THE PREVALENCE IN THE PAST YEAR OF SUBSTANCE USE AND ICD-10 SUBSTANCE USE DISORDERS IN AUSTRALIAN ADULTS: FINDINGS FROM THE NATIONAL SURVEY OF MENTAL HEALTH AND WELL-BEING.

W. Hall, M. Teesson, M. Lynskey & L. Degenhardt

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The Prevalence in the Past Year of Substance Use and ICD-10 Substance Use Disorders in Australian adults: Findings from the National Survey of Mental Health and Well-Being

Wayne Hall, Maree Teesson, Michael Lynskey and Louisa Degenhardt
National Drug and Alcohol Research Centre

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EXECUTIVE SUMMARY

The National Survey of Mental Health and Well-Being (NSMHWB) was the first national survey of the prevalence of common mental disorders in the Australian population. The survey interviewed a representative sample of 10,600 adults (aged 18 years or older) from throughout Australia and assessed symptoms of the affective, anxiety, and substance use disorders. Disorders were defined in terms of ICD-10 and DSM-IV diagnostic criteria, but only the ICD-10 data are presented in this report. The survey also collected detailed self-report information on: physical illness, personality disorders, the disability due to mental illness, and patterns of treatment seeking.

This report summarises data on the prevalence and correlates of the ICD-10 (WHO, 1993) substance use disorders, harmful use and dependence on alcohol, and the harmful use and dependence on four classes of drug: cannabis, stimulants, sedatives, and opioids, in the adult Australian population.

In the past 12 months, 6.5% of Australians 18 years and over had an ICD-10 alcohol use disorder, and 2.2% had another drug use disorder.

More males than females had an alcohol and other drug use disorders: 9.4% of males and 3.7% of females met criteria for an alcohol use disorder, and 3.2% of males and 1.3% of females met criteria for another drug use disorder within the past 12 months.

The prevalence of substance use disorders decreased with increasing age: 10.6% of respondents aged 18-34 years met criteria for an alcohol use disorder and 4.9% met criteria for a drug use disorder. The rates of these disorders among those aged 55 years or older were 4.4% and 0.8%, respectively.

Substance use disorders were more prevalent among: the unemployed; those who had never married; and those who were Australian-born. Other drug use disorders were more prevalent among those living in capital cities.

Alcohol was the most widely used of any drug but more users of other drugs had a use disorder in the past year. Specifically, only 8.9% of those who used alcohol in the previous 12 months had an alcohol use disorder while 22.7% of those who used other drugs had another drug use disorder.

There was a moderate degree of comorbidity between substance use disorders and other common mental health problems. Just under half of females with a substance use disorder (46%) met criteria for at least one other mental disorder (anxiety or affective), and one fifth (18%) met criteria for *both* an affective and an anxiety disorder. A quarter (25%) of males with a substance use disorder met criteria for another mental disorder, with 10% meeting criteria for both an anxiety and an affective disorder. Just over a third (39%) of individuals with substance use disorders had a comorbid physical disorder.

Substance use disorders were associated with a moderate degree of disability. Individuals who met criteria for a substance use disorder had a higher mean number of days out of role than those who did not meet criteria for a substance use disorder. Relatively few people with a substance use disorder had sought assistance with their substance use problem from a mental health

professional (21% of women and 12% of men). Among those who sought help, general practitioners were the health professionals most likely to be consulted.

The results of the NSMHWB indicate that substance use disorders are relatively common among the Australian population. Their prevalence in Australia is reasonably comparable to that in surveys conducted in the United States using similar diagnostic interviews. The data from the NSMHWB provides a valuable resource for studying the prevalence of substance use disorders, their correlates, the disability that they cause, and the factors that predict who will and will not seek treatment for a substance use disorder. Subsequent reports will examine these issues.

1.0 INTRODUCTION

The use of alcohol and other drugs by Australian adults causes a range of adverse consequences including morbidity and premature mortality (English et al., 1995). The National Drug Strategy Household Surveys (Commonwealth Department of Health and Family Services, 1996) provide good data on the prevalence of the use of these drugs, but until recently there has been no nationally representative Australian data on the prevalence of substance use disorders and problems related to substance use. These have now been provided by the National Survey of Mental Health and Well-Being (NSMHWB) which administered a standardised diagnostic interview to a nationally representative sample of adults. It provides estimates of the prevalence and correlates of ICD-10 substance use disorders among Australian adults in the past year.

1.1 PREVIOUS STUDIES

Since the development of DSM-III (American Psychiatric Association, 1980) there have been a number of surveys of the prevalence of substance use and mental disorders in the general population (Robins, 1990). These have included the Epidemiological Catchment Area (ECA) studies conducted in the United States during the early to mid 1980s (Robins & Regier, 1991) and similar studies conducted at a number of other sites throughout the world (Bland, Newman & Orn, 1988; Canino et al., 1987; Kessler et al., 1994; Wells, Bushnell, Hornblow, Joyce & Oakley-Browne, 1989). These surveys have established that mental disorders affect a substantial minority of the population, and that substance use disorders are among the most common mental disorders in the community (Hall, 1996a).

One of the first major epidemiological surveys conducted was the ECA survey, which involved personal interviews with 20,000 Americans in 5 states (Regier et al., 1990; Robins and Regier, 1991; Regier et al., 1993). It indicated that alcohol use disorders were the second most common mental disorders among the major diagnoses that were assessed (Helzer et al., 1991). Just under 14% of the population suffered from alcohol use disorders (with 8% suffering from alcohol dependence) at some time in their lives (Robins and Regier, 1991).

The prevalence of alcohol use disorders was strongly related to gender: 24% of men and 5% of women had suffered from such disorders at some time in their lives, while 12% of men and 2% of women had alcohol use disorders in the last 12 months. The prevalence of alcohol abuse declined with age, from 14% among men aged 18-29 years to 2% among those aged over 65 years. In contrast, alcohol dependence was highest in the 30-44 and 45-65 year age groups (15%) and lower in the 18-29 (12%) and over 65 year-old age group (11%). Just under a third of the ECA sample (31% overall, 36% of men and 25% of women) had used at least one drug. Drug use disorders were diagnosed in 6% of the sample. Cannabis use disorders affected 4% of the sample, followed by stimulants (2%), sedatives (1%) and opioid (0.7%) use disorders.

The National Comorbidity Survey (NCS) was undertaken between 1990 and 1992 to examine the extent of comorbidity between substance use and non-substance use disorders in the US population (Kessler et al., 1994). It used a modified version of the Composite International Diagnostic Interview (CIDI) schedule to diagnose the same disorders as in the ECA using the DSM-III-R rather than DSM-III diagnostic criteria. The prevalence of alcohol use disorders was even higher in the NCS than the ECA, even though it differed from the ECA in assessing dependence symptoms only in those persons who had used alcohol 12 or more times in a year (Anthony et al., 1994). The proportion of the population that met lifetime criteria for alcohol use disorders was 24%.

The proportion of the population who experienced alcohol use disorders in the year before interview was 10% (14% men and 5% women). Men were more likely than women to become dependent on alcohol (Anthony et al., 1994). The lifetime prevalence of drug use disorders in the NCS was 12% (15% for men and 9% for women). The 12 month prevalence of drug use disorders in the NCS was 4% (5% among men and 2% among women).

There has not been any Australian mental health survey that has produced national estimates of the prevalence of common mental disorders according to DSM-III criteria . There have been population surveys in specific cities using the General Health Questionnaire (GHQ) to assess symptoms and the PSE to make ICD diagnoses (Henderson et al., 1977).

1.2 STUDY AIMS

In 1997, the Australian Bureau of Statistics undertook the NSMHWB to survey the mental health of a representative sample of the Australian adult population. Preliminary descriptive findings from the survey on the epidemiology of substance use disorders, derived from the NSMHWB, are reported in this paper. These data are used to address the following sets of questions:

1. What proportion of the Australian population met standardised diagnostic criteria for an ICD-10 diagnosis of harmful use or dependence on alcohol, cannabis, stimulants, sedatives and opioids in the past 12 months?

2. What are the correlates of substance use disorders in the Australian population?

3. What proportions of current users of different drug types meet ICD-10 criteria for dependence and harmful use?

4. What are the patterns of comorbidity between substance use disorders and other mental disorders?

5. What is the disability associated with substance use disorders?

6. What health services have been utilised by persons with substance use disorders?

2.0 METHOD

The NSMHWB sample was based on a stratified, multistage probability sample of persons aged 18 years and older in the population. Fieldwork was carried out by the Australian Bureau of Statistics (ABS) in 1997. All interviewer procedures were predetermined and all inputs and scoring outputs were standardised. Responses were recorded directly onto laptop computer by the interviewer. The data was weighted for two types of errors, variation in probability of being selected for interview within and between households, and variation of the sample from the characteristics of the national population. The overall response rate was 78% with approximately 10,600 participants. A more detailed discussion of the NSMHWB sampling design and its implementation has been given in the initial report of the survey findings (ABS, 1998).

Trained survey interviewers met with each designated respondent to administer the interview. The interviewers were given 24-hour access to a trained psychiatrist to deal with any concerns that arose in the course of the interview. The interview schedule included established measures of known reliability and validity to cover the following areas: demographics (age, sex, marital status and history, country of birth, education, occupation, source of income), disability (Ware et al., 1996) and neuroticism (Eysenck et al., 1985).

Mental disorders were assessed by a modified version of the CIDI (WHO, 1997). This was adapted for the NSMHWB to yield information about: substance use disorders (harmful use and dependence), affective disorders, and anxiety disorders (see Appendix A for lists of anxiety and affective disorders assessed). The interview also inquired about childhood adversity and suicidal ideation, disability related to main mental health and physical health problem (Von Korff et al., 1993), health service utilisation, perceived health needs (Meadows et al., 1996), days out of role for all positive diagnoses, and the General Health Questionnaire (Goldberg, 1972).

All CIDI modules produce diagnoses according to ICD-10 and DSM-IV classifications. The interview was designed to allow disability to be measured at the general, syndrome and principal complaint levels. The interview was restricted to symptoms in the last 12 months to minimise the uncertainty about recall of symptoms over the longer periods. Age of first onset was asked for clusters of symptoms when the person met criteria for a diagnosis. This provided greater confidence that identified symptoms occurred together and that they were not residual symptoms from previous episodes.

2.1 Assessment of Alcohol and Other Drug Use

Respondents were asked separate questions about their use of alcoholic beverages and other drugs including cannabis, stimulants, sedatives and opioids. The questions asked about the use of drugs such as marijuana and the "extramedical use" of prescribed drugs such as benzodiazepines. This is consistent with the approach taken in the NCS (Anthony et al., 1994). The questions asked whether drugs and medicines had been used "in larger amounts than was prescribed or for a longer period than was prescribed" or used "more than five times when they were not prescribed for you, to get high, to relax, or to make you feel better, more active, or alert". Additional questions covered age of onset of use, frequency and recency of use of each of four drug groups. These questions were a subset of those that were used in the NCS. They were selected to reflect the most widely used extramedical drugs among Australian adults, as indicated

in the Australian National Drug Strategy Household surveys (Commonwealth Department of Health and Family Services, 1996).

