

**YSAS**  
SEEING **YOUTH** IN A  
DIFFERENT **LIGHT**

# TECHNICAL REPORT MARCH 2014: YOUNG PEOPLE IN VICTORIAN YOUTH ALCOHOL AND OTHER DRUG SERVICES

## DATA & KEY FINDINGS

Results from the Statewide Youth Needs Census (SYNC)



YOUTH  
SUPPORT +  
ADVOCACY  
SERVICE

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## RELATED PUBLICATIONS

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## **EXECUTIVE SUMMARY**

The 'Statewide Youth Needs Census' (SYNC) was a study aimed at identifying the needs and characteristics of 1,000 young people registered as clients of specialist youth AOD treatment services in Victoria in 2013. The study was conducted by YSAS in partnership with Turning Point and Victorian youth alcohol and other drug (AOD) treatment services. This report contains a descriptive analysis of the SYNC results and key findings as well as a review of the relevant research.

Young people who are clients of AOD services in Victoria were found to have extremely high levels of harmful substance use and complex psychosocial problems. A strong correlation was demonstrated between the severity of youth AOD clients' substance use problems and their level of psychosocial complexity. Disconnection from employment and/or education, acute housing instability, mental health problems, family conflict, offending behaviour and poor quality of life all featured strongly. There were high levels of involvement with the criminal justice system (64%) and the child protection system (33%).

### **Substance Use**

The majority of youth AOD clients (54%) were dependent on one or more substances.

The substances that were used most in the previous 4 weeks were cannabis (64%) and alcohol (63%). However cannabis was more likely to be used on a daily basis (48%) and be the primary drug of concern (38%). Twenty per cent of young people engaged in daily use of alcohol and this was the primary drug of concern in treatment for 22% of youth AOD clients.

The next most prevalent substance used was methamphetamine: 35% had used this in the previous 4 weeks. It was the primary drug of concern in treatment for 26% of clients, a figure much higher than rate of daily use (13%). Heroin use was used by 7% and it was the primary drug of concern in treatment for 4.5% of youth AOD clients. Heroin users experienced the highest rates of substance use severity and psychosocial complexity when compared to those who used other substances.

### **Differences According to Age and Gender**

Clients' age had a significant influence on substance use severity. Alcohol and cannabis were far more likely to be the primary drug of concern in treatment for the youngest age cohort (15 years of age and under) who also had lower rates of multiple substance use or injecting. Methamphetamine and heroin were rarely used and featured more in the substance use patterns of the older cohorts. While the younger cohort had almost equally high levels of psychosocial complexity as older clients they were more likely to live with their family and be involved with education. While these connections were often fraught with problems, there seems to be an opportunity for early intervention focussed on strengthening family and school connectedness. Gender was a significant factor in differences in level of psychosocial complexity but not substance use severity. The prevalence of psychosocial problems such as homelessness, poor psychological and physical health, self-injury, and family disconnection were significantly higher for young women. Criminal justice system involvement and/or offending were the only issues more prevalent among male clients.

## High Levels of Abuse and Neglect

For all clients, the level of both past and present abuse and neglect was at an extremely high level (64%) and associated with both increased severity of substance use problems and higher levels of psychosocial complexity for these clients. The rate of abuse and neglect among young women (77%) was extreme which may be associated with the increased overall level of psychosocial complexity among female clients.

## Cultural Diversity

There were 53 cultural groups represented. The three largest CALD/ATSI groups were: Aboriginal and Torres Strait Islanders (8%); young people from African cultures (5%); and Pacific Islander or Maori young people (5%). The service type through which these groups were most likely to be engaged was outreach and there were very low levels of involvement in the counselling service type.

## Related Areas of Unmet Need

There were four areas of need that were most identified as being unmet by services. These were: assistance with family relationships; finding employment; engagement in education; and addressing mental health issues. Unmet mental health need was greater among clients from rural areas.

## Patterns Treatment Involvement

The report also investigates patterns of treatment involvement among clients. Four distinct groups of youth AOD clients were identified by cross referencing their level of substance use severity and psychosocial complexity:

- **Group 1** (69% of clients) - High to extreme levels of both substance use severity and psychosocial complexity
- **Group 2** (19% of clients) - Low level of substance use severity but with high to extreme levels of psychosocial complexity
- **Group 3** (6% of clients) - High to extreme levels of substance use severity but with a low level of psychosocial complexity
- **Group 4** (6% of clients) - Low levels of both substance use severity or psychosocial complexity

The length of current involvement in treatment was found to increase with substance use severity and level of psychosocial complexity. Also, youth AOD clients with highest level of substance use severity and the highest level of psychosocial complexity are considerably more likely to return to treatment.

From Group 1, the 331 clients meeting the criteria for severe on both substance use and psychosocial complexity were considered to be extremely vulnerable. This group were far more likely to use methamphetamine and heroin and be engaged in the outreach and withdrawal service types. They were least likely to be engaged in the counselling and long term residential service types. Structured withdrawal programs, both residential and non-residential, had on average the youngest clients and those most early in their current course of treatment (average 3.6 weeks). This suggests that participation in structured withdrawal programs might act as a gateway into services and facilitate early treatment engagement.

# INTRODUCTION

The 'Statewide Youth Needs Census' (SYNC) is a study conducted by YSAS in partnership with Turning Point and Victorian youth alcohol and other drug (AOD) treatment services. This report contains a descriptive analysis of the SYNC results, generated by practitioner-completed surveys on 1,000 young people aged 8-27 who were registered clients of specialist youth AOD treatment services in Victoria, Australia on June 6, 2013.

The study was supported by the Victorian Department of Health (DoH) and commissioned by the expert advisory group that the DoH established to guide a reform of the youth AOD service system in Victoria. The advisory group was clear that the reformed youth AOD service system, scheduled to be operational on July 1, 2015, should be based on an understanding of the needs and the challenges that Victorian young people face in relation to substance use. This required accurate and reliable data and an agreed framework for analysis.

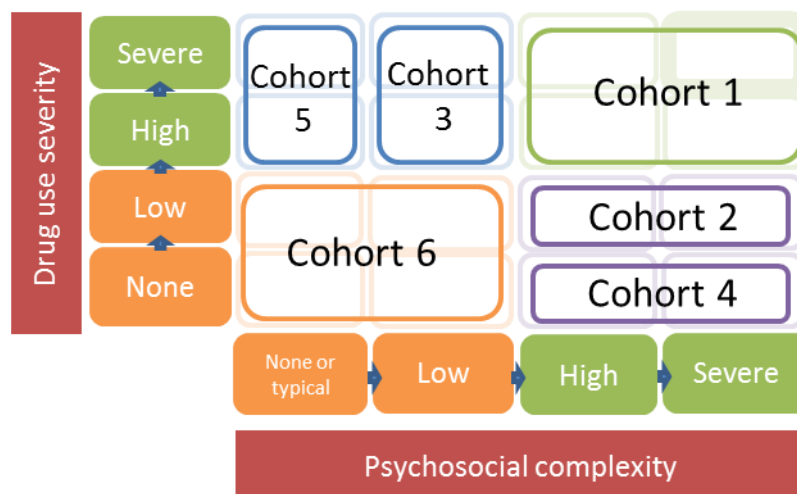
The advisory group agreed that the most effective way of gaining consistent and contemporary data on the clients of youth AOD services from across Victoria was to conduct a census. The method decided on for the census was based on a pilot study conducted by YSAS in September, 2012. This study relied on YSAS practitioners completing an on-line survey for each of their clients. The survey incorporated questions from relevant validated questionnaires that enabled the severity of clients AOD use to be measured together with the interrelated factors that create life complexity and vulnerability. Mitchell, Kutin, Ennis & Bruun (2013) found that using a practitioner-completed census achieved results that were broadly comparable to traditional methods used to investigate the needs and characteristics of young people engaged in youth AOD treatment.

