below the expected norm in terms of their overall academic achievement.

Comparison of reading, spelling and arithmetic with overall academic achievement

Thirty-seven percent (79) achieved Composite Standard Scores equivalent to those expected from the intellectually disabled range. Sixty-four percent (136) of young people had numeracy skills in this range compared to 28% (60) falling in this range for reading and 30% (64) for spelling. The average overall academic performance was found at the borderline range, with the largest groups overall scores falling in the range equivalent to those expected of people with intellectual disabilities.

Figure 5: WIAT-II-A Numerical Ability Standard Scores (%)[a]

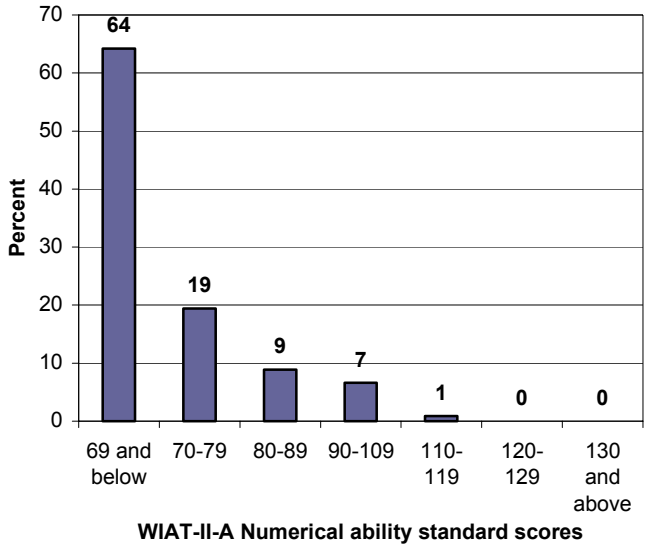


Figure 6: WIAT-II-A Spelling Standard Scores (%)[a]

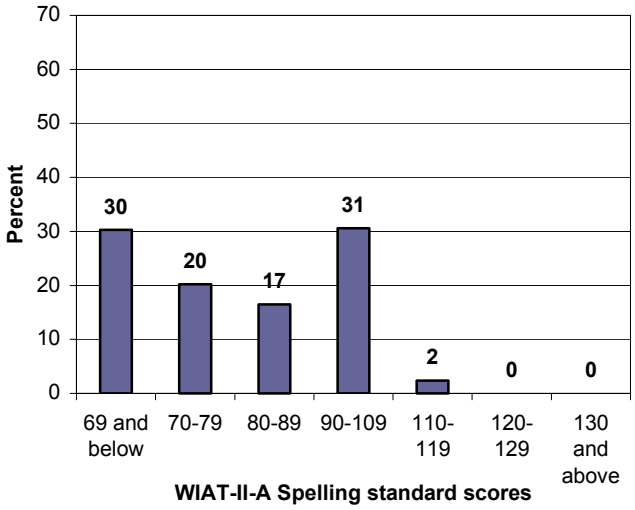
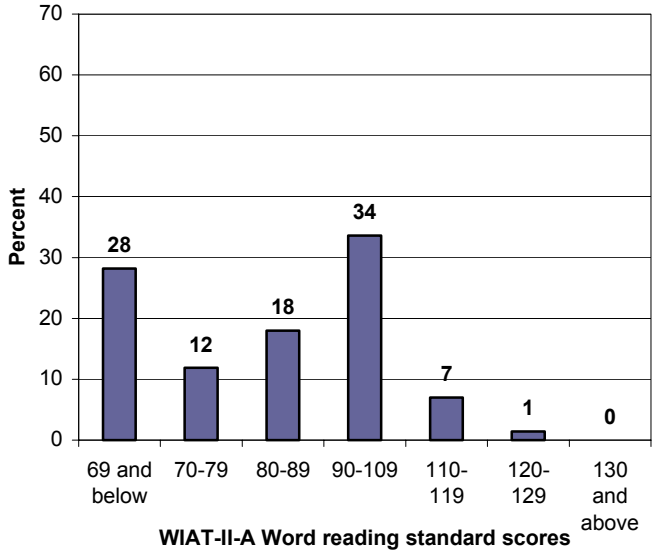


Figure 7: WIAT-II-A Word Reading Standard Scores (%)[a]



[a] Males = 194; Females = 18; Total = 212

Summary of the cognitive and academic findings

Many young people scored in the borderline or below average ranges on both the cognitive and academic tests. These figures are probably an underestimate, because seven young people who scored less than 70 on the WASI refused to complete the WIAT-II-A.

The pattern of results suggests that compared to other adolescents, many young people in custody may have difficulty comprehending, communicating and problem solving using language or numbers. Conversely, their practical reasoning (fluid intelligence skills or ability to solve non-verbal problems) is close to a typical adolescent's. Sixty percent of subjects could read at a low average or better standard, with 50% able to spell at an average or better standard.

Intellectual disability estimates

For a diagnosis of intellectual disability to be made, tests of cognitive and adaptive functioning must be considered. The WIAT-II-A results may be seen as an estimate of one area of adaptive functioning, that of functional academic skills. Seventeen percent (40) of the young people's WASI Full Scale IQ scores were consistent with the DSM-IV criteria for intellectual disability (i.e., a full scale score of less than 70). Twenty-seven young people, or 13% of the sample scored below 70 on both the WASI Full Scale IQ and the WIAT-II-A Composite Standard Score. This suggests that at least 13% of young people in custody could have an intellectual disability.