The drug groups were:

- cannabis (marijuana & hashish);
- amphetamines, ecstasy, speed and other stimulants which can be obtained by medical prescription including, dexedrine, preludin and ritalin;
- barbiturates and tranquillisers and other sedatives which can be obtained by medical prescription including, ativan, librium, megaton, normison, rohypnol, serepax, valium, xanax;
- opioids such as heroin and opium as well as other opioids and analgesics which can be obtained on medical prescription including, codeine, doloxene, methadone, morphine, percodan and pethidine.

The interviewee was given a detailed verbal description of each drug group and lists of drugs in each class. The interviewer read the questions and recorded the participants' responses on a laptop computer. This use of a computer to record answers in real-time differed from the ECA and NCS, which used pencil and paper. Studies have since shown excellent agreement between responses recorded via pencil and paper and those recorded via laptop computer (Peters, Clarke & Carrol, in press).

NSMHWB questions on the use of alcoholic beverages followed a similar format and asked about age of onset, frequency, recency and quantity of drinking. Respondents were also asked if they had consumed at least 12 standard drinks in the last 12 months. A standard drink was defined as 10g of alcohol. In addition, respondents were asked if they currently smoked tobacco, if they smoked at least once a day, and if they had ever smoked regularly (that is, at least once a day).

2.2 Diagnostic Assessment of Substance Use Disorders

The CIDI diagnostic assessment of substance use disorders for the NSMHWB was based on DSM-IV and ICD-10 criteria that were translated into standardised survey questions for administration by a trained lay interviewer. The CIDI is the most widely used interview in large epidemiological studies (Robins & Regier, 1991; Kessler et al., 1994). The CIDI assessments for substance use disorders have been shown to have excellent inter-rater reliability in large international field trials (Cottler et al., 1991; Wittchen et al., 1991) and the test-retest reliability has been shown to be good (Andrews & Peters, 1998; Cottler et al., 1991; Rubio-Stipec et al., submitted; Semler et al., 1987; Wacker et al., 1990; Wittchen et al., 1989; Wittchen et al., 1991). Indeed, the agreement for past year ICD-10 diagnoses of substance dependence across a mean interval of 9.2 days ranged from good (Kappa=0.62 for sedatives) to excellent (Kappa=0.92 for opiates) (Rubio-Stipec et al., submitted). The inter-rater reliability for substance use symptoms are also high with all Kappas greater than 0.94 (Cottler et al., 1991). The demonstrated reliability of the CIDI is important because unreliable interviews cannot be valid, the test-retest reliability places an upper limit on the relationship between the test and any other standard (Streiner & Norman, 1989).

The measurement of the validity of a measure is much more difficult than measuring its reliability (see Andrews & Peters, 1998 for a discussion of the issues). As with most interviews there are few studies of the validity of the CIDI assessments for substance use disorders. In an

early study, Farmer et al (1987) compared the agreement between the Present State Examination (PSE) and CIDI interviews. The agreement for syndromes was adequate (Overall Kappa =0.55). Janca et al. (1992) compared CIDI diagnoses to diagnoses completed by clinicians using a checklist after observing the administration of the CIDI. The overall agreement between the CIDI and the clinical diagnoses was good (Kappa = 0.77).

The validity of the CIDI has been further supported by the broad agreement between the findings of the ECA and the NCS which used improved diagnostic interview schedules and various other methodological refinements (Kessler et al, 1994). Thus, while community epidemiological surveys may not provide perfect estimates of the prevalence of mental disorders in the community they provide a reasonably valid portrait of the pattern of disorders in the community. This represents an enormous improvement on previous knowledge of the epidemiology of substance use disorders derived from clinical populations.

The assessment of substance use disorders was undertaken whenever a respondent reported extramedical use of drugs more than five times in the last 12 months, or when they reported consuming 12 or more drinks in total, and more than three drinks on any one occasion, in the past year. Substance use disorders were assessed whenever participants reported using prescribed drugs and medicines in larger amounts than was prescribed, or for a longer period than was prescribed or at least several occasions of extramedical drug use. The requirement of at least 5 occasions was based on the assumption that even as few as six occasions might be sufficient for development of a substance use disorder, and that substance use disorders would be extremely rare among persons who had used the drug less than five times.

In this report, we present prevalence estimates based on ICD-10 criteria for harmful use and dependence. The two categories are mutually exclusive so that a person meeting criteria for dependence cannot also be categorised as having harmful use. These criteria are described below.

2.21 ICD-10 HARMFUL USE

ICD-10 Harmful Use criteria require a pattern of substance use that is causing damage to health. The damage may be physical (e.g. hepatitis from sharing contaminated injecting equipment) or mental (e.g. depression secondary to heavy consumption of alcohol).

2.22 ICD-10 DEPENDENCE

ICD-10 Dependence criteria require the presence of three or more indicators of alcohol or other drug dependence. These include: a strong desire to take the substance; impaired control over the use; a withdrawal syndrome on ceasing or reducing use; tolerance to the effects of alcohol or other drugs; requiring larger doses to achieve the desired psychological effect; a disproportionate amount of the user's time is spent obtaining, using and recovering from alcohol or other drugs; and the user continuing to drink alcohol or take other drugs despite associated problems. The problems should have been experienced at some time during the previous year for at least one-month.

2.3 ESTIMATION PROCEDURES

This paper presents population estimates of the 12-month prevalence of extramedical substance use, and the 12-month prevalence of ICD-10 substance use disorders for alcohol and the other drugs previously listed. In the case of prevalence of use, the numerator consists of the estimated number of persons who have had at least five occasions of extramedical drug use in the last 12 months, and the denominator is the total study population. Each population prevalence estimate for substance use disorders has the total study population for the denominator. The numerator is the estimated number of persons who qualify for the ICD-10 diagnosis of a substance use disorder in the last 12 months. In addition, for each individual drug or drug group, estimates were provided of the proportion of drug users in the survey who met criteria for a substance use disorder in the last 12 months.

Estimates are also given of the strength of association between substance use disorders and various risk factors identified in previous studies. Table 1 gives a frequency distribution for each variable considered in this analysis based on NSMHWB sample data. Estimates from the survey were derived using a complex estimation procedure, which ensures that survey estimates conform to independent population estimates by State, part of state, age and sex. Odds ratios were used to indicate the strength of association between each of these variables and substance use disorders. The odds ratios were estimated from logistic regression/cross tabulations using the statistical package SPSS-X. The 95% confidence intervals (CI) around differences based on a sample of 10 600 adults are given in Appendix A (only significant results are reported in the paper). The remaining results reported in this paper are based on weighted data.

Table 1: Description of NSMHWB Sample

Characteristic	Men (49.2%)	Women (50.8%)	Total
Age (years)			
18-34	35.1	34.0	34.5
35-54	39.1	37.9	38.5
55+	25.8	28.1	27.0
Country of Birth			
Australian Born	73.3	76.2	74.8
Not Australian Born	26.7	23.8	25.2
Employment			
Employed	72.1	54.8	63.3
Unemployed	5.0	3.4	4.2
Not in Labour Force	22.9	41.8	32.5
Education (highest)			
Post-school qualification	54.1	41.0	47.4
Secondary school	15.9	18.1	17.1
Didn't complete secondary	29.5	40.3	34.9
Household			
Live Alone	10.2	13.1	11.7
Live with others	89.8	86.9	88.3
Marital Status			
Married or defacto	67.1	63.3	65.2
Separated/divorced	6.3	9.8	8.0
Never married	24.4	17.9	21.1
Widowed	2.2	9.0	5.7
Geographical area			
Capital city	64.5	65.3	64.9
Rest of state	35.5	34.7	35.1

3.0 RESULTS

3.1 PREVALENCE OF SUBSTANCE USE DISORDERS IN THE PAST 12 MONTHS

Table 2 shows estimates of the 12-month prevalence of use, harmful use and dependence on alcohol, cannabis, sedatives, stimulants and opioids. The results presented in this table are summarised below:

3.11 SUBSTANCE USE

Alcohol is widely used by Australian adults, with 83.1% of males and 63.5% of females reporting that they had consumed at least 12 drinks of alcohol in the preceding year.

The prevalence of other types of drug use was considerably lower. An estimated 12.5% of males and 6.9% of females reported the extramedical use of at least one of the other drug classes (cannabis, stimulants, sedatives and opioids) in the past year. The most commonly used drug was cannabis, with 10.3% of males and 4.3% of females reporting that they had used it at least 5 times in the preceding 12 months. The use of stimulants, sedatives and opioids was estimated in the survey population to be between 1.3 - 1.9% of males, and 0.6 - 2.3% of females. It was estimated that 0.7% of males and 0.3% of females had injected drugs within the preceding 12 months (Appendix C).

With the single exception of sedatives, all the substances assessed in this survey was more common among males than among females. Overall, 84.3% of males reported using at least one substance (including alcohol) in the past year, compared with 64.7% of females.

Table 2: Prevalence (%) of substance use, diagnoses of harmful use and dependence by gender

	Use in Past 12 Months #			**Harmful Use****			**Dependence****		
	M*	**F**	**P**	**M**	**F**	**P**	**M**	**F**	**P**
Alcohol	83.1	63.5	73.1	4.3	1.8	3.0	5.1	1.9	3.5
Any Drug	12.5	6.9	9.7	0.3	0.1	0.2	2.9	1.2	2.0
Cannabis	10.3	4.3	7.3	0.2	0.1	0.1	2.5	0.7	1.6
Stimulants	1.4	0.6	1.0	0.1	0.0	0.1	0.2	0.1	0.2
Sedatives	1.9	2.3	2.1	0.0	0.0	0.0	0.4	0.4	0.4
Opioids	1.3	1.0	1.2	0.0	0.0	0.0	0.2	0.2	0.2
Any Substance	84.3	64.7	74.3	4.5	1.9	3.2	7.1	2.8	4.9

*M = males, F = females, P = persons # Use defined as at least 12 drinks for alcohol, and 5 times for all other drugs
** Addition of harmful use and dependence diagnoses is referred to as “use disorder”

Injecting drug use in the past 12 months was reported by 0.5% of the study population (Appendix C). More males than females reporting injecting a drug, and the prevalecne of injectinmg decelined steeply with age from 1% of those aged 18-34 reported injecting drug use to only .03% of those aged 55 years or older. Males between the age of 18 and 34 years accounted for approximately half of all those who reported injecting drug use.