The National AOD Minimum Dataset developed by the Australian Institute of Health and Welfare fails to capture the prevalence of significant co-occurring health and behavioural issues alongside substance use issues and is based on 'episodes of care' rather than individual clients who access treatment services.

The advisory group also recommended that the 'youth AOD needs identification and intervention planning matrix', developed by YSAS and Turning Point, be adopted as a framework for analysing the data generated by the census. This matrix evolved from collaborative work on the 'Youth Cohort Study' (Best et al, 2012) that investigated the effectiveness of youth AOD treatment service in Victoria.

The matrix is created by using a developmentally geared set of indicators (see Methods section of this report) to determine both the degree of substance use severity and psychosocial complexity in the client population of Victorian youth AOD services. Through stratifying and cross-referencing four levels of substance use severity and four levels of psychosocial complexity, particular cohorts of Victorian young people can be identified, each expected to require different responses from a reformed youth AOD service system (see Figure 1). This is in line with recent international demand modelling research where increasing AOD problem severity and complexity are assumed to be indicative of increasing levels of risk and therefore need for treatment (Rush et al., 2012). Knowledge about the extent of co-occurring difficulties within a client population can facilitate provision of interventions that are calibrated to align individual client needs and characteristics.

Figure 1. The 'youth AOD needs identification and intervention planning matrix'



The vertical axis of the matrix maps the four levels of AOD severity including a category indicating no severity. The horizontal axis maps psychosocial complexity spanning from complexity 'typically' expected for the age group to extreme complexity.

While the youth AOD needs identification and intervention planning matrix specifies 6 cohorts, cohorts 4, 5 & 6 are expected to require a prevention based response and are not relevant to the SYNC study of treatment engaged young people. The 3 cohorts that are relevant include:

**Cohort 1:** Young people experiencing high to severe AOD problems interrelated with high to extreme psychosocial complexity. These young people are expected to need interventions that address the interrelated AOD problems and vulnerability/complexity addressed simultaneously.

**Cohort 2:** Young people whose lives feature high to extreme psychosocial complexity but with low level of emerging AOD use. These young people are expected to be younger but at serious risk of AOD problems developing and escalating. Early intervention would be required to prevent transition to entrenched, harmful substance use.

**Cohort 3:** Young people with a high or severe level AOD problem combined with an indicator of additional psychosocial complexity. These young people are expected to have stable living circumstances and connection with family, school and/or employment. Specific AOD intervention is required and possibly early intervention to maintain connectedness and participation and to further psychosocial complexity and transition to the first cohort (above).

SYNC data has been gathered on clients in a current course of treatment. This means that due to the effect of treatment there are clients in all quadrants of the matrix even if this is not where they would have been located at the commencement of their treatment (baseline). For example, a young person in the community with none or low levels of both substance use severity or psychosocial complexity would not be expected to need treatment. In the SYNC study however, because the focus is on treatment engaged young people meaning that being in this quadrant could be an indication of improvement. As such, the matrix used as a framework for analysing SYNC data based on four quadrants (see methodology section). A separate category has also been established for young people 'most at risk'. These clients meet the criteria the highest levels of both substance use severity and psychosocial complexity.

This technical report includes the results of the SYNC study on client characteristics, patterns of treatment involvement, client substance using behaviour and a range of psychosocial indicators of life complexity and client need. Key findings and conclusions based on an analysis of these results is follows.

This report also includes a review of literature relevant to youth AOD treatment and understanding the needs and characteristics of clients.

## LITERATURE REVIEW

Problems with alcohol and other drugs are both more prevalent and more dangerous in adolescence and early adulthood than they are in later adulthood.

In the most recent National Survey of Mental Health and Wellbeing conducted in 2007, the prevalence of substance use disorders (SUDs) among the general population of males was 7%, but among males aged 16-24 the prevalence was just over 15% (Slade, et al., 2009). Similarly among females, in the general population 3.3% met diagnostic criteria for an SUD, but at least 10% of females aged 16-24 met these diagnostic criteria (Slade, et al., 2009).

As with many other mental health problems, adolescence is the key developmental period for the emergence of substance use disorders and problems. While SUDs are rarely seen in children under 12, there is a sharp increase in the prevalence from ages 12 to 18 (Merikangas & McClair, 2012; p779).

Among young people, overdoses of alcohol and other drugs compete with road crashes as leading causes of death, and the contribution of AOD intoxication and misuse to suicide, homicide, injuries, and poisoning is well established (Toumbourou, et al., 2007). In 2000 the use of alcohol and illicit drugs was estimated to account for 30.6% of deaths and 23.3% of disability adjusted life years (DALYs) lost among people aged 15-29 years living in economically developed countries (Toumbourou, et al., 2007).

When problems with alcohol and other drugs emerge in adolescence, the consequences are more likely to be negative and long lasting than when they emerge in adulthood. "Individuals who develop SUD in adolescence are more likely to have those symptoms persist into adulthood" (Merikangas & McClair, 2012; p783). In addition to more persistent symptoms, adolescents who enter the transition to adulthood with problematic substance use are more likely than others to demonstrate negative outcomes in young adulthood such as elevated levels of drug use, lower educational and occupational attainment, and higher levels of aggressive and violent behaviour (Keller, Blakeslee, Lemon, & Courtney, 2010).

It could be argued that, based on prevalence alone, adolescents and young adults warrant larger numbers of AOD treatment places per head of population than other age groups. When we factor in the relatively high proportion of deaths and burden of disease due to substance use, and the long term costs of negative health and social outcomes later in adulthood, a case can readily be made that adolescents and young adults require relatively more investment from AOD services in terms of treatment, early intervention and prevention.

## Relevant Australian Research

The substance use patterns and trends among treatment engaged young people can be better understood when considered alongside substance use patterns and trends young people in the population more broadly. The two relevant studies referred to throughout this report are:

- The 2010 National Drug Strategy Household Survey (AIHW 2011a) surveyed 26,648 Australians on their drug use patterns and attitudes. As the name implies, it does only survey households and therefore, excludes many of those living in temporary accommodation and the homeless.
- The 'Victorian Secondary School Students' study into the use of licit and illicit substances in 2011 (Department of Health 2013). This used a stratified random sampling technique to recruit 4797 students to complete surveys on their own drug use.

The **National AOD Minimum Dataset** collates information on the episodes of care provided by AOD treatment services in Australia. Data is available on age, sex, country of birth, principal drug of concern and treatment type and modality. The most recent data available is for 2011/12 and in that year, there were 146,948 (AIHW, 2013a) episodes of care provided by AOD treatment services to clients for their own drug use nationally (AIHW, 2013b). Of these episodes, 11,821 were for 10-19 year olds (8%), and 28,485 episodes for clients aged 20-29 years (19%). In total, young people account for 27% of episodes of care (p. 15). In Victoria, 50,004 episodes were recorded, 4,255 for clients aged 10 to 19 years (8.5%) and 9,899 episodes for 20 to 29 year olds (19.8%). The total population in Victoria aged 10-19 years and 20-29 years at the last census (2011) was 673,281 and 763,774 respectively. No information is collected regarding co-occurring psycho-social issues such as mental health problems, past and current abuse and neglect, involvement in criminal behaviour, homelessness, physical health, conflict with family, and disengagement from school or work.