With 57% (132) of the WASI and WIAT-II-A sample from Aboriginal and Torres Strait Islander (ATSI) (42%) and non-English-speaking backgrounds (NESB) (15%), these results require careful interpretation. These young people would be expected to have lower verbal scores than those from an English speaking background (ESB). To understand the educational and adaptive needs of this population, the normative standards of the dominant cultural group are important.[16] That is why the figures described above are significant.

Aboriginal and Torres Strait Islander people's performance on the non-verbal, performance scales on IQ tests are comparable to available Australian norms, particularly for those raised in urban areas.[16] A 'culture fair' estimate of numbers of young people with intellectual disability could be based on numbers of ATSI and NESB young people scoring less than 70 on the WASI Performance IQ Scale, and the number of ESB young people scoring 70 or below on the WASI Full Scale IQ. Twelve ATSI young people and four NESB young people scored less than 70 on the Performance IQ Scale, with eight young people from an ESB scoring below 70 on the WASI Full Scale IQ. The WIAT-II-A results will not be included in this definition because of their cultural bias and the fact that so many of this group refused this test. Therefore a culture fair estimate of the WASI results consistent with intellectual disability for this sample would be 10%.

Mental Health

The Adolescent Psychopathology Scale (APS) generates forty scales to describe a range of psychological and psychiatric symptoms warranting possible referral or intervention.[10] These scales are based on DSM-IV criteria for psychiatric, personality and psychosocial problems.[17] The APS only provides an indication of possible disorders, not a formal diagnosis.

Psychiatric disorders

Table 12: APS clinical disorder scale (%)[a]

	Symptoms						
	Mild		Moderate		Severe		Combined
Clinical Disorders Scale	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Total**
Conduct Disorder	4	0	32	50	24	22	61
Substance Abuse Disorder	14	11	19	22	27	44	61
Adjustment Disorder	12	6	18	44	7	11	39
ADHD	13	22	14	22	1	6	30
Sleep Disorder	10	11	13	17	2	17	27
Separation Anxiety Disorder	5	6	15	17	4	22	26
Oppositional Defiant Disorder	8	17	12	22	3	0	24
Schizophrenia	6	17	10	17	4	0	21
Posttraumatic Stress Disorder	8	17	9	28	0	0	20
Obsessive Compulsive Disorder	5	6	8	6	3	17	17
Depersonalisation Disorder	7	6	5	22	3	6	16
Mania	5	0	6	33	3	0	15
Major Depression	9	11	3	11	1	0	14
Panic Disorder	2	11	8	6	3	6	14
Dysthymic Disorder	6	17	6	6	0	0	13
Somatization Disorder	1	33	6	6	2	6	12
Generalised Anxiety Disorder	4	17	5	17	0	0	11
Social Phobia	4	22	4	11	0	0	11
Bulimia Nervosa	1	17	3	11	1	11	8
Anorexia Nervosa	1	11	1	6	0	0	3
Any clinical disorder (above)	**58**	**78**	**67**	**89**	**48**	**61**	**88**

[a] Males = 161; Females = 18; Total = 179

Eighty-eight percent (158) of the young people in custody reported mild, moderate or severe symptoms consistent with a clinical disorder.

Sixty-one percent (109) of the population reported symptoms of Conduct Disorder in the mild, moderate or severe range. Also, sixty-one percent (109) were in the same range for Substance Abuse Disorder, with 39% (70) in the same range for Adjustment Disorder. Thirty percent (54) were in the mild, moderate or severe range for Attention-Deficit Hyperactivity Disorder. Mild, moderate or severe symptoms consistent with a diagnosis of Schizophrenia were recorded in 21% (38) of the population.

Seventy-three percent (130) reported symptoms consistent with two or more clinical disorders.[11] The most commonly co-occurring disorders were found to be substance abuse

disorder, conduct disorder and adjustment disorder, with conduct disorder and substance use disorder co-occurring together most frequently.

Personality disorders

Thirty-five percent (63) had mild, moderate or severe symptoms consistent with a personality disorder. The most common personality disorders were borderline and schizotypal. Twenty-two percent (39) of the sample had symptoms of two or more personality disorders. Borderline and schizotypal personality disorder were the most commonly co-occurring disorders.

Table 13: APS personality disorder scale (%)[a]

	Symptoms						
	Mild		Moderate		Severe		Combined
Personality Disorder	Male	Female	Male	Female	Male	Female	Total
Borderline	8	11	6	17	3	0	18
Schizotypal	10	17	4	6	1	6	16
Avoidant	10	17	2	17	0	0	14
Paranoid	4	6	8	0	1	6	13
Obsessive Compulsive	8	17	3	11	0	0	12
Any personality disorder (above)	**27**	**44**	**17**	**28**	**4**	**6**	**35**

[a] Males = 161; Females = 18; Total = 179

Psychosocial problems

Seventy-nine percent (141) of young people in custody reported mild moderate or severe symptoms consistent with psychosocial problems (Table 14). The most frequently reported problems in the mild or more serious symptom range were psychosocial substance use difficulties (52%; 93), followed by aggression (47%; 84), interpersonal problems (45%; 81) and anger (26%; 47).