One in four of the adult Australian population (25%) reported current regular tobacco use (at least once a day) (Appendix D). Rates of tobacco use were higher among males (27.1%) than females (23.1%). There was an approximately linear decrease in the prevalence of current regular tobacco use with age: 33.4% of respondents aged 18-34 years old were regular smokers compared with only 13.8% of those aged 55 years or older.

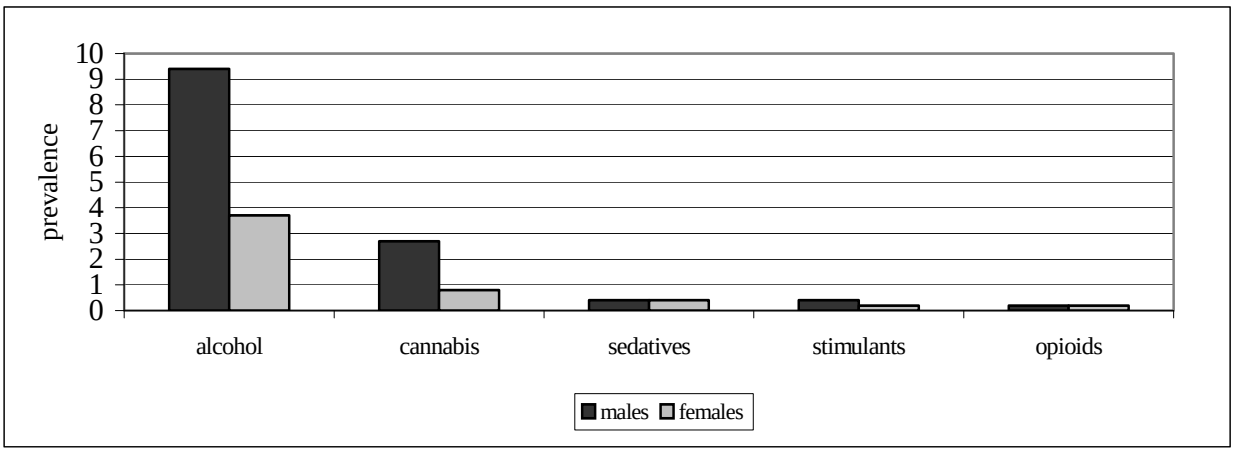
3.12 HARMFUL USE AND DEPENDENCE

An estimated 6.5% of the population met criteria for an alcohol use disorder (3.0% with harmful use, and 3.5% with dependence), and 2.2% had a drug use disorder (0.2% with harmful use, and 2.0% with dependence) on at least one of the controlled substances in the last 12 months (Table 2). Thus, alcohol use disorders were the most prevalent, affecting about 1 in 15 persons in the past 12 months. Drug use disorders affected about 1 in 45 persons in the past 12 months.

Cannabis accounted for more drug use disorders than any other drug: 1.7% qualified for 12 month diagnosis of a cannabis use disorder. Sedative use disorders were next in rank, with 0.4% of the study population meeting criteria for this disorder; 0.3% met criteria for a stimulant use disorder, and 0.2% met criteria for an opioid use disorder in the past 12 months (Figure 1).

The overall prevalence of alcohol and other drug use disorders studied was higher among males than among females (Figure 1 and Table 2). Specifically, 9.4% of males and 3.7% of females met criteria for an alcohol use disorder; 3.2% of males versus 1.3% of females met criteria for a drug use disorder (harmful use or dependence on cannabis, stimulants, sedatives or opioids). In total, 11.6% of males versus 4.7% of females met criteria for harmful use or dependence on any substance including alcohol.

Figure 1: Prevalence (%) of substance use disorders by gender



3.2 Correlates of Substance Use Disorders in the Australian population

The associations between the prevalence of substance use disorders and a range of socio-demographic characteristics including gender, age, country of birth, employment, education, household composition, marital status and geographical area are examined below. For the analyses, two main outcomes measures are assessed: alcohol use disorders (including harmful use and dependence) and other drug use disorders (including harmful use and dependence on cannabis, stimulants, sedatives and opioids).

It was not possible to present the socio-demographic correlates separately for harmful use and dependence for each type of substance (cannabis, stimulants, sedatives, and opioids) because of low prevalence rates of each of these drug use disorders. Accordingly, the decision was made to collapse these disorders into the two broad categories described above. This has the advantage of providing meaningful comparisons between the prevalence and correlates of alcohol and drug use disorders. Table 3 gives the estimated 12-month prevalence of alcohol and drug use disorders by correlates, and the findings are discussed below.

3.21 Gender and age

Men were more likely than women to meet criteria for an alcohol use (9.4% of men, 3.7% of women) or a drug use disorder (3.1% of men, 1.3% of women; Table 3). In both men and women, Figure 2 shows that the prevalence of substance use disorders decreased steadily with increasing age: alcohol use disorders were highest among 18-34 year olds (10.6%) and lowest among those over age 55 (4.4%). Rates of alcohol use disorders among those aged 35-54 were intermediate (6.1%). Similarly, drug use disorders were most likely to be found among young adults (4.9%) and least likely to be found among individuals over 55 years of age (0.8%).

Figure 2: Prevalence (%) of alcohol and drug use disorders by age and gender

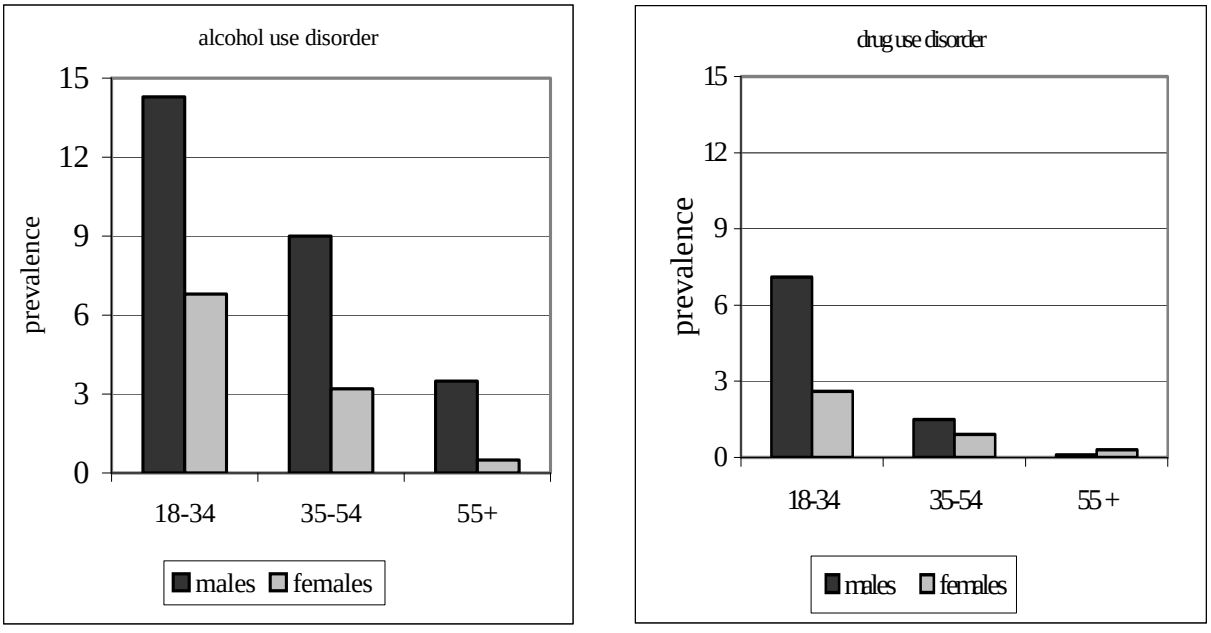


Table 3: Demographic correlates of alcohol and other drug disorders

Characteristic	Alcohol Use disorder (%)	Other Drug Use Disorder (%)
Gender		
Male	9.4	3.1
Female	3.7	1.3
Persons	6.5	2.2
Age (years)		
18-34	10.6	4.9
35-54	6.1	1.2
55+	1.9	0.2 #
Country of Birth		
Australian Born	7.1	2.5
Not Australian Born (ESB)	6.2	1.4
Not Australian Born (NESB)	3.4	1.4
Employment		
Employed full time	8.2	2.0
Employed part time	6.7	2.4
Unemployed	13.2	11.5
Not in Labour Force	3.2	1.2
Education		
Post –Secondary	6.5	1.7
Completed Secondary	8.0	2.5
Did not complete Secondary School	5.7	2.6
Household		
Live Alone	6.6	2.4
Live with others	6.5	2.2
Marital Status		
Married	4.5	1.0 #
Separated/Divorced	9.4	2.6
Widowed	0.7 #	0.1 #
Never married	13.1	6.3
Geographical Area		
Capital City	6.3	2.4
Rest of State	6.9	1.8

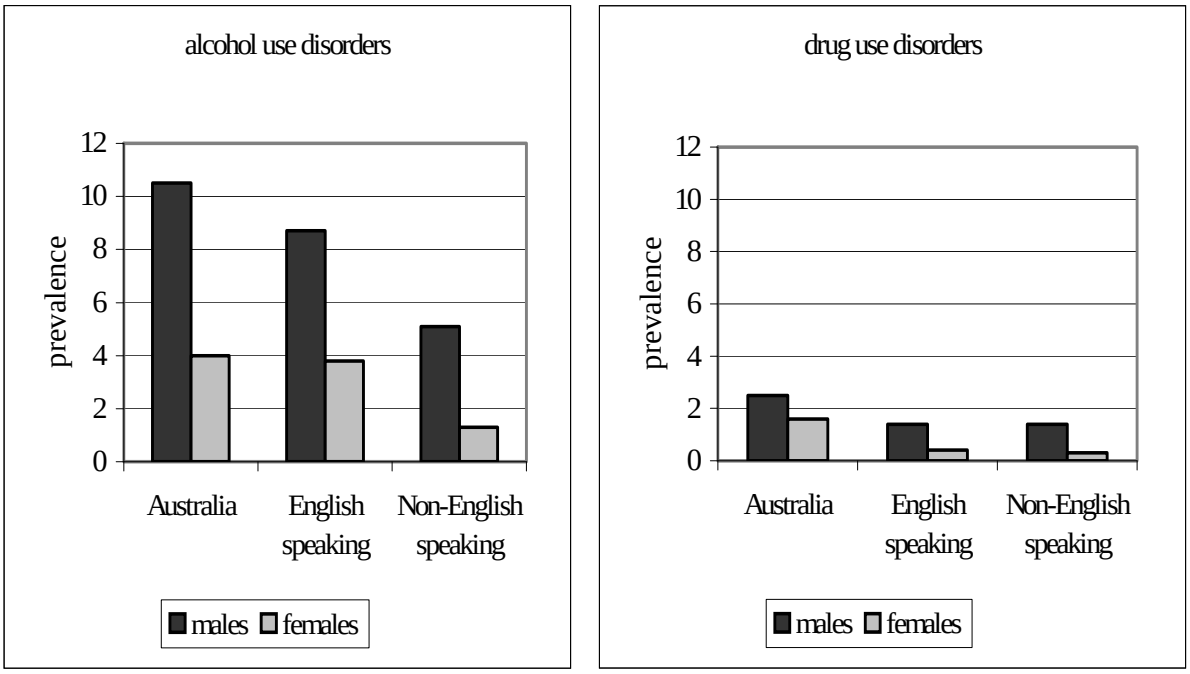
This estimate could contain a significant amount of error due to the small size of the estimate

3.22 COUNTRY OF BIRTH

The prevalence of alcohol use disorders was similar for those born in Australia and other English speaking countries (7.1% and 6.2% respectively) but it was lower among those from non-English speaking backgrounds (3.4%; Figure 3, Table 3).