There are four important Australian studies that have examined the co-occurrence of substance misuse with other psychosocial problems from the perspective of young people attending AOD services. The common Australian context also provides for a useful comparison with SYNC data on a range of variables. They are:

- **Dean, McBride, MacDonald, Connolly and McDermott (2010)** analysed administrative data collected on 262 young people aged 13-18 years admitted to a short-term withdrawal treatment service in Brisbane, Queensland. Data were extracted for admissions between March 2000 and September 2004.
- **MacLean, Kutin, Best, Bruun and Green (2013)** report findings from a survey of 163 young people aged 13-24 years attending youth AOD services across Melbourne, Victoria. Relying on convenience sampling, young people were recruited through referrals from workers and through participants referring friends to the study (i.e. "snowballing") over the 6 month period from October 2006 to March 2007. This study is known as the Youth Drug Reporting System (YDRS).
- **Best et al (2012) The Youth Cohort Study (YoCo)** (Victorian), conducted structured interviews with 150 young people aged 16 to 21 attending 11 different youth AOD services, mostly in Melbourne (Best, Wilson, Reed, Harney et al. 2012). A convenience sampling procedure was used and youth were recruited from a variety of settings and modalities including residential withdrawal (52%), outpatient (35%), and residential rehabilitation (13%) via referrals from workers. Data were collected between June 2009 and April 2010.
- **The YSAS (2012) The YSAS Pilot Census** (Victorian), was a practitioner completed census based on the complete population of current AOD clients on the census day. Surveys were returned for 374 clients aged between 12 and 24 years.



These four studies have been conducted from the perspective of the youth AOD sector and examine a number of different emotional and behavioural health issues and risk factors. They also have weaknesses. The two YDRS and YoCo studies have small samples ( $N = 163$  and  $150$ ) and use convenience sampling, detracting from the generalizability of the findings across the whole population of concern. By collecting data directly from clients using a specially designed survey instrument these studies were able to collect a more comprehensive dataset, but this was achieved at the expense of sample size. Drawing on administrative data, the Queensland study achieved a somewhat larger and representative sample size ( $N = 262$ ), but the dataset was much less comprehensive. A summary of the methodological features of these studies is included as appendix 2.

To add to insights provided by these studies, Daley (Forthcoming) undertook a qualitative study examining young people's pathways into problematic substance use. A non-random stratified sample of 61 young people aged 14-25 years were recruited through ethnographic fieldwork in drop-in centres and youth residential withdrawal services in Victoria. These young people participated in life-history interviews between 2010-2012.

The following review integrates data from these studies and the findings of international research conducted on the prevalence of substance use and coexisting psychosocial problems in populations of young people in AOD treatment settings and other service sectors. The review is generally limited to studies published between 2008 and 2012. Older studies are included if they report informative comparisons across two or more sectors, problem domains, or population groups. Data from the pilot census of YSAS clients conducted in September 2012 is also reported. A response rate of 94% was achieved with data collected on 371 clients.

## **Substance Use and Misuse**

The 'National Drug Strategy Household Survey' (AIHW, 2011a) and the 'Victorian Secondary School Students Study into the Use of Licit and Illicit Substances' (Department of Health 2013) demonstrate that alcohol and cannabis are the two primary drugs used by young people (excl. nicotine); although the prevalence of cannabis use is significantly less than alcohol. The school survey showed that the prevalence of alcohol and other drug use increased steadily with age, a finding that was expected given the range in age from 12-17 years.

Interestingly, while there are only a small percentage of 12 to 15 year olds who had consumed alcohol in the past four weeks, those who had were more likely to be female. Fourteen per cent of 12 year old females had used alcohol in the past month, compared to 4% of males. This trend was reversed as young people aged. Among 17 year olds, 65% of males had consumed alcohol in the past month compared with 58% of females.

'Regular use' of cannabis was low. Less than 8% of 17 year olds were categorised as 'regular' cannabis users, and this was where a 'regular' user was defined as someone who had used cannabis more than 10 times in the past 12 months.

The survey also examined other drugs 'ever' used. Hallucinogens had ever been used by 3% of the sample, with the largest level of use among the oldest students, where 10% of males and 7% of females cited having ever used a hallucinogen. Only 2% of all students had ever used ecstasy; with 4% of male, and 6% of female 17 year olds having ever used it. Amphetamine had been used by 3% of all students with greatest use among the oldest students, 5% of whom had ever tried amphetamine. The use of opiates and other illicit drugs was negligible across all ages.

The National Drug Strategy Household Survey (NDSHS: AIHW 2011) offers figures on weekly use or 'recent use'; however, 'recent' is any use in the past 12 months. Such a broad category is unable to capture the nuances between different users, and therefore, figures from those who have used in the past week are offered here unless otherwise stated. Similarly, this survey adopted different age categorisations. Young participants were coded as either 12 to 17; 18 to 19; 20 to 29 years of age. As the average age of young people in the SYNC study was 18 years, the figures drawn from the NDSHS are those from the 18 to 19 year age category.

Alcohol use in the past week was higher among males (46% cf. 30%). Illicit drug use was reported as any use in the past 12 months rather than in the last week. Cannabis had been used by 21% of 18 to 19 year olds and this was the most common illicit substance. Ecstasy had been used by 6%; meth/amphetamine by 4%; and heroin by only 0.2% of 18 to 19 year old Australians surveyed.

It is important to acknowledge that these two surveys are likely to exclude the majority of young people in AOD treatment given that they are delivered in schools and homes. A different picture of substance use patterns emerges when the studies focused on young people engaged in the AOD treatment system.

The YSAS Census found high rates of harmful substance use among clients on several indicators. Appendix 2 presents data on six different indicators of severity of substance use across the four different studies. Data on these indicators (or very similar) are available from the two previous Victorian studies, while the Queensland study provides data on two of the six.

In the YSAS Census, practitioners reported that 89% of clients were using at least one substance (other than tobacco) on a daily or almost daily basis in the 4 weeks prior to the Census. A very similar figure of 88% was found in the YoCo study which referenced a 3 month period prior to interview. In the YDRS study, which referenced a 6 month period, daily or almost daily use was not reported.

Cannabis and alcohol were used daily or almost daily by 55% and 27% of YSAS clients respectively. Equivalent figures in the YoCo study were 69% and 35% respectively. In the YSAS Census workers reported that 4% of clients were using heroin/other opiates daily or almost daily in the past 4 weeks. This compares to 20% in YoCo over the past 3 months and 7% in YDRS over the past 6 months. In their Queensland sample, Dean et al. (2010) reported that heroin was the primary drug of concern for 26% of females and 11% of males. Data were not reported for both genders combined.

On average YSAS clients were using 1.5 different substances daily or almost daily, and in the YoCo study, clients nominated on average 1.9 main drugs of concern. In the YDRS study only 3 out of 163 respondents did not have a second drug of concern. Data on this indicator were not reported by Dean et al. (2010). In the YSAS Census 9% of clients had injected drugs in the past four weeks, compared to 22% of YoCo interviewees who had injected in the past 3 months, and 36% of the YDRS sample who had injected in the past 6 months. In the Queensland sample 64% of females and 52% of males were recorded as currently being involved in injecting drug use (Dean et al., 2010).

YSAS practitioners assessed 62 % of clients as being dependent on at least one drug (excluding tobacco). The YoCo and YDRS studies used the Severity of Dependence Scale (SDS) to measure dependence. In these studies 99% and 73% of clients respectively were assessed as dependent for their main drug of concern. A summary of results from the four main Australian youth AOD treatment studies are included as appendix 3.

## Mental Health

Community-based epidemiological studies have demonstrated that approximately 60% of adolescents diagnosed with a substance use disorder (SUD) have a co-occurring psychiatric disorder (Armstrong & Costello, 2002). In contrast, the prevalence of psychiatric disorders in the general population of adolescents is about half this. Psychiatric disorders most commonly co-occurring with SUDs in adolescence are conduct disorder, oppositional defiant disorder and depression (Armstrong & Costello, 2002).