Table 14: APS psychosocial problem scale (%)[a]

	Symptoms						
	Mild		Moderate		Severe		Combined
Psychosocial Problem Scale	Male	Female	Male	Female	Male	Female	Total
Psychosocial Substance Use Difficulties	8	11	17	11	26	44	52
Aggression	22	28	14	17	11	11	47
Interpersonal Problems	26	33	12	17	4	17	45
Anger	8	6	14	33	3	6	26
Disorientation	6	22	8	22	2	0	19
Emotional Lability	6	28	6	17	2	0	17
Self Concept	11	6	3	6	0	0	14
Alienation-Boredom	12	0	2	6	0	0	13
Suicide	3	11	1	0	5	6	10
Social Adaptation	7	0	3	0	0	0	8
Introversion	2	0	3	0	0	0	4
Any psychosocial problem (above)	**62**	**72**	**45**	**61**	**34**	**50**	**79**

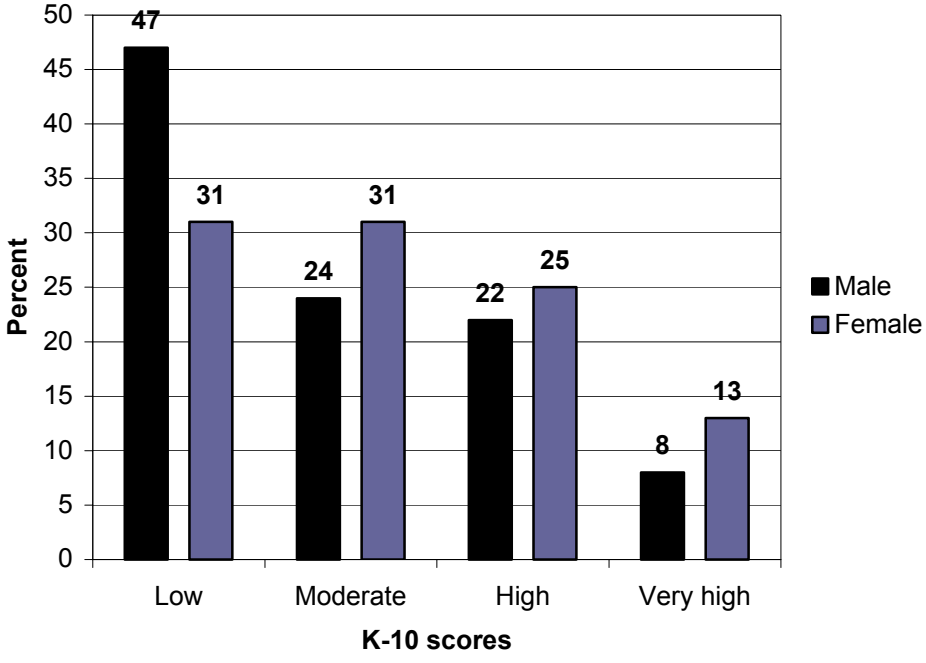
[a] Males = 161; Females = 18; Total = 179

Psychological Distress

The Kessler-10 (K-10) is a ten-item questionnaire yielding a global measure of psychosocial distress.[18] The questions examine the level of anxiety and depressive symptoms in the previous four weeks. Scores on the K-10 range from 10 (no distress) to 50 (severe distress). It is possible to categorise K-10 scores into four groups: low (10 to 15), moderate (16 to 21), high (22-29) and very high (over 30). Scores in the very high range are associated with a high probability of having an anxiety or depressive disorder. [19]

Based on these data, 30% of young people in custody had high or very high psychological distress, consistent with a greater than fifty percent chance of an anxiety or depressive disorder; 8% of the sample had an almost eighty percent chance of having an anxiety or depressive disorder. Population norms suggest that between 11% and 12% of the general population had high to very high scores on the K-10.

Figure 8: K-10 psychological distress scores (%)[a]



[a] Males=199; Females=16; Total=215

Experience of abuse, trauma or neglect

The Childhood Trauma Questionnaire (CTQ) examines experiences of physical, emotional and sexual abuse and assesses the degree to which people minimise or deny experiences of abuse or trauma. [11]

Minimisation and denial of experienced abuse and trauma

Fifty-six percent (110) of males and 39% (7) of females endorsed items on the Minimisation/Denial Scale of the CTQ, suggesting substantial underreporting of abuse, neglect or trauma.

Physical, emotional and sexual abuse

The CTQ contains three items that directly ask about the experience of physical, emotional and sexual abuse. Twenty one percent of males indicated that they had been victims of physical abuse. Twenty percent of males reported that they had been emotionally abused, with 4% admitting they had experienced sexual abuse. Twenty-three percent of females reported experiencing physical abuse, 45% reported emotional abuse and 22% reported experiencing sexual abuse.

Severity of abuse and trauma

Two-thirds of young people in custody had experienced some form of abuse or neglect in their childhood.