Australian-born respondents were more likely to have a drug use disorder than those who were born in other countries. The prevalence of drug use disorders among Australian-born respondents was 2.5%, compared to 1.4% among those from English and non-English speaking backgrounds.

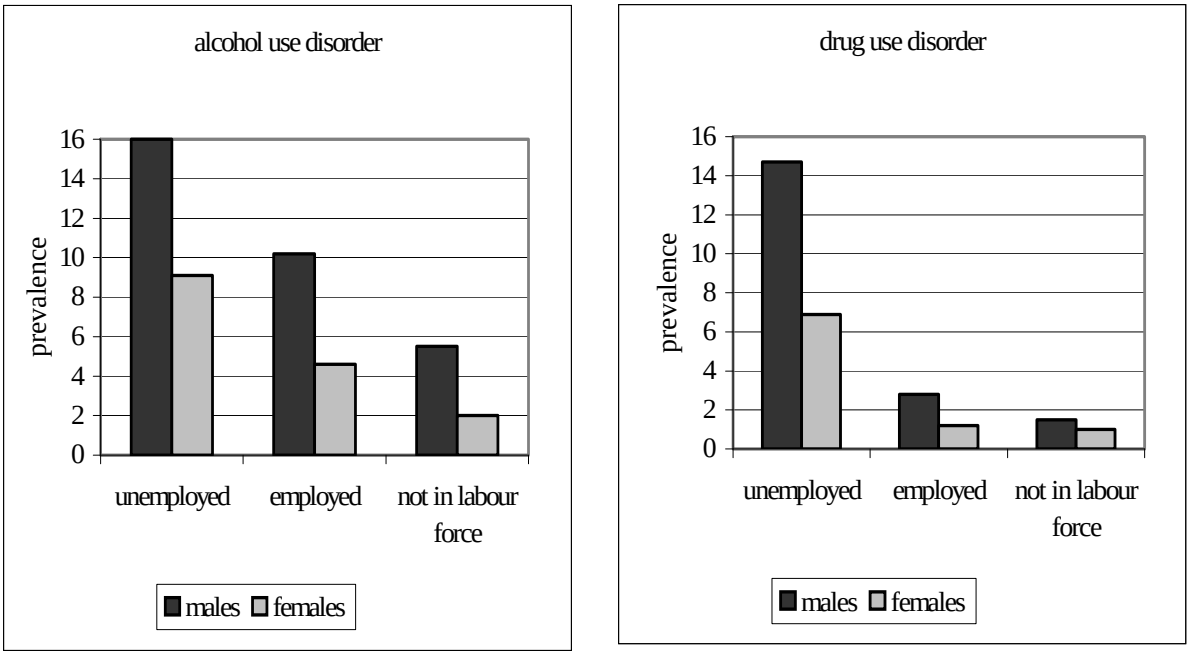
Figure 3: Prevalence (%) of alcohol and other drug use disorders by gender and country of birth



3.23 EMPLOYMENT AND EDUCATION STATUS

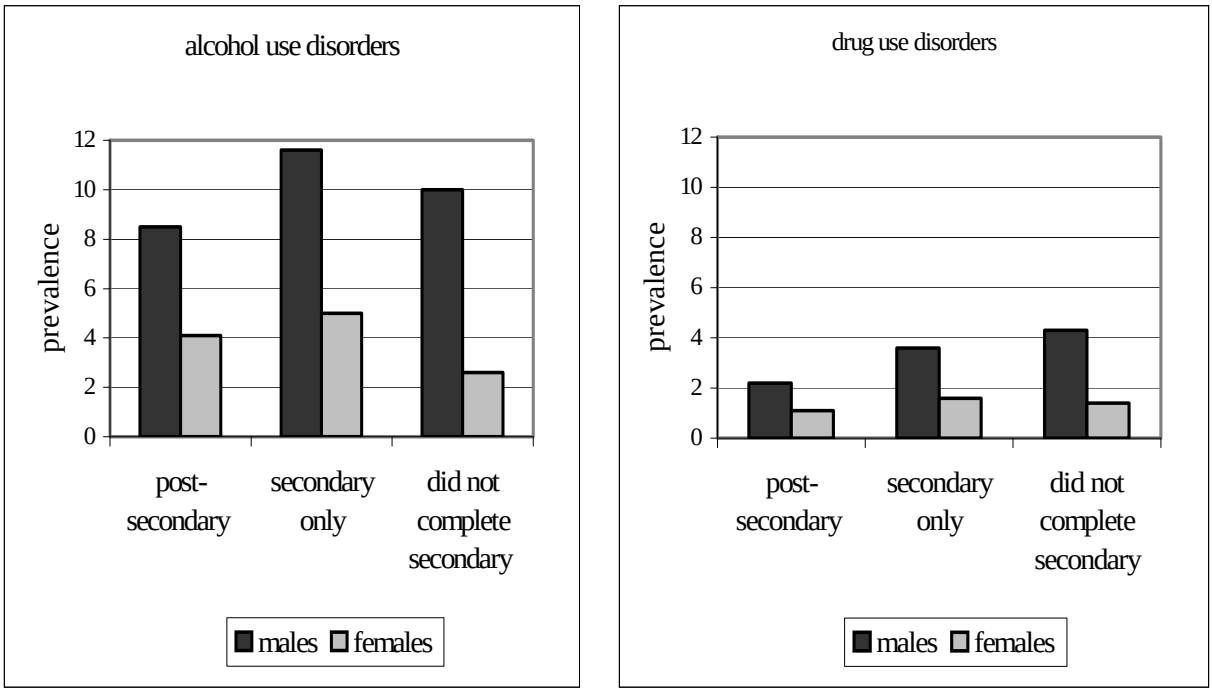
In comparison with employed workers, the unemployed generally had a higher 12-month prevalence of both alcohol (13.2% versus 7.8%) and drug use (11.5% versus 2.1%) disorders (Figure 4, Table 3). Furthermore, those not in the labour force were less likely than the unemployed to have alcohol use disorders (13.2% versus 3.2%) and drug use disorders (11.5% versus 1.2%).

Figure 4: Prevalence (%) of substance use disorders by gender and employment status



Low educational achievement had a weak association with substance use disorders among males (Figure 5, Table 3). Males who had post-secondary qualifications were a little less likely than those who only had some secondary education to have an alcohol used disorder (8.5% versus 10.6%). Similarly, males with more education were less likely to have a drug use disorder than those who had completed fewer years of education (2.2% versus 4.1%). There were no observed differences in the drug and alcohol use disorders among females who differed in education..

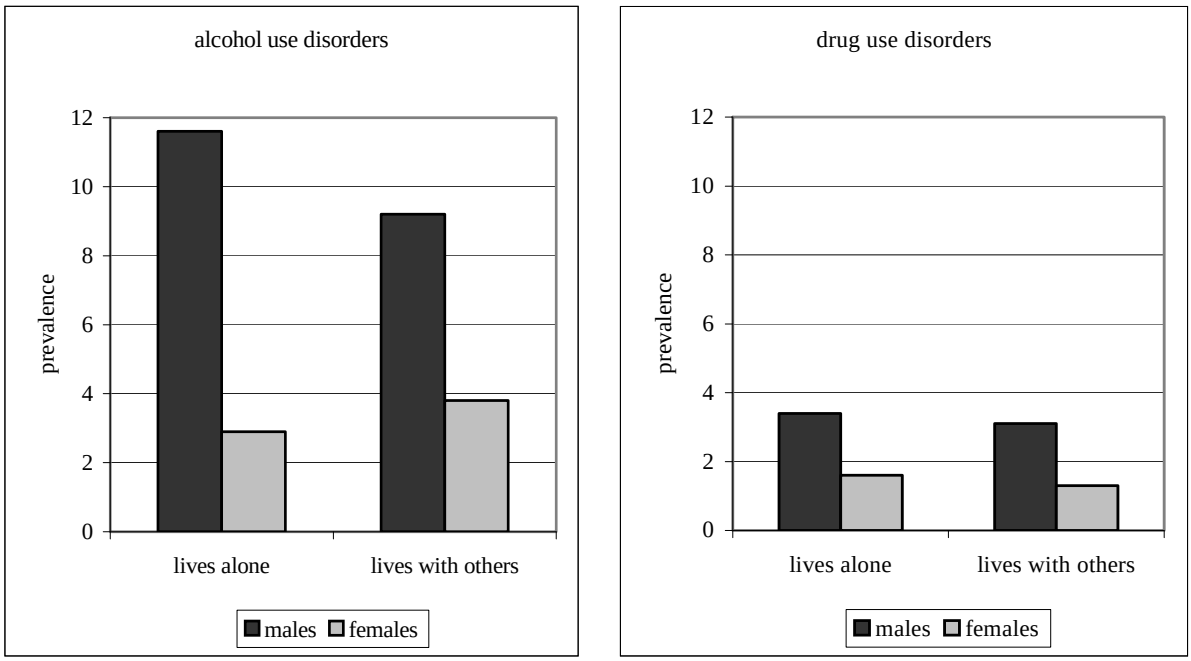
Figure 5: Prevalence (%) of alcohol and drug use disorders by gender and education



3.24 HOUSEHOLD COMPOSITION

Two thirds of the study population (65%) was married or living in a defacto relationship but a substantial minority of respondents (12%) lived alone in their households (Table 1). Figure 6 presents the relationship between drug and alcohol use disorders and household composition.