Among youth attending inpatient or residential substance abuse services, rates of mental disorders have been found to range from approximately 60 to 80% (Christie, Merry, & Robinson, 2010). Three recent studies collected data directly from adolescents using validated instruments. Among 88 adolescents aged 13 to 18 attending a community AOD treatment program in Ireland, 68% of participants were found to have an additional psychological problem in at least one of five domains that was moderate or severe (Edokpolo, James, Kearns, Campbell, & Smyth, 2010). Similarly, a study of 67 youth aged 14 to 18 attending a community-based addiction service in New Zealand found the prevalence of mental disorders among youth with SUDs to be 63% (Christie et al., 2010). In Australia, the Victorian Youth Drug Reporting System (YDRS) study of 163 AOD service-connected young people aged 13 to 24 found that 38% had a lifetime diagnosis of mental illness, while 29% had reported suicide attempts in the previous 12 months (MacLean et al., 2013). The Victorian Youth Cohort (YoCo) study of 150 AOD clients found that 49% had experienced severe psychological distress as measured by the K10. Using a cut-off score of 27, 62% of young people were deemed likely to meet the criteria for an affective disorder (Best et al., 2012).

Substance use problems are also commonly found in populations of youth attending mental health services, but the prevalence of SUDs among adolescents attending psychiatric services appears to be lower than the prevalence of mental disorders among adolescents attending AOD services. In outpatient mental health settings the prevalence of substance use disorders has been studied extensively and found to range between 11% to 40% (Christie et al., 2010). An electronic health records study of 11,457 psychiatric patients at a large United States tertiary care hospital found that 25% of youth aged 13 to 17 had at least one substance use disorder (SUD) (Wu, Gersing, Burchett, Woody, & Blazer, 2011). A study of 12 to 17 year olds admitted to a general public hospital in Spain for psychiatric reasons (other than substance use) found that 13.9% fulfilled criteria for a substance use disorder (not including tobacco) (Diaz et al., 2011).

The New Zealand study that estimated the prevalence of co-occurring mental disorders and SUDs to be 63% within an addiction service (Christie et al., 2010), estimated prevalence to be 41% in a mental health service. Across these two services, there were no differences in psychiatric symptoms or behavioural problems, but the adolescents attending the addiction service had significantly more problems with substance use than youth attending mental health services.

Community-based surveys consistently find that substance use disorders are more prevalent among males than females (Essau, 2011; Merikangas & McClair, 2012; Slade et al., 2009). Consistent with this pattern, the Wu et al. (2011) electronic health records study of the adolescent psychiatric population (aged 13 to 17 years), found that 33.7% of males compared to 16.2% of females had at least one SUD.

From the perspective of the youth AOD treatment population, there is emerging evidence that some co-occurring problems, including psychiatric disorders are more prevalent among females than males. Edokpolo et al. (2010) found that 68% of adolescents attending a community AOD treatment program in Ireland had an additional moderate or severe psychological problem in at least one of five domains assessed by the Beck Youth Inventory. Females were more likely than males to experience

additional psychological problems in four out of five domains including self-concept, anxiety, depression, and anger. Only disruptive behaviours were equally common for males and females. In Queensland, Dean et al. (2010) found that 88% of clients were recorded at intake as having “any mental health issue”, but 44% were actually involved in current mental health treatment. Further, Maclean et al (2013) reported that 60% of participants in the YDRS study a mental health issue.

## **Youth Justice Involvement**

In many jurisdictions, the criminal justice system is the major referral source for adolescent substance abuse treatment. In 2005 in the United States, national administrative data for publicly funded substance abuse treatment services showed that the criminal justice system was the source of 55% of male admissions and 39% of female admissions (Chassin, 2008). In a large US random sample survey of 1,829 juvenile detainees aged 10 to 18, the six month prevalence of at least one SUD was nearly 50% among males and 45% among females (McClelland, Elkington, Teplin, & Abram, 2004). More than 21% of adolescents had two or more SUDs. The most common were marijuana and alcohol use disorders.

Gender differences have been studied only recently. Data collected in 2009-2010 from 227 adolescents aged 14 to 19 years living in residential facilities for juvenile offenders in Pennsylvania revealed that females were significantly more likely than males to be using substances in highly harmful ways including injecting, using heroin, and using crack/cocaine (Biswas & Vaughn, 2011).

Among youth attending AOD treatment services, MacLean et al. (2013) report that 57% of 13 to 15 year olds and 60% of 16 to 19 year olds had been charged with a crime in the previous 6 months, while 35% and 29% respectively had ever been incarcerated. Similar but slightly higher rates were found in the somewhat older sample of youth aged 16 to 21 in the Victorian Youth Cohort Study. Here 66% reported involvement in criminal activity in the month prior to interview, 44% had ever been incarcerated, and 21% had had contact with a “youth justice worker” in the 6 months prior to interview (Best et al., 2012).

It should be noted that on a given day less than 0.3% of young Australians aged 10 to 17 are under youth justice supervision; however this rate varies considerably among subsets of the population (AIHW, 2011, bulletin). For example 7% of indigenous males compared to 0.6% of non-indigenous males were under youth justice supervision and 2% of indigenous females compared to 0.1% of non-indigenous females.

## **Child Protection Involvement**

On the 30<sup>th</sup> of June, 2012, 8 in every 1000 children and young people in Victoria were on a care and protection order (AIHW 2013c). Most young people in Child Protection are placed into care because of neglect. Of all the young people on care and protection orders in Australia, 51% are female.

This review could find only one study that has directly examined the prevalence of child protection involvement in a population of young people using AOD services. The Victorian YoCo study found that 36% of their sample had ever had involvement with a child protection worker (Best et al., 2012). The YSAS pilot census (YSAS, 2012) found that 45% of clients had ever been involved with Child protection.

Studies of children and adolescents under the care of child protection services have found rates of substance use disorders or problems approaching 20%. One of the earliest studies, conducted between 1997 and 1999, examined prevalence of SUDs across five sectors in the United States. This study found the prevalence of SUDs to be 19.2% in child welfare services (Aarons, Brown, Hough, Garland, & Wood, 2001). Of a representative sample of older foster youths (17 years and older) involved in the United States child welfare system for more than one year, 14.0% had a diagnosis of

alcohol abuse or dependence (AA or AD) (Keller, Blakeslee, Lemon, & Courtney, 2010). A very recent national survey of the child welfare population (aged 11 to 14) in the United States found rates of “hard substance use” to be 17.4% compared to 8.0% in the general teen population (Traube, James, Zhang, & Landsverk, 2012).

A study of 993 young adolescents aged 11 to 15 in the United States child welfare system (drawn from the National Survey of Child and Adolescent Wellbeing) found that males had a significantly lower “risk rate” (0.63 times lower) than females (Leslie et al., 2010). The risk rate was calculated on the basis of nine variables in four categories – sexual behaviours, emotional distress, substance use, and delinquency. No Australian data could be found on this question.

Leaving care is well known to be a particularly risky period for young people who have been involved in the child protection system (Courtney & Dworsky, 2006; Dworsky & Courtney, 2009). Despite this, there are very limited data available about the health and wellbeing of this vulnerable population, especially in Australia. Unfortunately, a substantial national survey involving 471 young people who had recently left out of home care in Australia did not collect data about use of substances or contact with AOD services (McDowall, 2009). Over one-third of this sample reported experiencing homelessness within the first year of leaving out of home care, and nearly one-third claimed to have some form of disability (McDowall, 2009). A very small study of 43 young people with an intellectual disability who had exited care on average two and a half years previously found that 44% had “engaged in substance abuse”, 71% were known to have been a victim of crime (mainly sexual assault), 94% were unemployed and 59% had experienced homelessness (MacDonald, 2010).

## **Homelessness**

Various studies have found that between 70% to 97% of homeless youth misuse alcohol and or other drugs (Zerger, Strehlow, & Gundlapalli, 2008). Runaway and homeless youth also show high rates of mental disorders: risky sexual practices, and involvement in illegal activities including prostitution, theft, truancy, and the sale and distribution of narcotics (Meade & Slesnick, 2002; Rossiter, Mallett, Myers, & Rosenthal, 2003).