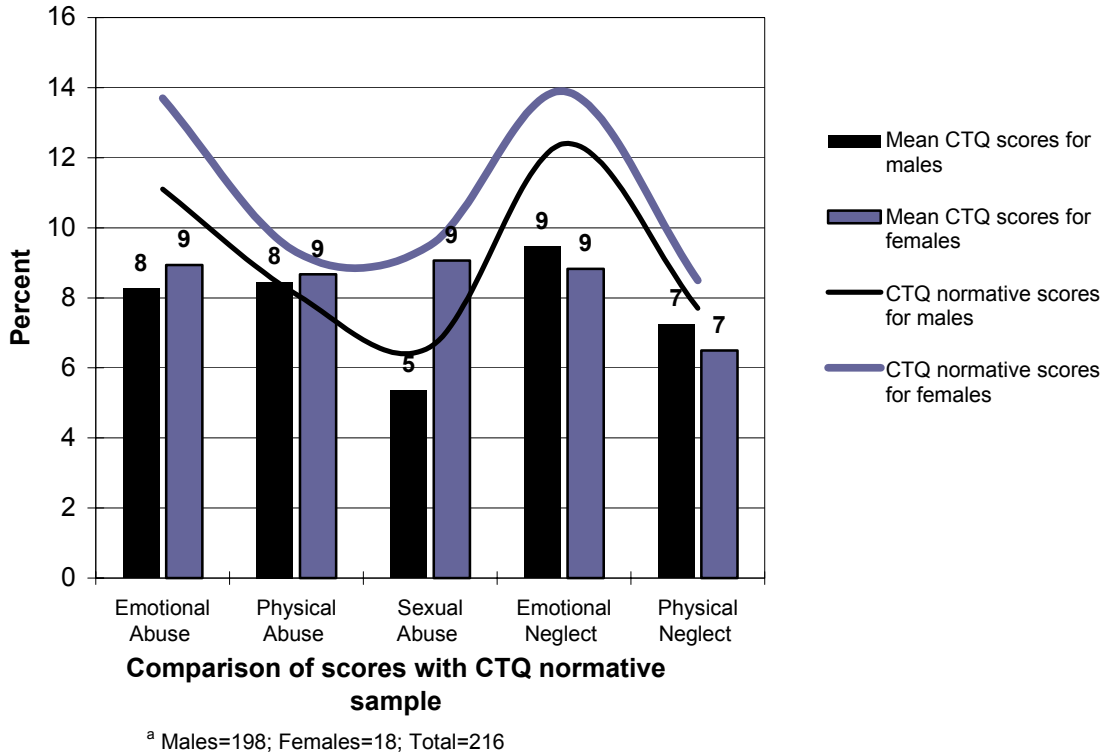
Table 15: CTQ scale score classifications (%)[a]

Classification	Low		Moderate		Severe		Combined
	Male	Female	Male	Female	Male	Female	
Emotional Abuse	20	33	9	6	7	11	37
Physical Abuse	12	17	14	28	15	11	42
Sexual Abuse	4	11	3	6	2	22	11
Emotional Neglect	22	22	6	6	11	6	38
Physical Neglect	18	17	11	0	8	6	34
Any abuse (above)	**53**	**67**	**32**	**44**	**25**	**28**	**68**

[a] Males = 198; Females = 18; Total = 216

Young people reported lower levels of abuse than the available sample of adolescent inpatients on the majority of classification scales.

Figure 9: Comparison of mean scores to CTQ normative population (adolescent psychiatric patients)(%)[a]



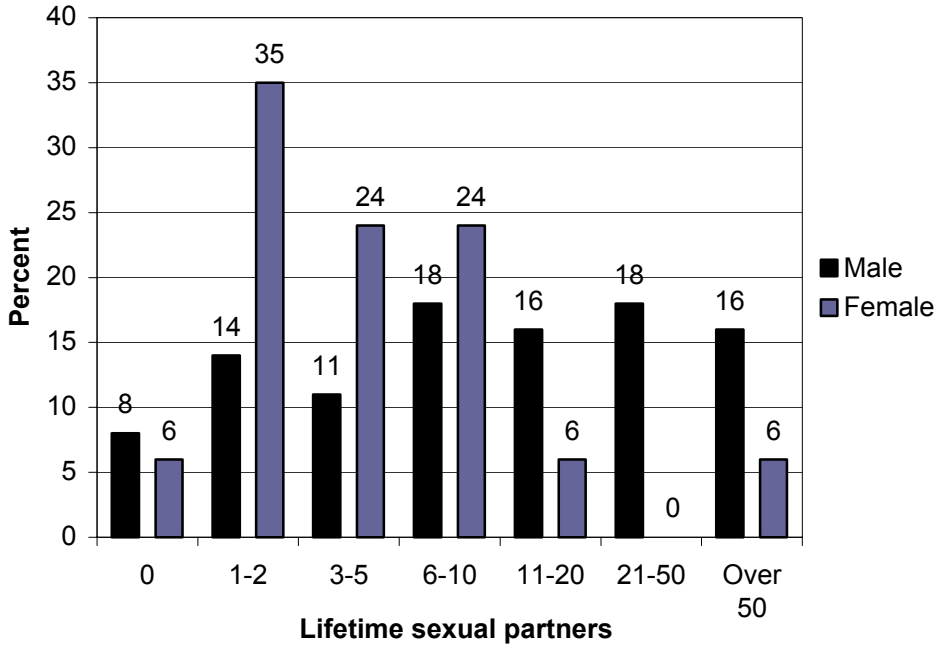
[a] Males=198; Females=18; Total=216

Risk Behaviours

Sexual health

Most of those screened had engaged in sexual intercourse[i] (93%). The median age of first intercourse was 13 years (range: 6 to 17) for males and 14 for females (range: 12 to 16). Figure 10 indicates that most young people in custody have had more than one sexual partner.

Figure 10: Lifetime number of sexual partners (%) [a]



[a] Males=204; Females=17; Total=221

Of the 183 males and 14 females who had a regular partner, 49% (89) of young men and 57% (8) of young women either never used condoms or used them less than half of the time when they engaged in penetrative sex with regular partners.