Figure 6: Prevalence (%) of alcohol and drug use disorders by gender and household composition



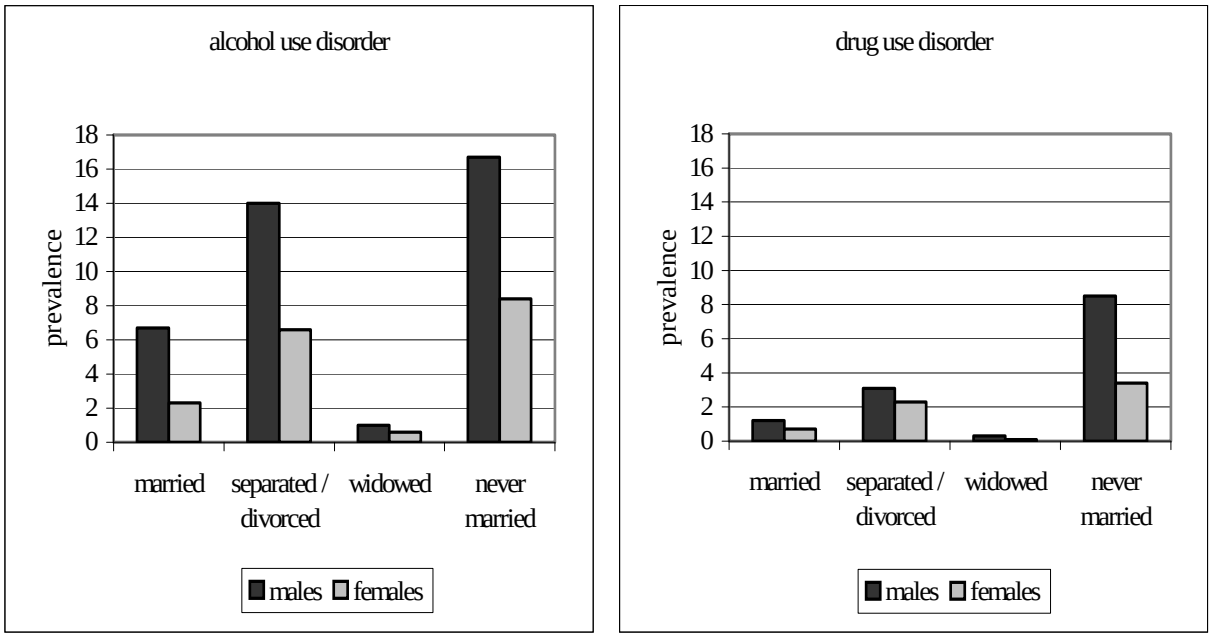
Approximately 11.6% of men living alone, and 9.2% of men living with others, had an alcohol use disorder. Of women living with others, 3.8% had an alcohol use disorder as against 2.9% of those living alone. There was little difference for men or women in the likelihood of having a drug use disorder according to whether they lived alone or with others (3.4% versus 3.1%, and 1.6% versus 1.3% respectively).

3.25 MARITAL STATUS

Alcohol use disorders were more common among persons who had never been married than among those who were currently married (13.1% versus 4.5%; Figure 7, Table 3). Similarly, more people who had never married had a drug use disorder than those who were married, (6.3% and 1.0% respectively).

Individuals who were separated or divorced had rates of both alcohol use disorders (9.4%) and drug use disorders (2.6%) that were intermediate between the corresponding rates among those who were married and those who had never been married. The higher rate of substance use disorders among those who have never married is in part due to the younger age of those who have not married.

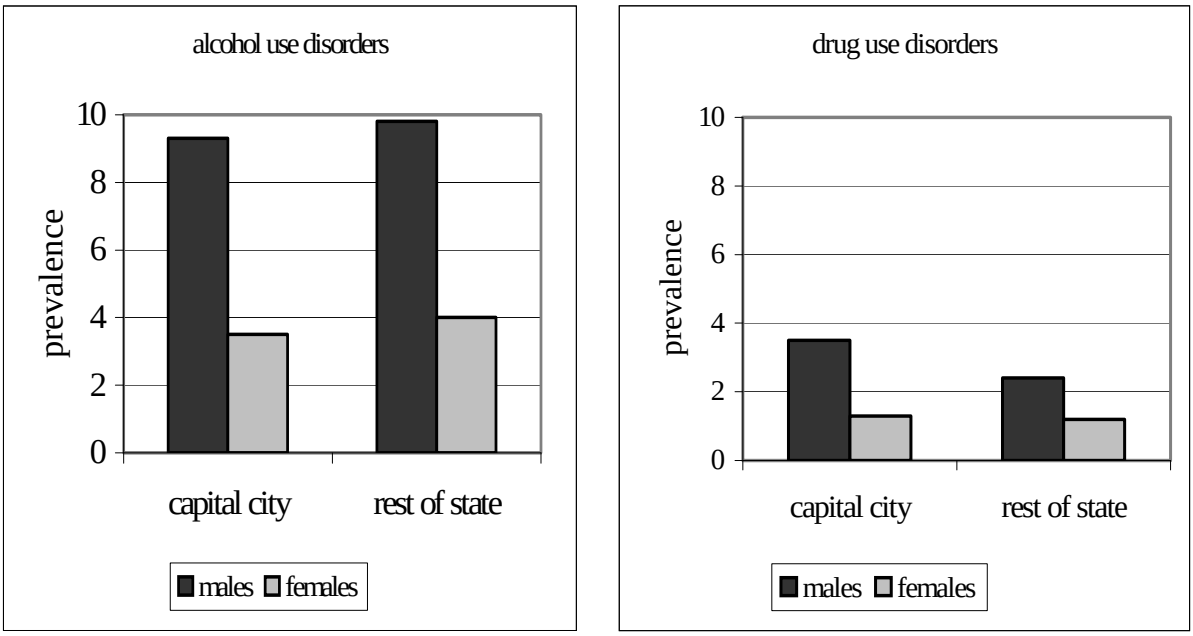
Figure 7: Prevalence (%) of alcohol and drug use disorders by gender and marital status



3.26 LOCATION OF RESIDENCE

Approximately 6.9% of those living in other cities had an alcohol use disorder, with 6.3% of those living in the cities having an alcohol use disorder (Figure 8, Table 3). Drug use disorders were more likely to be found in capital cities (2.4%) than in the rest of the state (1.8%).

Figure 8: Prevalence (%) of alcohol and drug use disorders by location of residence



3.3 Substance Use and risks of Substance Use Disorders

The prevalence of alcohol and drug use disorders among persons who have used substances in the past year gives some indication of the relative dependence potential of each drug class. An examination of the prevalence of substance use disorders among people who had used alcohol, cannabis, stimulants, sedatives and opioids during the past year is shown in Table 4.

For the purposes of this analysis, an individual was classified as having used alcohol in the past year if they had consumed an alcoholic beverage at least 12 times in the last year. By contrast, an individual was considered to have used cannabis, stimulants, sedatives or opioids in the past year if they reported using that substance more than five times in the last 12 months. Classifications of harmful use and dependence were based on ICD-10 criteria for substance use disorders.

A much smaller proportion of the study population had used drugs more than five times in the last 12 months (9.7%) than had consumed more than 12 alcoholic beverages in the same period (73.1%). This reflects the differing legal status and the greater availability of alcohol than other drugs. Substance use disorders were more likely to have occurred among drug users than alcohol users. One in four of those who had used drugs other than alcohol had a drug use disorder in the past year (22.7%) whereas only 8.9% of alcohol users had developed an alcohol use disorder in the past year. However, it must be noted that the differences between the rates of use disorders among users of alcohol and drugs reflects in part the fact that alcohol use is more likely to continue into older age, and the average consumed decreases with increasing age.

After alcohol, cannabis was the next most frequently used drug. Within the study population, an estimated 7.3% had used cannabis on at least 5 occasions in the past 12 months and approximately 23.3% of users met criteria for a cannabis use disorder. Thus, one in four cannabis users met criteria for a cannabis use disorder while one in eleven users of alcohol met criteria for an alcohol use disorder. Similar statistics are reported for other drug types, but the small numbers of cases mean that these should be interpreted with caution.

Table 4: Prevalence (%) of substance use, substance use disorders, and proportion of users meeting criteria for substance use disorders

	% using in last 12 months	%with substance use disorder in last 12 months	% of users with 12 month substance use disorder
Alcohol	73.1	6.5	8.9
Other drugs	9.7	2.2	22.7
Cannabis	7.3	1.7	23.3
Sedatives	2.1	0.4	19.0
Stimulants	1.0	0.3	30.0
Opioids	1.2	0.2	16.7

NOTE: Any drug group refers to the aggregate category comprising cannabis, sedatives, stimulants and opioids.

3.4 AGE AND SPECIFIC DRUG USE DISORDERS

Table 5 examines the percentage of users of alcohol and other drugs who met criteria for a substance use disorder within the last 12 months. The results show that while there was a decline with age in the percentage of people who reported using alcohol, there was a far more marked decline in the prevalence of alcohol use disorders with increasing age.

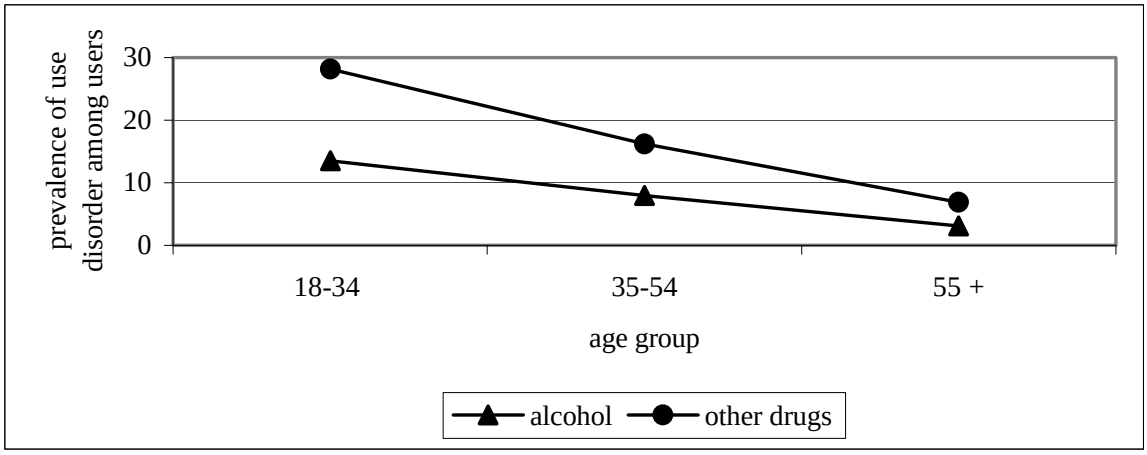
Table 5: Prevalence (%) of substance use, substance use disorders and proportion of users meeting criteria for substance use disorder by age

	% using in last 12 months	%with substance use disorder in last 12 months	% of users with 12 month substance use disorder
Alcohol			
18-34	78.7	10.6	13.5
35-54	75.8	6.1	8.0
55+	62.1	1.9	3.1
Other drugs			
18-34	17.4	4.9	28.2
35-54	7.4	1.2	16.2
55+	2.9	0.2	6.9

NOTE: Any drug group refers to the aggregate category comprising the controlled substances but not alcohol

Consequently, there was a steep and approximately linear decline in the percentage of alcohol users who met criteria for an alcohol use disorder with increasing age: 13.5% of 18-34 year olds who used alcohol met criteria for an alcohol use disorder in the last 12 months compared with only 3.1% of alcohol users aged 55 years or older (Figure 9).