In their sample of youth using AOD services, MacLean et al. (2013) reported that 17% of young adults aged 20 to 24 years were “homeless” and a further 14% were living in temporary accommodation at the time they completed the survey. In the 16 to 19 year age group 7% were homeless and 6% were living in temporary accommodation. In the YoCo sample aged 16 to 21 years, 11.1% had been homeless (living on the street or in a squat) and a further 9% had lived in short term or crisis accommodation in the previous six months. Daley’s (forthcoming) study showed very high levels of homelessness among young people (14 to 25 years) in AOD treatment with 92% of the young women and 74% of the young men having been homeless.

These data from treatment engaged populations stand in stark comparison to the rate of homelessness in the general population of young people. In 2006 there were 32,444 young people aged 12 to 24 who were homeless. In 2006, for every 100 young Victorians (12 to 24), 3.59 are homeless (Chamberlain & MacKenzie, 2008)

## **Abuse and Neglect**

Abuse and neglect refers to physical, sexual or psychological abuse, as well as emotional maltreatment and is now well established as one of the most significant general risk factors for a broad range of emotional and behavioural problems in adolescence and young adulthood (King, et al., 2011; Lansford, Dodge, Pettit, & Bates, 2010; Oshri, Tubman, & Jaccard, 2011; Rosenkranz, Muller, & Henderson, 2012; Tanaka, Wekerle, Schmuck, Paglia-Boak, & Team, 2011). Emotional or psychological maltreatment is increasingly recognised as an important, but previously under-

identified, part of the child maltreatment spectrum (Rosenkranz, Muller, & Henderson, 2012; Tanaka, et al., 2011). Emotional maltreatment is difficult to document by child protection services because it may not be identifiable as an event (Tanaka, et al., 2011).

Research into early life stress and childhood maltreatment (Enoch, 2011) also demonstrates the importance of moving beyond dichotomous representation of outcomes such as the presence or absence of a particular diagnosis. Enoch's (2011) review describes several studies demonstrating that the severity and chronicity of childhood maltreatment is associated with greater likelihood of being diagnosed with multiple psychiatric disorders, greater likelihood of poly substance abuse, as well as earlier onset substance use problems, and adolescent binge drinking.

A recent study of 216 youth aged 16 to 24 years entering an outpatient substance use treatment program in Canada found that 72% of males and 90% of females had been psychologically maltreated. Further, after controlling for all other forms of abuse, only emotional abuse and emotional neglect emerged as significant predictors of substance use problem severity (Rosenkranz, Muller, & Henderson, 2012). There was a significant interaction between gender and emotional abuse ( $\beta = .18$ ,  $p < .05$ ) such that females with emotional abuse histories reported greater substance use problem severity (Rosenkranz, Muller, & Henderson, 2012).

Research examining gender differences is finding that effects of sexual abuse and physical abuse on substance use problems may be specific to females (Clark, et al., 2012; Lansford, et al., 2010; Oshri, Tubman, & Jaccard, 2011; Shin, Hong, & Hazen, 2010), and that effects of psychological maltreatment may be larger for females than males (Rosenkranz, Muller, & Henderson, 2012).

Post-Traumatic Stress Disorder (PTSD) is a particularly important marker of exposure to trauma, particularly physical and sexual abuse, and it is associated with a range of health risk behaviours including running away, self-injury, delinquency, depression, anxiety and poor school functioning (Mueser & Taub, 2008). PTSD is highly prevalent among young people who are involved in multiple service systems, yet even within relatively well integrated systems-of-care it is underdiagnosed in routine client records (Mueser & Taub, 2008).

## **Self-injury**

The prevalence of self-injury among the broader population is unknown but it is accepted that only a small minority of people who engage in self-injury will ever present for treatment. Most research looking at self-injury draws from clinical case-files and thus, represent only those accessing psychiatric care. Adler and Adler (2011) undertook a large qualitative study in the United States that explored self-injury among the broader population. Over 10 years the authors conducted 150 interviews and collated 30-40,000 posts from Internet chat rooms. They found that those in treatment are only a minority of people who engage in self-injury.

There is little reliable data in Australia to indicate the prevalence of self-injury among the broader population nor among those in AOD services. It is accepted that it is a behaviour far more common among females. A 2002 survey of 3,757 year 10 and 11 students in Queensland found that 6.2% met the criteria for Deliberate Self Harm, with a higher prevalence among females (De Leo & Heller 2004).

Given that the prevalence of self-injury in the general population is uncertain, it is not possible to confirm if the prevalence of self-injury among young people in AOD services is higher than the 'norm'; however, it appears to be. Daley (forthcoming) found that self-injury was more common than not among young women in AOD services with 20 of the 26 young women in the study having a history of self-injury. In addition to this, a 2012 census of 371 young people (94% response rate) accessing the Youth Support + Advocacy Service found that 43% of young people accessing AOD

services had engaged in self-injury (YSAS 2012). The same study also illustrated a very high incidence of suicide attempts among young people in AOD treatment with 28% of clients having attempted to take their own life.

The Australian Bureau of Statistics (2013) reported that in 2011, 321 young people aged 15 to 24 years committed suicide. Suicide was far more common among young men than women, with 231 young men having suicided compared with 90 young women.

Suicide and self-injury can both result in self-harm but are not enacted with the same intent. The former seeks to end life, where the latter is typically a way for a young person to cope. There is high co-morbidity between the two, though it is necessary to point out that most people who self-injure will not attempt suicide.

### **Family Conflict and Disconnection**

It is well established that a young person's family environment influences the development of harmful substance use (Ennett et al 2006; Kosterman et al 2000; Kuperman et al 2001; Wu et al 2004). Among young people who experience problematic drug use, family backgrounds are often characterised by conflict, parental substance abuse, neglect, and crime (Kosterman et al 2000; Kuperman et al 2001; Wu et al 2004). The role of family in young people's pathways into (and out of) problematic substance use is intractable. However, disconnection from family also makes a young person more vulnerable to substance use.

### **Disconnection from Education and Employment**

Premature and problematic school disengagement is also now well established as another general risk factor for a broad range of emotional and behaviour problems (Maynard, McCrea, Pigott, & Kelly, 2012), including psychiatric disorders (Vaughn, et al., 2011), delinquency (Henry, Knight, & Thornberry, 2012) substance use (Cheng & Lo, 2011; Ewing, Venner, Mead, & Bryan, 2011; Henry, Knight, & Thornberry, 2012), and running away from home (Tucker, Edelen, Ellickson, & Klein, 2011).

Recent work using methods such as 'structural equation modelling' and 'latent growth modelling' with longitudinal data suggest that declining academic performance and disengagement from school tend to precede and predict outcomes such as substance misuse, involvement in crime and running away from home rather than the other way around (Henry, 2008, 2010; Tucker, et al., 2011).

Of broader concern is the diminished future prospects of young people should they leave school early. In Australia, Year 12 completion is increasingly considered a baseline level of educational attainment. The DEECD reports that in 2013 the retention rate for secondary school in Victoria was 87.6% for Year 7 to 12 (83.3% males; 92.1% females). In 2013, 88% of 20 to 24 year olds had completed year 12 or equivalent (DEECD 2013).

Studies show that young people who do not complete secondary school are more likely to have unstable future employment and low income (McMillan & Marks, 2003; Robinson, Lamb, & Walstad, 2010). Moreover, studies show that once young people disconnect from the mainstream education system it is very difficult for them to reconnect (Daniels, Cole, Sellman, Sutton, Visser, & Bedward, 2003). While the official rate of Year 12 completion has been increasing in Australia in recent years (Robinson, et al., 2010), there is no indication that these improvements are being seen among vulnerable young people who have AOD issues and other complex needs.