Of the 184 males and 16 females who had a casual partner, 33% (60) of young men and 44% (7) of young women either never used condoms or used them less than half of the time when they had penetrative sex with casual partners. Five young people had engaged in sex in order to obtain drugs or money.

Tattooing and Body Piercing

Thirty-six percent of young men and 53% of young women had at least one tattoo. Of those with a tattoo, a non-professional had tattooed 66% of young men and 78% of young women.

Thirty percent of young men and 82% of young women had one or more body piercing. A non-professional had performed the procedure on 40% of the young men and 29% of the young women who had a piercing. The majority of those with tattoos or body piercing had them done in the community.

[i] Includes vaginal, anal and oral sex

Table 16: Setting where tattooing and body piercing was carried out (%)

Location	Tattooing [a]			Body Piercing [b]		
	Male	Female	Total	Male	Female	Total
Community	78	89	79	90	93	90
Custody	14	0	12	7	0	6
Both	8	11	9	3	7	4

[a] Males = 73; Females = 9; Total = 82
[b] Males = 59; Females = 14; Total = 73

Alcohol and other drug use

Preferred drug of choice

The three main substances of choice were cannabis, tobacco and alcohol.

Table 17: Self-reported substances of choice (%)[a]

Drug type	First choice drug		
	Male	Female	Total
Cannabis	46	29	44
Tobacco	28	41	29
Alcohol	17	12	16
Amphetamines	4	0	4
Heroin	2	18	3
Cocaine	2	0	1
Ecstasy/Designer Drugs	2	0	1
Pain-Killers/Sleeping Pills	0	0	0

[a] Males = 191; Females = 17; Total = 208

Substance use

Twenty-eight percent of young people in custody (26% of males and 53% of females) used two or more illicit substances on a weekly or more frequent basis.

Table 18: Drugs ever used (other than alcohol or tobacco)* (%)[a]

Drug type [a]	Male	Female	Total	Problems[#] in the past 12 months (%)[b]
Cannabis	88	88	88	37
Amphetamine	46	59	47	16
Ecstasy and amphetamine-type substances	34	35	34	8
Cocaine	20	29	21	6
Heroin	17	47	20	9
Hallucinogens	13	18	13	3
Benzodiazepines	12	12	12	3
Solvents or inhalants	10	29	12	2
Other drugs (steroids, other opiates, anaesthetics)	14	35	15	3
Any drug (above)	**90**	**100**	**91**	**51**

* Multiple responses permitted
[#] Problems included school, friends, health, police and parents.
[a] Males = 207; Females = 17; Total = 224
[b] Males = 96; Females = 10; Total = 106

Nineteen percent of young people (16% of young men and 53% of young women) had injected drugs in the twelve months prior to custody. Thirty-five percent of amphetamine users, 47% of heroin users and 32% of cocaine users reported injection as the route of administration.

Four percent of young people with histories of injecting drugs (6% of males and no females) had shared needles or injecting equipment in the previous month. Twenty-nine percent (29% of both males and females) had shared injecting equipment between one and six months prior to interview, with 33% (29% of males and 43% of females) sharing injecting equipment between 6 months to 2 years ago.

Young people were asked for the factors that they thought had influenced their decision to first used illicit drugs (Table 19).

Table 19: Factors influencing decision to first use illicit drugs* (%)[a]

Influencing factors	Male	Female	Total
Curiosity	59	53	58
Friends used/offered drugs by friends	41	35	40
To feel better/to stop feeling unhappy	11	18	11
To do something exciting	10	6	10
Family problems	8	6	8
To take a risk	5	0	5
Work / school / relationship problems	3	0	3
Don't know	2	6	3

* Multiple responses permitted
[a] Males = 181; Females = 17; Total = 198

Alcohol use

Almost all adolescents had consumed alcohol and been drunk at some time in the past (Table 20). The average age of first consuming alcohol was 13 years for males (range: 5 to 18) and 14 years for females (range: 11 to 16). Fourteen was the average age of first getting drunk for both males (range: 6 to 19) and females (range: 12 to 17).

Table 20: Alcohol use among young people in custody (%)

Alcohol use	Male	Female	Total
Ever tried alcohol [a]	96	100	96
Had a full serve of alcohol [a]	93	100	94
Ever been drunk [a]	84	100	85
Been drunk before the age of 16 years [b]	80	78	80

[a] Males = 208; Females = 18; Total = 226
[b] Males = 172; Females = 18; Total = 190

Thirty-two percent (65) of young men and 44% (7) of young women reported being drunk at least weekly in the twelve months prior to custody. Twenty-one percent (44) of males and 56% (10) females drank at hazardous or harmful levels.[ii]

Binge drinking was common - 46% of young men and 71% of young women had engaged in binge drinking on a weekly basis prior to custody.[iii]

[ii] Hazardous/harmful levels based on the 2003 Australian Alcohol Guidelines [http://www.alcoholguidelines.gov.au]
[iii] Binge drinking is defined as six or more standard drinks on any one occasion [Based on the 2003 Australian Alcohol Guidelines http://www.alcoholguidelines.gov.au]

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Typical indicators of alcohol dependency are reported in Table 21.