Figure 9: Proportion of alcohol or drug users who had use disorders by age



A similar pattern emerged for other drug use and other drug use disorders. While there was a steady decline in the percentage of users of other drugs with increasing age, there was a more pronounced decline in the prevalence of drug use disorders with increasing age. Thus, there was a steep and approximately linear decline in the percentage of other drug users who met criteria for a drug use disorder with increasing age (Figure 9). Approximately 28.2% of 18-34 year olds who used other drugs met criteria for a drug use disorder in the last 12 months, compared with only 6.9% of those aged 55 years or older who used other drugs. The small size of the estimates for the 55+ age group make these figures somewhat unreliable but the general trend holds.

3.5 COMORBID MENTAL DISORDERS

There was a considerable degree of comorbidity between substance use disorders and other mental health disorders (Figure 10). Just under half of females with a substance use disorder (46%) met criteria for an anxiety or affective disorder, and one fifth (18%) met criteria for *both* an affective and an anxiety disorder. A quarter (25%) of males with a substance use disorder met criteria for another mental disorder, with 10% meeting criteria for *both* an anxiety and an affective disorder. Just over a third (39%) of individuals with substance use disorders had a comorbid physical disorder.

In comparison, among females who *did not* have a substance use disorder, 14.2% had at least one mental disorder, and 3.2% had *both* an anxiety and an affective disorder. Of men who did not have a substance use disorder, 7.1% had at least one mental disorder, and 1.5% had *both* an affective and an anxiety disorder.

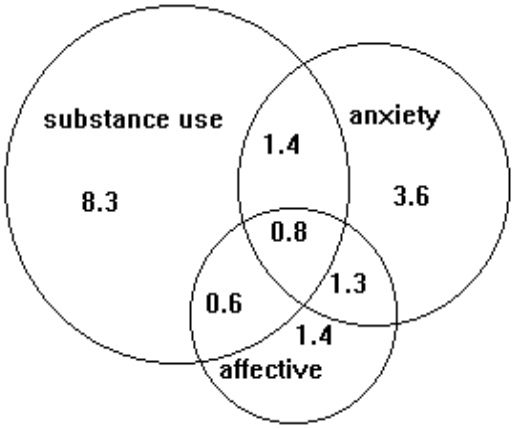
When compared to those without a substance use disorder, males who met criteria for a substance use disorder were 4.8 times more likely to have an affective disorder and 4.2 times more likely to have an anxiety disorder. Similarly, females with a substance use disorder were 4.7 times more likely to have an affective disorder and 5.2 times more likely to have an anxiety disorder than females without a substance use disorder.

Approximately 40% of females with an anxiety disorder met criteria for at least one other mental disorder, with 7% meeting criteria for *both*. Among males who had an anxiety disorder, half (49%) had at least one comorbid mental disorder, and with one fifth (19.5%) had *both* an affective and substance use disorder.

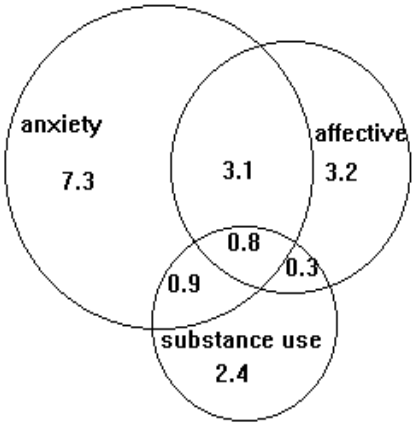
Among females with an affective disorder, over half (57%) met criteria for at least one other mental disorder, with 11% meeting criteria for *both* an anxiety and substance use disorder. Further, 66% of males with an affective disorder met criteria for another mental disorder, whilst one quarter (26%) met criteria for *both* an anxiety and a substance use disorder.

Figure 10: Prevalence (%) of comorbid mental disorders (substance use, affective or anxiety disorders) among males and females

Males



Females



3.6 DISABILITY

A preliminary assessment was made of the extent of disability associated with a substance use disorder by examining the number of days "out of role" reported by those with a substance use disorder only (those with comorbid mental disorders are not included). The "number of days out of role" refers to the number of days on which the respondent reported that he or she could not perform their usual activities or duties (such as attending work) during the past four weeks. It provides an approximate measure of disability.

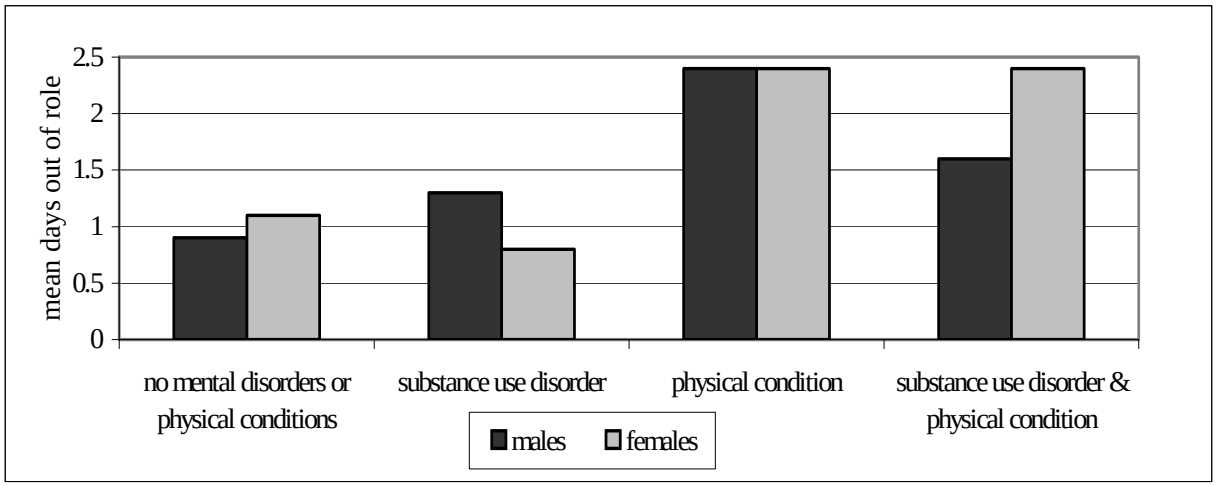
Men with no physical or mental disorders reported a mean of 0.9 days out of role. Men with a substance use disorder only had a marginally higher mean number of days out of role (1.3). In contrast, women with a substance use disorder had a lower mean number of days out of role (M = 0.8) than women with no physical or mental disorder (M = 1.1).

Men with both a physical condition and a substance use disorder had fewer days out of role (M = 1.6) than those with a physical condition alone (M = 2.4). There was no difference in the number

of days out of role for women who had either a substance use disorder with a physical condition, or those who had a physical condition only (both M = 2.4).

These data should be treated with caution because substance use disorders were more prevalent in younger age groups, so younger women might be expected to have fewer days out of role than older women. More detailed analyses will be undertaken of the relationship between days out of role and substance use disorder, including persons who have comorbid mental disorders.

Figure 11: Disability (days out of role during the past four weeks) associated with substance use disorders

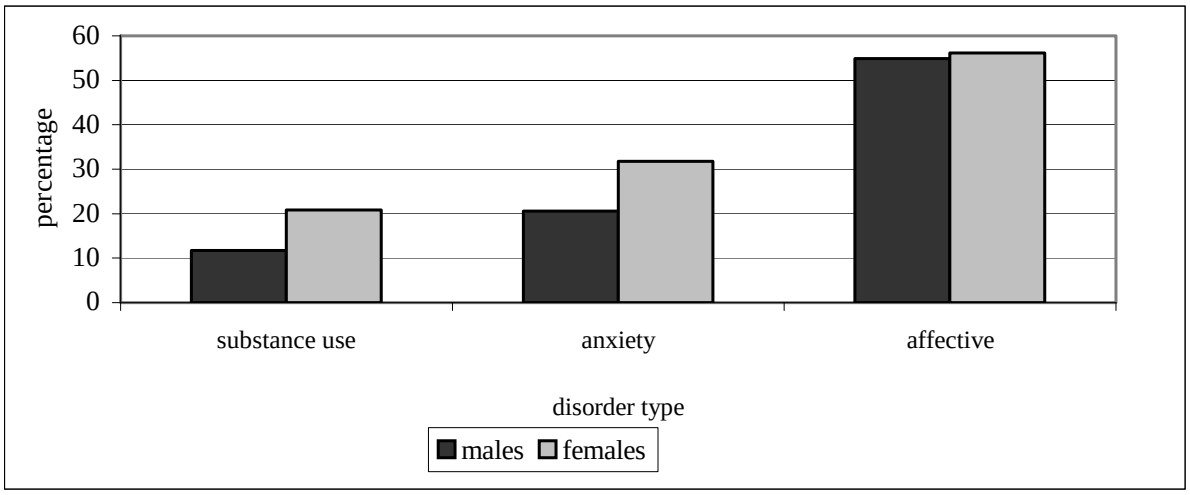


3.7 HEALTH SERVICE UTILISATION

Respondents with a substance use or other mental disorder were asked if they had sought assistance from a health professional for their disorder in the past 12 months. These included general practitioners, psychologists, psychiatrists, other mental health professionals, and other health professionals. "Other mental health professionals" included social workers, welfare officers, drug and alcohol counsellors, other counsellors, and a mental health team. "Other health professionals" included medical specialist, nurse, chemist, ambulance officer, and other health professional.