Drug and alcohol use plays a role in a chain of factors rather than being a sole predictor of school dropout. Henry (2010) finds that deteriorating school achievement typically occurs alongside increases in substance use in a mutually reinforcing feedback loop. Others show that those who are dissatisfied with and disengaged from school are more likely to use illicit drugs (Henry, 2010). While

poor social connectedness at school is associated with early leaving, social connection to drug using peers is strongly predictive of a young person's drug involvement (Bond, et al., 2007). Also, numerous studies find that there is a strong link between truancy and substance use. Ferguson and Xie (2012) found that young people with higher levels of adult support were less likely to use substances or to truant.

Early to mid-teenage years are a time when vulnerable young people experience increased disengagement from mainstream social institutions such as schools (McLean, Bruun, Mallet & Green 2009). MacLean, Kutin, Best, Bruun & Green (2013) report that the "Youth Drug Reporting System" survey revealed very high levels of school mobility, with most participants reporting a history of school suspension and/or expulsion. While they reported being less frequently substance affected during their last year at school than older participants, half of early adolescents in the sample also said that they always or almost always hated being at school during this period. Intensive focus should be given to retaining AOD-using early adolescents within the education system, addressing the behaviours that lead to early school leaving and devising viable alternatives to school suspension and expulsion. Integration into new social networks appears critical for some early-adolescents attempting to re-engage in education. It is important to make school as enjoyable and meaningful as possible for AOD-using early adolescents so as to reduce their motivation to be substance affected.

## **Gender Differences**

Until very recently, there had been little attention to the differences between men and women in youth AOD services. Two studies illuminated the issue. Daley (Forthcoming) found that pathways into problematic substance use were very gendered with backgrounds of childhood abuse and abandonment common. Young women were more likely to experience homelessness. Young women's drug use often began with a family member or older boyfriend. It was atypical for a young woman to use drugs to be part of a peer network.

Young men's pathways were experientially more diverse; nonetheless, there was a dominant explanation. Young men had backgrounds of abuse and other trauma – often a parent with severe mental health issues and/or the death of an immediate family member – and this was compounded by the absence of a safe space in which they felt they belonged. Young men were constrained by sub-cultural ideals of "masculinity" where machismo and aggression dominated and where emotions were seen as "weak". Young men often began drug use as part of a peer group cultural practice.

Subsequent to this study, the pilot of the current census (YSAS 2012) sought to examine gender differences. What was found was that young women in youth AOD services had presentations of greater severity and vulnerability. Young women fared worse on all measures except criminal justice involvement.

## **Developmental Differences**

Little research into populations of service connected young people have properly accounted for developmental differences found within the cohort being studied. MacLean et al (2013) have recently published work based on an analysis of data from the Victorian Youth Drug Reporting System study where participants aged 13 to 15 years with two older cohorts involved, 16 to 19 and 20 to 24. The rationale for making the first age cut off at 15 years is that in Victoria, 16 year olds are legally able to consent to sexual activity with another person of any age, are able to obtain a learner's driving permit, can apply for Youth Allowance payments as an independent, are eligible for supported housing and were eligible to leave school at the time of data collection for their study. No similar rationale is provided for the why the next age cut off is 19 years of age. The work of MacLean and colleagues is crucial because most studies concerning AOD-involved young people frequently sample people aged over 15 years (Bates & Labouvie, 1997; Sindich & Burns, 2010) or else do not



report specifically on early adolescents aged 13 to 15 years (Dean, McBride, Macdonald, Connolly, & McDermott, 2010; McGee, Valentine, Schulte, & Brown, 2011). As such little is known about the specific needs of early adolescents or how they differ from those of older youth AOD service clients.

MacLean and colleagues report that the wellbeing of regular drug users in their study diminishes with age. They found that 13 to 15 year olds were less likely to be homeless, report depression, or lifetime incarceration or use heroin or methamphetamine. They were also more likely to have attended school without 'always' or 'almost always' being substance affected during their last year of education and to be connected with a network of close friends.

### **An Integrated Response**

This review has demonstrated that in addition to substance use issues, Youth AOD clients can be expected to experience co-occurring emotional and behavioural issues and a variety of psychosocial issues that create life complexity (see appendix 4 for a summary of the results from the major Australian youth AOD studies reported on in this review). These emotional and behavioural difficulties often have common antecedents and develop through cumulative exposure and exposure to multiple risks. Any service system established to respond to the needs of young people with AOD problems clearly requires a capacity to simultaneously address a range of associated emotional and behavioural difficulties.

# METHOD

## Participating Drug and Alcohol Services

Almost all drug and alcohol (AOD) services that provide programs for youth, in the state of Victoria were invited to participate in the study ( $N = 48$ ). Some agencies had more than one site, and these were counted separately. A final group of 36 treatment sites and services agreed to participate (75%). Some services were exclusively youth AOD services, others were embedded in community health centres, or had specific workers for youth within an adult AOD service.

## Procedure

The census date was Thursday 6 June, 2013. Clients were deemed eligible if they had commenced or were continuing treatment on that date. The key worker for each client was asked to complete an online survey, one survey per client, based on their current knowledge of that client. Surveys were completed by staff in the two weeks following the census date.

The 36 AOD service sites reported that their current caseload was 1,188. A total of 1,009 were completed online but due to some having a very high missing data rate, a final sample of 1,000 was achieved. The final sample represented an 84% response rate.

## Questionnaire

A 30 item online quantitative survey was developed utilising existing dataset items and questions developed by literature review, existing surveys and expert consultation. The majority of items required a yes/no/don't know response. Each survey took approximately 15 minutes to complete.

The survey covered the following domains: demographics, program involvement, drug use (primary drug of concern and recent drug use), drug use harms, involvement in employment, education or training, literacy and numeracy, housing, family conflict, mental health, suicide and self-harm, experience of neglect, physical, emotional and sexual abuse, or violence, involvement in the criminal justice system and key worker assessment of client AOD severity, dependence, and psycho-social vulnerability. (See Appendix A). Workers were also asked to rate the client's level of physical health, psychological health and quality of life using Likert scales from the Australian Treatment Outcome Profile (ATOP).

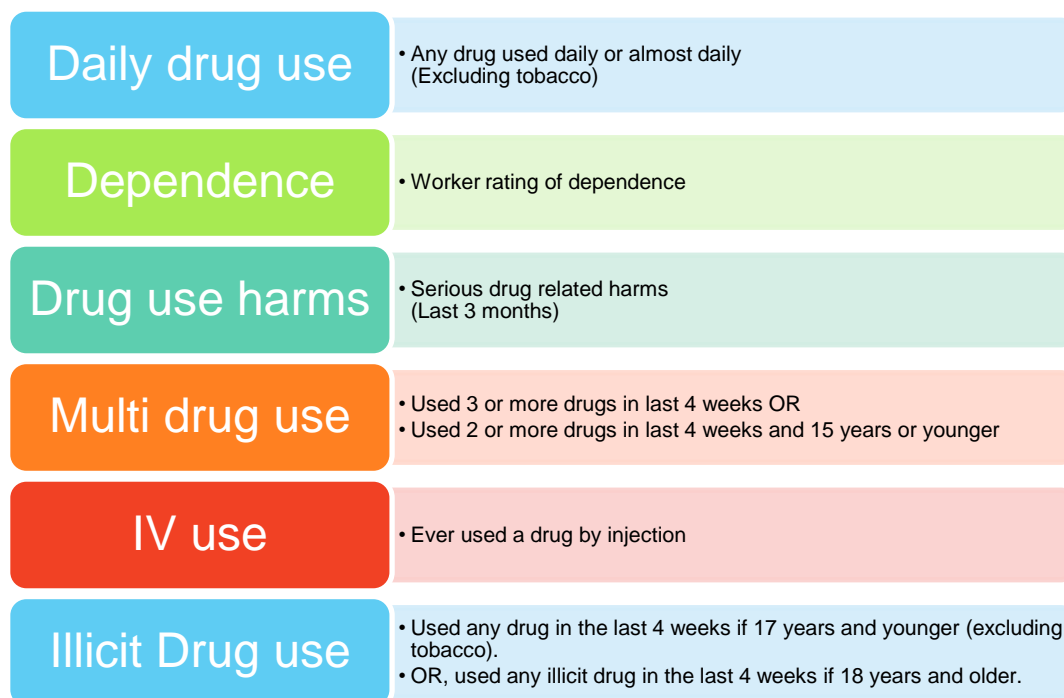
## Data Analyses

Data were analysed using SPSS version 21. Descriptive data (drug use and demographics) were reported for the sample group as a whole. For the age based comparisons, clients were divided into four groups, those 8 to 15 years ( $n = 108$ ), 16 to 18 years ( $n = 325$ ), 19 to 21 years of age ( $n = 410$ ) and 22 to 27 years ( $n = 157$ ). The sample sizes for the gender comparisons were 339 (females) and 655 (males). Six clients were identified as intersex or transgender, and given the small sample size were only not included in the gender comparisons. Continuous data was analysed using Student's t-test, and categorical data was analysed using Chi-square tests. Significance values were set at the probability value of 0.01.