Table 21: Indicators of alcohol dependency (%)

Indicators of alcohol dependency	Male	Female	Total
Unable to stop drinking once started: [a]			
1-2 days/week, 3-4 days/week, almost every day, or every day:	18	35	19
Fortnightly or monthly:	4	12	5
Failed to do what was normally expected because of drinking: [b]			
1-2 days/week, 3-4 days/week, almost every day, or every day:	18	25	18
Fortnightly or monthly:	5	13	6
Needed an alcoholic drink in the morning to get going: [c]			
1-2 days/week, 3-4 days/week, almost every day, or every day:	6	12	7
Fortnightly or monthly:	1	6	1

[a] Males = 204; Females = 17; Total = 221
[b] Males = 206; Females = 16; Total = 222
[c] Males = 205; Females = 17; Total = 222

Substance use and offending

Fifty-nine percent of young people indicated that they had been under the influence of alcohol, drugs or both at the time of offending.

Table 22: Offending behaviour and alcohol and other drug use (%)

Offending behaviour	Male	Female	Total
Committed a crime to get drugs or alcohol [a]	61	76	62
Affected by drugs at the time of the offence [b]	47	47	47
Affected by alcohol at the time of offence [b]	37	41	38
Affected by drugs or alcohol at the time of offending [b]	59	59	59

[a] Males = 204; Females = 17; Total = 221
[b] Males = 206; Females = 17; Total = 223

Tobacco use

The average age for commencing smoking was twelve years for both young men and young women. Twenty-seven percent (57) of young people in custody began smoking at ten years of age or younger.

Despite tobacco use being illegal in custody, 58% (127) of young people reported they currently smoked (57% of males and 67% of females). Ninety one percent of current smokers did so on a weekly or more frequent basis (93% of males and 75% of females), with 68% (86) of current smokers reporting that they smoked daily. Ninety-two percent of both young men and young women currently smoke 10 or fewer cigarettes on the days that they smoke.

Six percent of young people reported that they had received help or treatment from a GP, counsellor or nurse to quit smoking since being admitted to custody. Thirty percent (38) of young people felt that they required assistance to quit smoking. Twenty-five (30) percent of current smokers had experienced problems associated with tobacco use while in custody. This included being subject to searches, forced abstinence, and getting in trouble with custodial staff. Three (8) percent of young people had experienced problems with other detainees including pressure, being “stood over” and being assaulted for cigarettes.

Gambling

Eight percent (18) of young men and 16% (3) of young women were classified as "problem gamblers" according to the criteria developed by Fisher (based on DSM-IV criteria).[20, 21]

Table 23: Problems/behaviours associated with gambling (%)

Problems/behaviours associated with gambling in past 12 months	Male	Female	Total
Spent more money than planned on gambling [a]	19	24	20
Felt bad or fed up when tried to stop gambling [b]	7	18	8
Led to arguments with friends [c]	8	12	8
Taken money from outside the family for gambling [c]	8	0	8
Led to arguments with family [c]	5	12	6
Led to missing school [c]	4	12	4
Taken money from family for gambling [c]	4	6	4
Used school money/fare for gambling [c]	3	6	3

[a] Males = 204; Females = 17; Total = 221
[b] Males = 203; Females = 17; Total = 220
[c] Males = 202; Females = 17; Total = 219

Injury

Eighty-six percent (179) of young men and 56% (10) of young women had sustained an injury at some time in their lives requiring them to see a doctor or nurse or attend hospital.

The three leading causes of injuries to young men (67% of all injuries) were: being struck by an object or person (31%), low falls (less than one metre)(21%) and cutting, piercing, stabbing (15%). The leading causes of injuries among young women were low falls (33%) and being struck by object or person (22%).

Thirty-four percent of young men and 28% of young women who had an injury said it caused a lasting disability. Pain was the most commonly reported disability resulting from the injury.

Over two-thirds (68%) of respondents had received a physical injury from a fellow detainee in the past twelve months.[iv] Partners (boyfriends and girlfriends) were also likely (15%) to have inflicted an injury.

Table 24: Persons causing injury in the past 12 months* (%)[a]

Person	Male	Female	Total
Detainee	68	69	68
Partner	15	13	15
Father	10	0	9
Other family member	5	13	5
Mother	2	6	2
Stranger	2	0	2
Police	2	0	1
Other known person	3	0	3

* Multiple responses permitted
[a] Males = 196; Females = 16; Total = 212

[iv] Note: this does not necessarily refer to injuries resulting in treatment by a health professional.

Head Injury
Forty percent (84) of young men had sustained a head injury in which they had been unconscious or "blacked out". Most were the result of being struck by an object or person (fights) (63%) or low falls (13%). Memory loss (19%) and poor concentration (18%) were the most common unresolved side effects from reported head injury by young men. Only one female reported sustaining a head injury.

Suicide and Self-harm

Suicidal ideation
Nineteen percent of males (38) and 24% (4) of females had seriously considered attempting suicide at some time in the past. Fifteen percent (30) of males and 12% (2) of females had seriously considered suicide in the past twelve months. Ten percent (19) of males and 6% (1) of females had made a suicide plan. Seven percent (14) of males and no females had made a suicide plan in the past twelve months.

Nine percent (19) of males and 11% (2) of females reported that that their suicidal thoughts had decreased since coming into custody. Four percent (10) of males and no females reported an increase in suicidal thoughts since coming into custody.