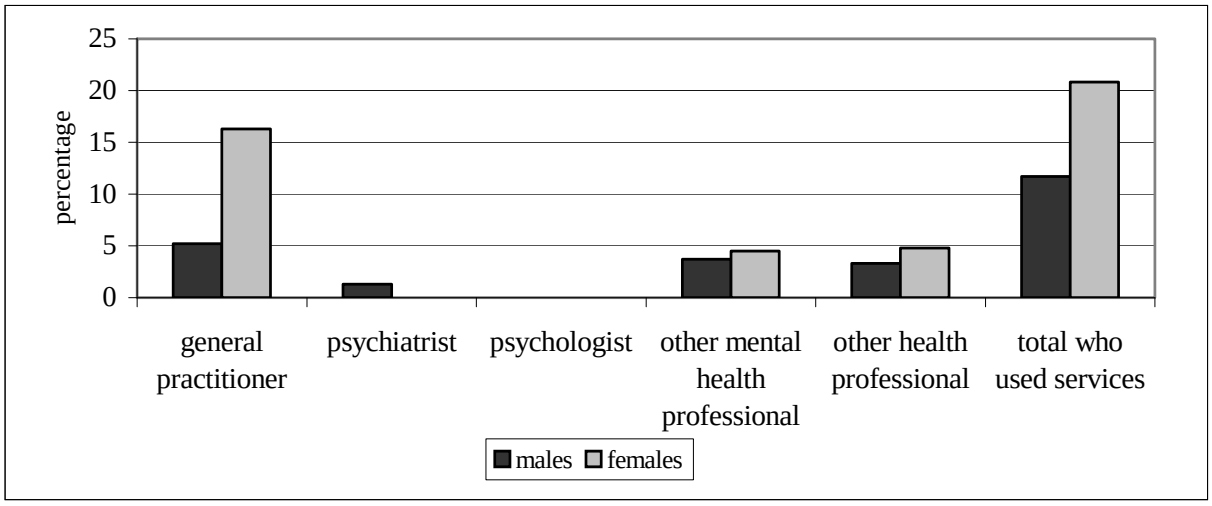
A third (38%) of all those who met criteria for a substance use or a mental health problem sought assistance from a health professional within the last year (Figure 12).

Figure 12: Percentage of those with mental disorders (substance use, affective or anxiety only) who used health services for a mental health problem by gender



There was considerable variation in patterns of service utilisation between persons with different types of mental health problems. Half of those with an affective disorder only (56%) had sought assistance from a health professional; one in four of those with an anxiety disorder only (28%) had done so but only 14% of those with a substance use disorder only had done so. Data were not available on persons with comorbid disorders.

Figure 13: Percentage of those with substance use disorders only who used health services for a mental health problem by gender



Rates of help seeking were higher among females (21%) than males (12%) who met criteria for a substance use disorder (Figure 13). General practitioners were the most commonly consulted professionals (three-quarters of women and just under half of men who sought treatment or assistance for a substance use problem). Relatively few people sought help from psychiatrists or psychologists. Other mental health professionals were consulted by approximately 4% of men and women with a substance use disorder.

4.0 DISCUSSION

The commonly held beliefs that substance use disorders are rare, that they have a poor prognosis and that persons with substance use disorders are typically older males have been challenged by the first representative survey of substance use disorders in the Australian population.

A substantial proportion of Australian adults (about one in 13) aged 18 years and older had a substance use disorder in the past 12 months. Males were about twice as likely as females to have a substance use disorder, with 11.1% of males and 4.5% of females meeting criteria for such a diagnosis in the past 12 months.

Alcohol use disorders were about three times as common as drug use disorders: 6.5% of Australians (9.4% of males and 3.7% of females) had an alcohol use disorder in the past 12 months. In comparison, 2.2% of Australians (3.1% of males and 1.3% of females) had a drug use disorder in the past year.

4.1 Some Caveats

It is likely that these estimates provide an underestimate of the prevalence of substance use disorders in Australian adults. First, the sampling frame for the current study was based on households thereby excluding groups, such as, the homeless or those living in institutions, who have higher rates of mental disorders than the general population. Several studies have sampled homeless people and residents of nursing homes and hospitals, for example, the ECA (Regier & Robins, 1991) and the British Household Survey (Meltzer, Gill, Petticrew & Hinds, 1996). These have found that the inclusion of persons in these groups would probably add a small fraction of 1% to the estimated percentage of the population who had a substance use or other mental disorder.

A second and larger potential source of error is the 21% non-response rate in the survey. Extensive efforts were made in the NCS (Kessler et al., 1994) to re-contact and interview individuals who initially declined to participate in the survey. Such individuals were offered a range of financial inducements to attempt to persuade them to participate in the study and, if they agreed, they were then interviewed using an abbreviated form of the original questionnaire. The rate of disorders among persons who initially declined to be interviewed in the NCS was higher than that of persons who initially agreed to be interviewed. For example, if the rate of substance use disorders among non-respondents in the NSMHWB was twice that among sample respondents, then the prevalence of substance use disorders among Australian adults may be as high as 9.4% (13.5% among males and 5.5% among females). The rates reported here therefore may slightly underestimate the rate of substance use disorders in the Australian population.

4.2 PREVALENCE OF SUBSTANCE USE AND OTHER PSYCHIATRIC DISORDERS

To place the substance use disorder findings in context we compare the prevalence rates of substance use disorders to that of other mental disorders assessed in the survey (ABS, 1998). The NSMHWB found that approximately one in five Australian (17.7%) had an anxiety, affective or substance use disorder. Anxiety disorders were the most common disorders, affecting 9.7% of adults, followed by substance use disorders (7.7%) and affective disorders (5.8%) (Table 6). Alcohol use disorders were the most common mental disorders reported by males. The prevalence of cannabis use disorders in adults (1.7%) falls between that of social phobia (2.7%) and panic disorder (1.3%).

Table 6: Prevalence (%) of Substance Use and other mental disorders by gender

	Persons	Females	Males
Depression	5.1	6.8	3.4
Alcohol dependence	3.5	1.9	5.1
Post-traumatic stress disorder	3.3	4.2	2.3
Generalised anxiety disorder	3.1	3.7	2.4
Alcohol harmful use	3.0	1.8	4.3
Social phobia	2.7	3.0	2.4
Cannabis use disorders	1.7	0.8	2.7
Panic disorder	1.3	2.0	0.6

4.3 COMPARISON WITH OTHER STUDIES

The 12-month prevalence rates for substance use disorders reported in the NSMHWB were generally similar to the NCS and ECA studies (Table 7; Anthony & Helzer, 1991), despite differences between the studies in the way that these disorders were assessed. In particular, the ECA assessed disorders according to DSM-III criteria and the NCS used DSM-III-R criteria, while in this report substance use disorders were diagnosed according to ICD-10 criteria. Andrews & Slade (in press) have reported that these two classification systems produce similar results for diagnoses of dependence, but differ in their diagnoses of harmful use.

Table 7: Comparison of 12-month prevalence estimates with other studies

Survey	Males (%)	Females (%)
NSMHWB		
Alcohol use disorder	9.4	3.1
Drug use disorder	3.7	1.3
ECA		
Alcohol use disorder	11.9	2.2
Drug use disorder	4.1	1.4
NCS		
Alcohol use disorder	14.0	5.0
Drug use disorder	5.0	2.0

Despite these different survey methods, the findings of these studies are remarkably consistent in showing that a substantial proportion of the adult population meet criteria for alcohol and other drug use disorders. Similarly, despite the methodological differences, the correlates of substance use disorders reported by the different surveys were similar. All surveys reported that substance use disorders are more common among males than females, and that the prevalence of these disorders was highest among young adults and declined linearly with age.

We compared the NSMHWB estimates for tobacco use with the NHS (National Health Survey) conducted in 1995 for consistency. The NHS ws a population survey which interviewed 23,800 residents of private dwellings (houses, flats etc) and non-private dwellings (hotels, motels, boarding houses, caravan parks, etc). Households were selected at random using a stratified multi-stage area sample which ensured that persons within each State and Territory had a known and equal chance of selection in the survey. The NHS found that 24% of the sample over 18 years of age were current regular smokers (at least one or more per day). By comparison, the estimate from the NSMHWB for current regular smoking among persons over 18 years of age was 25%.

4.4 Correlates of Alcohol and Other Drug use Disorders

The NSMHWB found associations between the prevalence of alcohol and other drug use disorders and the demographic characteristics of age, sex, marital status, education, employment and living arrangements. Many of these relationships have been reported in previous surveys (eg. Helzer et al., 1991; Anthony & Helzer, 1991; Kessler et al., 1994). It is nonetheless important to stress that these associations do not necessarily signal causal relationships between these characteristics and substance use disorders. The following discussion briefly indicates the major competing explanations of the observed associations.

4.41 Age and substance use disorders

Longitudinal studies of drinking reveal that one of the reasons for the decline with age is decreased exposure to alcohol with age (Bachman, Wadsworth, O'Malley, Johnstone & Schulenberg, 1997; Fillmore et al., 1991; Johnstone, Leino, Ager, Ferrer & Fillmore, 1996; Temple et al., 1991). Both the proportion of people who drink, and the frequency with which alcohol is consumed, decline with age (Adams & Cox, 1995). The heavy alcohol consumption and alcohol use disorders that are common among young adults in their early 20s (Fillmore et al., 1991) decline in the mid to late 20s, as they marry and assume the responsibilities of parenthood (Temple et al., 1991).

Excess mortality among heavy drinkers may also explain part of the age-related decline in alcohol use disorders. Heavy alcohol use in the early 20s is associated with an increased rate of premature death from accidents, violence, and suicide in early adulthood (Andreasson, Allebeck & Romelsjo, 1991). Continued heavy drinking into the early 30s and 40s produces liver cirrhosis, cancers and other serious medical consequences of sustained heavy drinking in the sixth and seventh decades (English et al., 1995; Thun et al., 1997). The reduced cardiovascular mortality associated with moderate alcohol use begins to become apparent in the 40s and 50s (Thun et al., 1997).

The contribution of life history and differential mortality to the age-related decline in alcohol use disorders has been accentuated by historical differences between birth cohorts in exposure to alcohol use in youth and early adulthood (Leino et al., 1998). Older Australian adults who grew up in a social environment in which alcohol was more expensive and less available than those born since World-War II had fewer opportunities to drink heavily during their young adult lives (Hall & Hunter, 1995).

There are less data on longitudinal trends, cohort differences and differential mortality among users of drugs other than alcohol, but what is available suggests that the reasons for the age-related decline in alcohol use disorders are equally plausible explanations for that of drug use disorders. Specifically, the use of cannabis declines steeply after the mid-twenties (Bachman et al., 1997; Kandel & Chen, 1995). Further, older adults have had fewer opportunities to use drugs than younger adults, because widespread illicit drug use during adolescence is largely a phenomenon that began in the late 1960s and early 1970s (Manderson, 1993). Some types of illicit drug use, especially the opioid drugs, are associated with higher rates of premature mortality (English et al., 1995), but it is unlikely that this has made much of a contribution to the age-related decline because so few young adults use opioid drugs.

4.42 GENDER AND SUBSTANCE USE DISORDERS

Males had higher rates of alcohol and most drug use disorders in all age groups. This largely reflects much higher rates of exposure to heavy alcohol use and drug use among males than females (Helzer et al., 1991; Anthony & Helzer, 1991).

Social change may have reduced differences in the risk of alcohol use disorders between younger men and women. Greater tolerance of female drinking and more opportunities for young women to drink under more liberal licensing laws (Leino et al., 1998), may have contributed to higher rates of hazardous drinking among young women (Copeland & Hall, 1995). These changes are reflected in the sex ratios of alcohol use disorders: the ratio was 2.0 among Australians aged 18 to 24 years in 1997, compared to 10.5 among those aged over 65 years.