Three summary variables were calculated: drug use severity score, psychosocial complexity score, and matrix classification.

The variables used to calculate drug use severity are detailed in Figure 1. One point was assigned to each of these factors (if present), then summed, and re-categorised. A score of 0 was coded as 'None', 1 as 'Low', 2 or 3 as 'High', and 4 to 6 as 'Severe'.

**Figure 1. Severity of Substance use definition and criteria.**



Similarly, a composite score for complexity was calculated using 9 questions from the survey that best reflect life history and current situational psycho-social vulnerability issues. The variables and criteria are detailed in Figure 2. One point was assigned to each of these factors (if present), then summed, and re-categorised. A score of 0 was coded as 'Typical', 1 as 'Additional', 2 or 3 as 'High', and 4 to 9 as 'Severe'.

**Figure 2. Complexity of psychosocial issues: definition and criteria.**

<b>Criminal justice issues</b>	<ul style="list-style-type: none"> <li>•Criminal activity in the last 4 weeks or,</li> <li>•Criminal justice system involvement ever</li> </ul>
<b>Abuse or neglect</b>	<ul style="list-style-type: none"> <li>•Experienced abuse, neglect or been a victim of crime (Ever)</li> <li>•Involved in child protection (Ever)</li> </ul>
<b>Family issues</b>	<ul style="list-style-type: none"> <li>•Conflict or disconnection with family or relatives (Last 4 weeks)</li> </ul>
<b>Problems at school</b>	<ul style="list-style-type: none"> <li>•Suspended, expelled, or disruptive behaviour at school (Ever)</li> </ul>
<b>No meaningful activity</b>	<ul style="list-style-type: none"> <li>•Not employed or not at school (Current)</li> </ul>
<b>Suicide or self-harm</b>	<ul style="list-style-type: none"> <li>•Attempted suicide or self-harm (Ever)</li> </ul>
<b>Housing instability</b>	<ul style="list-style-type: none"> <li>•Acute housing problems (Last 4 weeks)</li> </ul>
<b>Mental health</b>	<ul style="list-style-type: none"> <li>•Mental health diagnosis (Current)</li> </ul>
<b>Quality of Life</b>	<ul style="list-style-type: none"> <li>•Average ATOP score</li> <li>•Score between 0 and 4</li> </ul>

Matrix classification was computed by cross tabulating the severity and complexity categories. This resulted in a 4 by 4 matrix. Each quadrant (consisting of 4/16<sup>th</sup>) was recoded into four groups: Low Severity-Low Complexity; Low-Severity-High Complexity; High Severity-Low Complexity; and High Severity-High Complexity.

A further investigation of clients with the highest level of substance use severity and most extreme psychosocial complexity (1/16). This group considered most at risk where compared to the rest of the client population.

### **Ethics Approval**

The project was approved by the Eastern Health Research and Ethics Committee (ref. E28-1213), Melbourne, Australia.

# RESULTS

## CLIENT CHARACTERISTICS

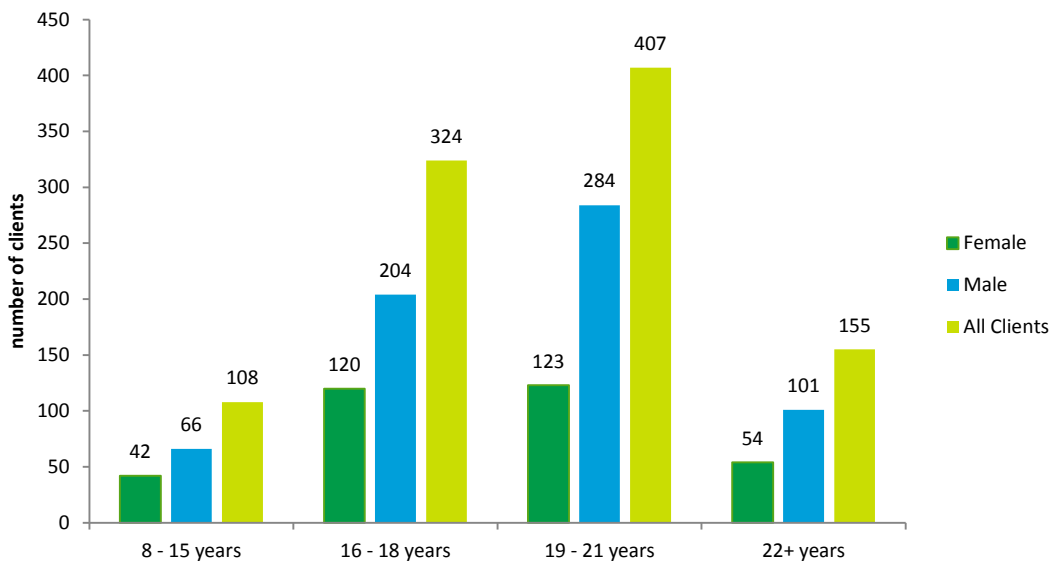
### Age & Gender

Surveys were completed for 1,000 clients. The age range was 8 to 27 years, the average being 18.9 years ( $SD = 2.8$ ).

Young men comprised 66% ( $n = 655$ ) of the sample, young women 34% ( $n = 339$ ), and intersex or transgender clients 0.6% ( $n = 6$ ). The average age of male and female clients did not differ significantly. The distribution of clients by age and gender is detailed in Figure 3.

Workers reported that 5% of the sample identified as gay, lesbian, bisexual, or queer and a similar proportion did not know their client's sexual orientation (6%).

Figure 3. Number of clients in each age group by gender (N = 994).