Suicide attempts
Eight percent of males (16) and 12% (2) of females had attempted suicide in the twelve months prior to interview. Four percent (8) of males and no females reported that these attempts had occurred while in custody. Three percent (6) of males and 12% (2) of females reported one suicide attempt during the previous twelve months. No females reported more than one suicide attempt in the previous twelve months. Four percent (7) of males reported two to three attempts and 2% (3) of males reported that they had attempted suicide four or more times in the previous twelve months.

Self-harm ideation
Eighteen percent (37) of males and 18% (3) of females had thought seriously about hurting or injuring themselves at some time in the past. Twelve percent (25) of males and 12% (2) of females had seriously thought about self-harm in the twelve months prior to interview.

Seven percent (14) of males and no females had made a plan to harm themselves in the past twelve months. Eight percent (17) of young men and 5% (1) of females reported that their thoughts of self-harm had decreased since coming into custody. Six percent (12) of males and no females reported that thoughts about self-harm had increased since coming into custody.

Self-harm attempts
Thirteen percent of males (26) and 6% (1) of females had intentionally hurt or injured themselves at some time in the past. Nine percent (19) of males and 6% (1) of females had deliberately hurt or injured themselves in the twelve months prior to interview. Six percent (14) of males and 5% (1) of females had self-harmed whilst in custody during the past twelve months.

No females reported more than one incident of self-harm in the previous twelve months. Three percent (6) of males reported two to three incidents and 4% (7) of males stated they had self-harmed four or more times in the previous twelve months.

Suicide and self-harm methods

Table 25: Most frequently reported methods for self-harm and attempting suicide* (%)

Method	Self-harm [a]			Suicide attempts [b]		
	Male	Female	Total	Male	Female	Total
Attempted hanging	0	0	0	7	13	7
Slashing/cutting wrists and body	5	6	6	4	6	4
Asphyxiation	3	0	2	2	0	2
Attempted alcohol or drug overdose	1	0	1	2	0	2
Banging head	2	0	2	1	0	1

* Multiple responses permitted
[a] Males = 203; Females = 17; Total = 220
[b] Males = 186; Females = 16; Total = 202

Fourteen percent (28) stated that a school peer had committed suicide. Thirty two percent (65) said that they had known someone who had committed suicide.

Health service utilisation

Community health service use

Thirty-eight percent of young people (43% of males and 27% of females) had not seen a doctor in the community in the last twelve months. A small proportion of young people had never visited a doctor in the community (3% males; 0% females).

Nineteen percent (37) of young men and 31% (5) of young women believed they had a medical problem in the last twelve months but did not seek treatment for it. These young people detailed a number of factors they perceived to be barriers to accessing medical treatment in the community (Table 26). Of this group, 55% (24) believed that their health problem had worsened due to lack of medical treatment.

Table 26: Barriers to seeking medical treatment in the community* (%)[a]

Barriers to seeking treatment in the community	Male	Female	Total
Thought the problem would go away	27	20	26
Didn't have time	15	20	15
Afraid of what the doctor would say or do	12	40	15
Didn't want to/could not be bothered	12	0	10
Didn't think a health professional could help	12	0	10
Parent or guardian would not go with you	9	0	8
Thought doctor would report something to authorities	9	0	8
Transportation problems	6	20	8
Too embarrassed	3	20	5
Couldn't pay	6	0	5
Difficult to make appointment	3	20	5
Didn't know who to go and see	6	0	5
No one was available to go along	3	20	8
Didn't want parents to know	0	0	0

* Multiple responses permitted
[a] Males = 34; Females = 5; Total = 39

Young people reported a broad awareness of telephone-based help lines, however only a small percentage of young people in custody reported utilising these (Table 27).

Table 27: Awareness and use of help lines available to young people* (%)[a]

Service	Male		Female		Total	
	Aware	Used	Aware	Used	Aware	Used
Kids Help line	84	9	94	25	84	10
Family Support	31	3	31	0	31	3
Life Line	61	2	56	0	60	2
Salvo's Line	51	2	44	6	51	2
Quit Line	56	2	50	6	55	2
1800 Mental Health Line[#]	18	2	13	0	17	1
ADIS	16	<1	25	0	17	<1
G Line	15	<1	19	0	15	<1
Hep C Help line	18	<1	19	0	18	<1
Internet Help lines	23	<1	25	6	23	<1

* Multiple responses permitted
[#] Only available to custodial clients
[a] Males = Range: 200 to 202; Females = 16; Total = Range: 216 to 218

Health service use in custody

Ninety-nine percent of young men and 100% of young women had seen a health provider since admission to custody. Most of those who had accessed health providers were satisfied with service they received (Table 29).

Table 28: Health service use in custody (%) [a]

Health Professional	Male	Female	Total
Nurse	98	100	98
Doctor	80	81	80
Psychologist	61	50	60
Alcohol and Other Drug Counsellor	47	63	48
Dentist / Dental Therapist	40	25	39
Psychiatrist	22	19	22
Sexual Health Worker	21	6	20
Any health service (above)	**99**	**100**	**99**

[a] Males = 202; Females = 16; Total = 218

Thirty-three percent (62) of young men and 36% (5) of young women had visited the Juvenile Justice Centre clinic to talk with a nurse when they did not have a health problem. This suggests that young people have good access to clinic staff and that there is a high level of trust between the nurses and young people in custody.