4.43 OTHER DEMOGRAPHIC CORRELATES

Several demographic correlates were found to be related to the likelihood of having an alcohol or drug use disorder. Those who were married were less likely than those who were not currently married to have a drug or alcohol use disorder. This may be because being unmarried increases the possibility of developing a substance use disorder, or it may be because persons with alcohol or drug use disorders may be disadvantaged in seeking partners and are therefore more likely to be unmarried. Such explanations cannot be distinguished on the basis of cross-sectional survey data.

Those who were unemployed or not in the labour force were more likely than employed persons to have a substance use disorder. This could be due to the possibility that persons with substance use disorders find it difficult to find or maintain employment. Alternatively, those who become unemployed, or who leave the labour force, may be more likely to use alcohol or other drugs, and are hence at increased risk of developing a substance use disorder.

The observed pattern of differences in the pattern of substance use disorders according to level of education attained may reflect several factors. Those who attain different education levels may have different levels of exposure to alcohol and other drugs; and increased education may involve an increased awareness of the risks involved in using alcohol and other drugs.

There was a small difference in the likelihood of having a substance use disorder according to a person's location of residence: those who lived in the capital cities were more likely to have a drug use disorder than those who lived in the rest of the state. This may reflect a higher level of exposure to drugs in capital cities compared to country and regional areas.

Finally, an individual's country of birth was associated with the likelihood of developing a substance use disorder. Compared to those born in Australia, those who came from non-English speaking countries were less likely to have alcohol or drug use disorders, while those who came from other English speaking countries were less likely to have drug use disorders. This may reflect the tendency for those who are more healthy to be both more able to migrate to another country, and more likely to be accepted as residents by the host country.

4.5 Drug Use to Drug Use Disorder: The transition

Analyses of the proportions of current users of alcohol and other drugs who met criteria for a substance use disorder revealed that although alcohol use and alcohol use disorders were more prevalent than other drug use or drug use disorders, a higher percentage of those who had used other drugs met criteria for a drug use disorder in the past year.

These findings parallel those reported by Kessler et al. (1994), who examined the relationship between lifetime substance use and substance dependence. Despite differences in both the time frame (lifetime in the NCS versus 12-month period in the NSMHWB) and the definition of drug use disorder (DSM-III-R drug dependence in the NCS study versus ICD-10 harmful use or dependence in the NSMHWB), both studies concluded that more drug users met criteria for a drug use disorder than did alcohol users. This finding must be qualified by the fact that there were more older, moderate alcohol users, reflecting its legal status. Drug users are much younger, and most discontinue rather than moderate their use in middle age.

4.6 Comorbidity

The analysis of comorbid disorders indicated that individuals who had a substance use disorder also have higher rates of other mental disorders than those who did not have a substance use disorder. Approximately half (46%) of females with a substance use disorder met criteria for another mental disorder, compared to 14% of females who did not have a substance use disorder. A quarter of males who had a substance use disorder (25%) had another mental disorder, compared to 7% of men who did not have a substance use disorder. This finding which has been reported by a large number of previous studies, has a number of important implications for the treatment and management of substance use disorders and other mental disorders that are discussed elsewhere (Hall, 1996b; Hall & Farrell, 1996).

Persons with substance use disorders that are complicated by the co-occurrence of other mental disorders have a poorer prognosis and are more difficult to treat than those without comorbid disorders (Drake et al., 1993; McLelland et al., 1983; Teesson & Gallagher, in press). Comorbid

disorders are more likely to result in greater service utilisation (Kessler, 1995). They therefore cause considerable social costs in terms of marital breakdown, social isolation, poor educational attainment, unemployment and chronic financial difficulties to those affected by them (Kessler, 1995). Cases of substance use disorders with comorbid mental disorders are also over-represented in clinical populations (Galbaud et al., 1993; Kessler, 1995).

4.7 Treatment Seeking

This study found, as did the ECA and NCS, that only a relatively small proportion of those who met criteria for a substance use disorder had sought professional help for their disorder. Treatment seeking was also related to gender, with females being more likely to seek treatment than men.

There are a number of potential explanations for the relatively low level of treatment seeking among those who met criteria for a substance use disorder. While these have not been explored in the current report, previous research has suggested that people do not seek help for substance use problems as they either do not recognise that they have a substance use problem, or they do not consider that they would benefit from treatment (Grant, 1997).

Although it is tempting to assume that substance use disorders are under-treated, treatment may not be appropriate in many cases. Approximately half of persons who have ever had alcohol use in population surveys have not reported symptoms in the previous year (Helzer et al, 1991). A major issue is that if not everyone with a substance use disorder needs treatment, how do we deploy limited treatment resources to produce the greatest reduction in alcohol and drug-related harm? This issue is discussed elsewhere in the case of alcohol use disorders (Hall & Teesson, 1998 in press).

4.8 Conclusions

The Survey confirms the findings of similar surveys in the USA in showing that alcohol and other drug use disorders are among the most common forms of mental disorder in the Australian population. These disorders comprise one of the most common form of mental disorder experienced by men, and men comprise the majority of persons who develop alcohol and other drug use disorders.

Alcohol use disorders are the most common type of substance use disorder. Young Australian men are at higher risk than women of developing these disorders and experiencing its adverse health consequences, largely because of their greater exposure to heavy drinking, although sex differences in exposure to alcohol may be narrowing. Drug use disorders are much less common than alcohol use disorders but they still affect a substantial minority of young men and women. They show similar patterns to alcohol use disorders, with young men over-represented because of their higher exposure to drug use than young women or older people.

The data provided by the NSMHWB will provide a valuable opportunity to undertake more detailed studies of the prevalence and correlates of alcohol and other drug use disorders. They will also enable analyses of the degree of disability produced by these disorders and the degree of met and unmet need for treatment among persons with these disorders.

4.9 FUTURE RESEARCH

The present report has provided a preliminary overview of results from the NSMHWB on the prevalence and correlates of substance use disorders within the Australian population. Over the next few years, further analyses of data from this study will be undertaken at the National Drug and Alcohol Research Centre (NDARC) to provide valuable information on the following issues:

1. Patterns and correlates of alcohol and other drug use;
2. The measurement and psychometric characteristics of criteria for substance use disorders;
3. The relationship between substance use and substance use disorders, and other physical and mental health disorders;
4. The burden of disease associated with substance use disorders;
5. Patterns and predictors of treatment seeking for substance use disorders.

These data will therefore improve our knowledge of how many people have what type of substance use disorders and what may be the most appropriate ways to prevent these disorders or assist those who develop these disorders to cease their harmful use of alcohol or other drugs.

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6.0 APPENDICES

APPENDIX A: AFFECTIVE AND ANXIETY DISORDERS ASSESSED IN THE NSMHWB

AFFECTIVE DISORDERS

Depression
Dysthymia
Mania
Hypomania
Bipolar affective disorder

ANXIETY DISORDERS

Panic disorder
Agoraphobia
Social phobia
Generalised anxiety disorder
Obsessive-compulsive disorder
Post-traumatic stress disorder

APPENDIX B: ODDS RATIOS AND 95% CONFIDENCE INTERVALS

Comparison	Percentages	Odds ratio	95% confidence interval
Females vs. males			
Substance use	64.7 - 84.3	2.93	2.67, 3.22
Substance harmful use	1.9 - 4.5	2.43	1.92, 3.08
Substance dependence	2.8 - 7.1	2.65	2.19, 3.22
Alcohol use disorder	3.7 - 9.4	2.70	2.28, 3.20
Drug use disorder	1.3 - 3.2	2.51	1.89, 3.33
Age			
55+ vs. 18-34			
alcohol	1.9 - 10.6	6.12	4.59, 8.17
drugs	0.2 - 4.9	25.7	11.17, 59.18
Country of origin			
NESB vs. Australian-born			
Alcohol	3.4 - 7.1	2.17	1.62, 2.92
Drugs	1.4 - 2.5	2.84	1.56, 5.16
ESB vs. Australian-born			
Alcohol	6.5 - 7.1	1.10	0.86, 1.40
Drugs	1.4 - 2.5	1.81	1.09, 2.98
Employment			
Employed vs. unemployed			
Alcohol	7.8 - 13.2	1.80	1.35, 2.40
Drugs	2.1 - 11.5	6.06	4.33, 8.47
Not in labour force vs. unemployed			
Alcohol	3.2 – 13.2	4.60	3.30, 6.42
Drugs	1.2 – 11.5	10.70	7.00, 16.33

Comparison	Percentages	Odds ratio	95% confidence interval
Education			
Tertiary vs. less than tertiary			
Males:			
Alcohol	8.5 – 10.6	1.28	1.06, 1.54
Drugs	2.2 – 4.1	1.90	1.38, 2.63
Females:			
Alcohol	4.1 – 3.3	0.79	0.60, 1.064
Drugs	1.1 – 1.5	1.51	0.91, 2.51
Household composition			
Lives with others vs. lives alone			
Males:			
Alcohol			
Drugs	9.2 - 11.6	1.30	0.975, 1.72
	3.1 - 3.4	1.10	0.67, 1.81
Females:			
Alcohol (alone vs. others)			
Drugs	2.9 - 3.8	1.32	0.83, 2.10
	1.3 - 1.6	1.23	0.65, 2.34
Marital status			
Married vs. never married			
Alcohol	4.5 - 13.1	3.17	2.44, 4.13
Drugs	6.3 – 1.0	6.66	4.44, 9.98
Location of residence			
Capital city vs. rest of state			
Alcohol	6.3 – 6.9	1.10	0.94, 1.29
Drugs (rest of state vs. city)	1.8 - 2.4	1.34	1.01, 1.79

APPENDIX C: PREVALENCE (%) OF INJECTING DRUG USE BY GENDER AND AGE

	Injecting Drug Use (past 12 months)	
	N	%
Males		
18-34	34965	1.5
35-54	7733	0.3
55+	440	0.03
Total	43138	0.7
Females		
18-34	10905	0.5
35-45	8622	0.3
55+	646	0.03
Total	20173	0.3
Persons		
18-34	45870	1
35-54	16355	0.3
55+	1086	0.03
Total	63311	0.5

APPENDIX D: PREVALENCE (%) OF TOBACCO USE BY GENDER AND AGE

	Current Regular Smoking (at least once a day)	
	N	%
Males		
18-34	805335	34.6
35-54	717863	27.7
55+	270431	15.8
Total	1793628	27.1
Females		
18-34	749205	32.2
35-45	596892	23.0
55+	231222	12.0
Total	1577319	23.1
Persons		
18-34	1554540	33.4
35-54	1314754	25.4
55+	501653	13.8
Total	3370947	25