Table 29: Satisfaction with service provided at last visit in custody (%)[a]

Health Professional seen	Satisfied*		
	Male	Female	Total
Alcohol and Other Drug Counsellor	95	100	95
Sexual Health Worker	95	100	95
Dentist / Dental Therapist	94	100	94
Doctor	93	100	94
Psychologist	93	100	94
Nurse	93	94	93
Psychiatrist	84	100	85

* Percentages of young people rating the last visit as either “good” or “OK”.
[a] Males=Range: 40 to 197; Females=Range: 1 to 16; Total=Range: 41 to 213.

APPENDIX ONE: SCREENING INSTRUMENTS

1. Physical assessment

- Blood Pressure (Sitting), (mmHg)
- Waist Measurement (cm)
- Body Mass Index (Quetelet's Index: BMI=kg/m^2)
- Hip Measurement (cm)
- Visual Acuity (Snellen chart)
- Audiometry

2. Dental Assessment

Dental screening using the Decayed, Missing, Filled Surfaces (DMFS), periodontal assessment and plaque index was carried out on all participants by dental therapists. All dental therapists were trained by the Australian Institute of Health and Welfare (AIHW) Dental Statistics and Research Unit, University of Adelaide to ensure standardised assessment of the following areas:

- Oral Mucosal Tissue Assessment/Examination
- Plaque Index
- DMFS Examination (Decayed, Missing, Filled surfaces)
- Periodontal Assessment.

Please note: The findings for the dental health section of this research will be available in a later report.

3. Blood and urine testing

- *Hepatitis:* Hepatitis A antibody, Hepatitis B core antibody, Hepatitis B Surface antigen, Hepatitis C Antibody, and Hepatitis C RNA.
- *Human Immunodeficiency Virus*: HIV antibody.
- *Sexually Transmitted Infections:* Syphilis, Herpes Simplex virus types 1 and 2.
- *General health:* Cholesterol, Creatinine, Random Glucose, HB, MCV, Plasma Ferritin.

4. Physical health questionnaire and risk behaviours

The physical health questionnaire was modelled on a number of adolescent health surveys addressing health care needs, risk behaviours and service utilisation. So as to understand unique characteristics of this group of people, the steering committee adapted and added to some of the items.

The instrument included questions from the Youth Risk Behaviour Questionnaire (YRBQ),[22, 23] Kessler Psychological Distress Scale (K-10), [18,19] Western Australian Child Health Survey,[24] National Longitudinal Survey of Children and Youth,[25] Young Offender Risk and Protective Factor Survey,[26] NSW Corrections Health's Inmate Health Surveys (1996[27] and 2001[28]), National Household Drug Use Survey,[29] Adolescent Health and Wellbeing Survey,[30] Hepatitis Prevalence Study,[31] Experience of Care and Health Outcomes Survey,[32] The National Longitudinal Study of Adolescent Health,[33] and the Child Use of Dental Health Services Study.[34]

The questionnaire's 32 sections included: demographics; education/occupation; living environment; family history; health status; disability health problem; symptom checklist; medication; asthma; dental health; physical injury; head injury; SF-12 version one;[35]

smoking; alcohol; drug use; drug treatment; sexual health; women's health; gambling; tattooing and body piercing; health education; physical activity; sun protection; nutrition; lifestyle; body image; mental health; K-10; [18,19] suicide and self-harm; community health services, and health services appraisal.

5. Mental health

- The Kessler Psychological Distress Scale (K-10) [18,19] was used to assess general psychological distress.
- The Childhood Trauma Questionnaire (CTQ)[11] assessed experience of childhood trauma and self-report of neglect and abuse history. The CTQ generates classification scales relating to five areas of maltreatment: emotional, physical and sexual abuse, and emotional and physical neglect. The CTQ also generates a Minimisation/Denial scale, for the detection of false-negative reports regarding trauma.
- The Adolescent Psychopathology Scale (APS)[10] assesses a range of psychological and psychiatric symptoms warranting possible referral or intervention. The APS while not a diagnostic tool is based on *DSM-IV* criteria. The 40 scales generated by the APS are classified into five symptom groups: no symptoms; subclinical; mild; moderate; and severe. The APS calculates 20 Clinical Scale scores based on *DSM-IV* Axis I Disorders (which incorporates all psychiatric or mental disorders except personality disorders and developmental disorders/delay). The APS calculates five Personality disorder scale scores based on *DSM-IV* Axis II disorder criteria (incorporating personality disorders, developmental disorders/delay and maladaptive personality features and defence mechanisms). The APS generates eleven scales measuring psychosocial problems based on *DSM-IV* Axis IV criteria (which highlights psychological characteristics that may cause significant problems in social adaptation and adjustment). These psychological characteristics may impact on the diagnosis and treatment of Axis I and II disorders.

6. Cognitive functioning and intellectual ability

A set of tests was administered to assess cognitive and intellectual ability, validity of cognitive test administration and educational achievement:

- Wechsler Abbreviated Scale of Intelligence (WASI).[7] The WASI is a standard, brief and reliable test of verbal and non-verbal intelligence for individuals aged 6 to 89 years.
- Guide to Assessment of Test Session Behaviour (GATSB).[8] The GATSB assesses participants' motivation and compliance with the testing process. This was applied to the WASI to determine whether participants' test session behaviour was valid.
- Wechsler Individual Achievement Test II - Abbreviated (WIAT-II-A).[9] The WIAT-II-A was used to assess basic literacy and numeracy skills. The WASI and WIAT-II-A together provide a brief, reliable assessment of achievement and cognitive functioning.

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