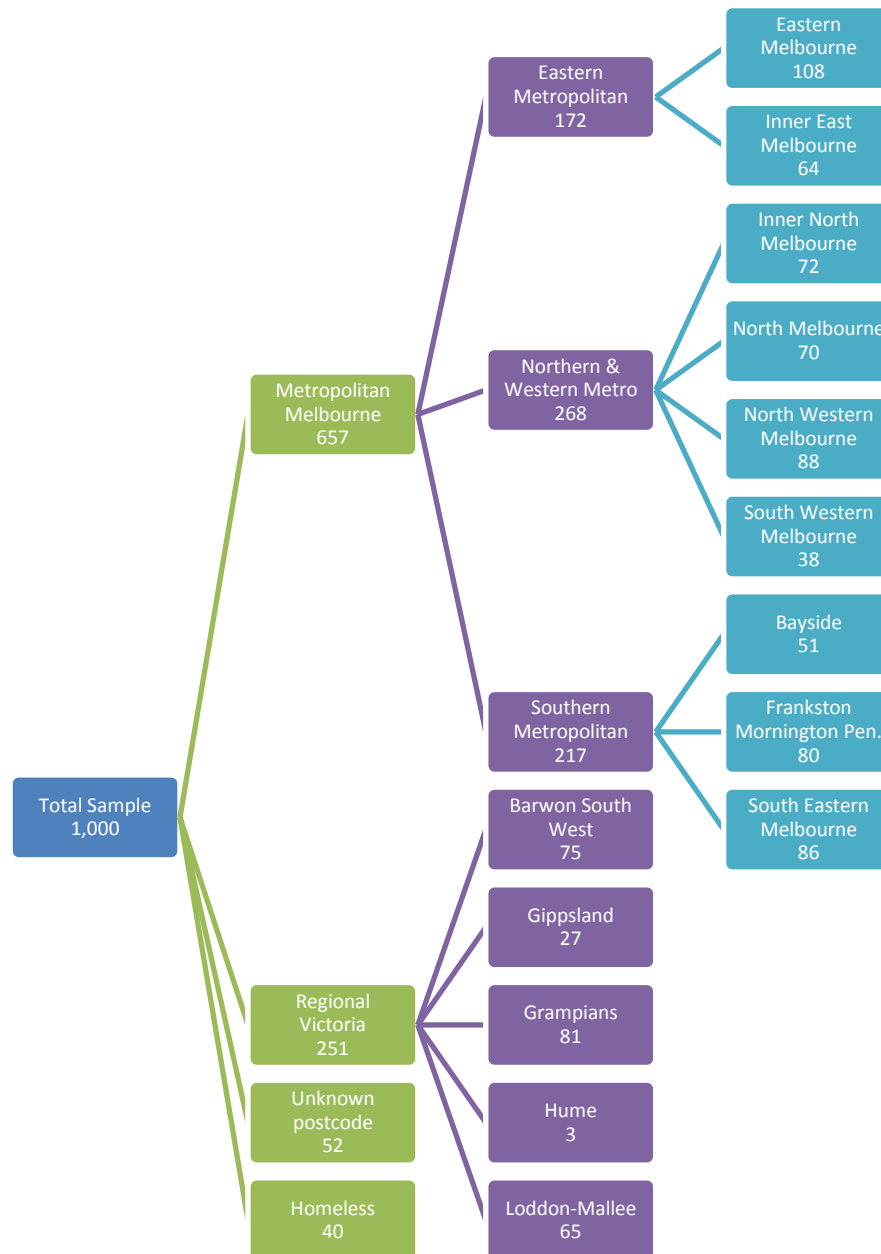


## Client Location

The postcode of the client's current usual place of residence was recorded as known (91%), unknown (5%) or homeless (4%).

The number of surveyed clients within each catchment and each Department of Human Services (DHS) region is detailed in below. There was a good coverage across regions except for Hume.

**Figure 4. Number of surveys completed in each DHS region (purple) and AOD treatment catchment area (light blue, metropolitan catchments only).**

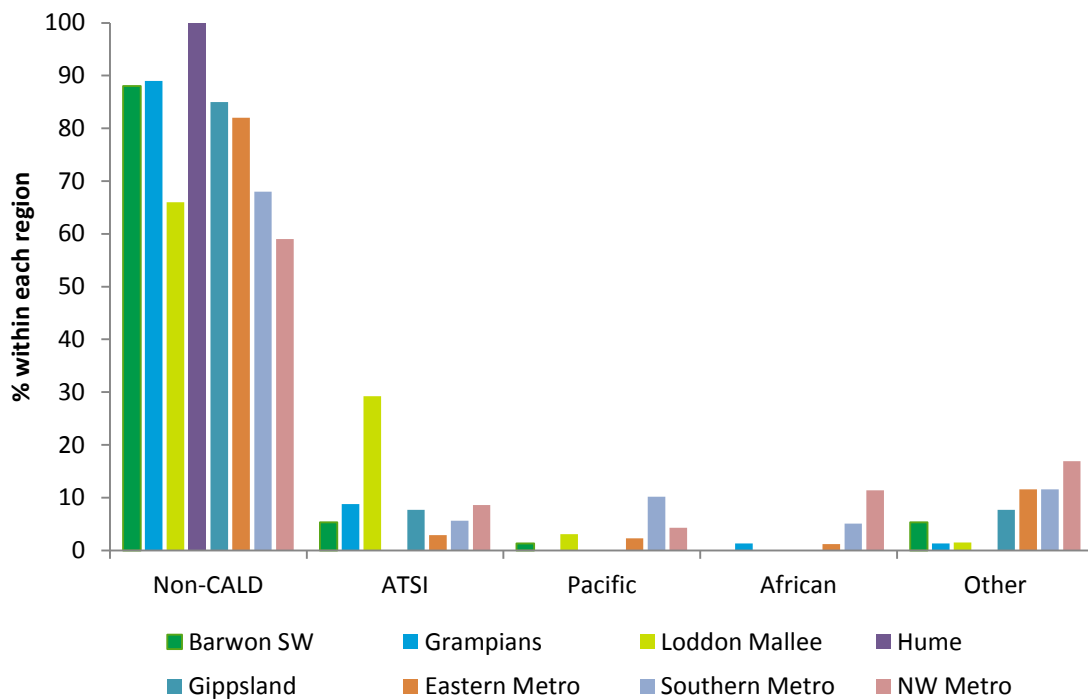


## Cultural Background

Clients were identified to belong to 53 different cultural backgrounds. 71% of clients were from a non-CALD background and 8% were Aboriginal or Torres Strait Islander. Cultural groups from the Pacific Islands accounted for 5% and African cultures 4.5%.

There was a significant difference in the distribution of cultural groups by DHS region. There were significantly more ATSI clients in the Loddon Mallee region (29%), Pacific cultures in Southern Metropolitan region (10%) and clients with African cultural background in Northern and Western Metropolitan region (11%).

**Figure 5. Client cultural background by DHS region.**



*Notes: Barwon SW n = 75; Grampians n = 80; Loddon Mallee n = 65; Hume n = 3; Gippsland n = 26; Eastern Metropolitan n = 172; Southern Metropolitan n = 216; Northern & Western Metropolitan n = 255.*

## COATS

Thirty-four percent of clients were current COATS clients (Community Corrections mandated clients), 64% were not COATS clients, and a small proportion of workers did not know (1%).

## CLIENT ENGAGEMENT IN TREATMENT

The most common mode of engagement of young people in treatment agencies is through outreach (64%), followed by counselling (20%), day programs (5%), residential withdrawal (4%), non-residential withdrawal (4%), long-term residential care (residential rehabilitation or supported accommodation) (3%) or a young parents program (1%). Seven percent of clients were involved in some form of residential rehabilitation.

The majority of clients (67%) participated in only one program (their main treatment type). A further 250 clients were concurrently engaged in one other program, and 79 clients were engaged with two, three or four other programs.

**Table 1. Main treatment type and the percentage of clients engaged in other treatments.**

Main program type	No. clients	% main program only	% engaged in one other program	% engaged in 2 to 4 other programs
Outreach	633	71%	23%	6%
Counselling	177	71%	22%	7%
Day Program	47	49%	19%	32%
Residential Withdrawal	41	63%	32%	5%
Home-based Withdrawal	30	47%	43%	10%
A&D Supported Accommodation	24	29%	63%	8%
Family Therapy	18	44%	44%	11%
Parent Support Program	10	40%	40%	20%
Residential Rehabilitation	9	78%	11%	11%
Outpatient Withdrawal	8	88%	12%	0
Other	2	100%	0	0
<b>Total (N)</b>	<b>1,000</b>	<b>670</b>	<b>250</b>	<b>79</b>

The majority of clients engaged with outreach programs, participated in only that program, as well as those whose main program was outpatient withdrawal (although a small sample), residential rehabilitation and residential withdrawal. Clients participating in the day program, home based withdrawal, family therapy, supported accommodation or the parent support program were more likely to also be involved in other programs.



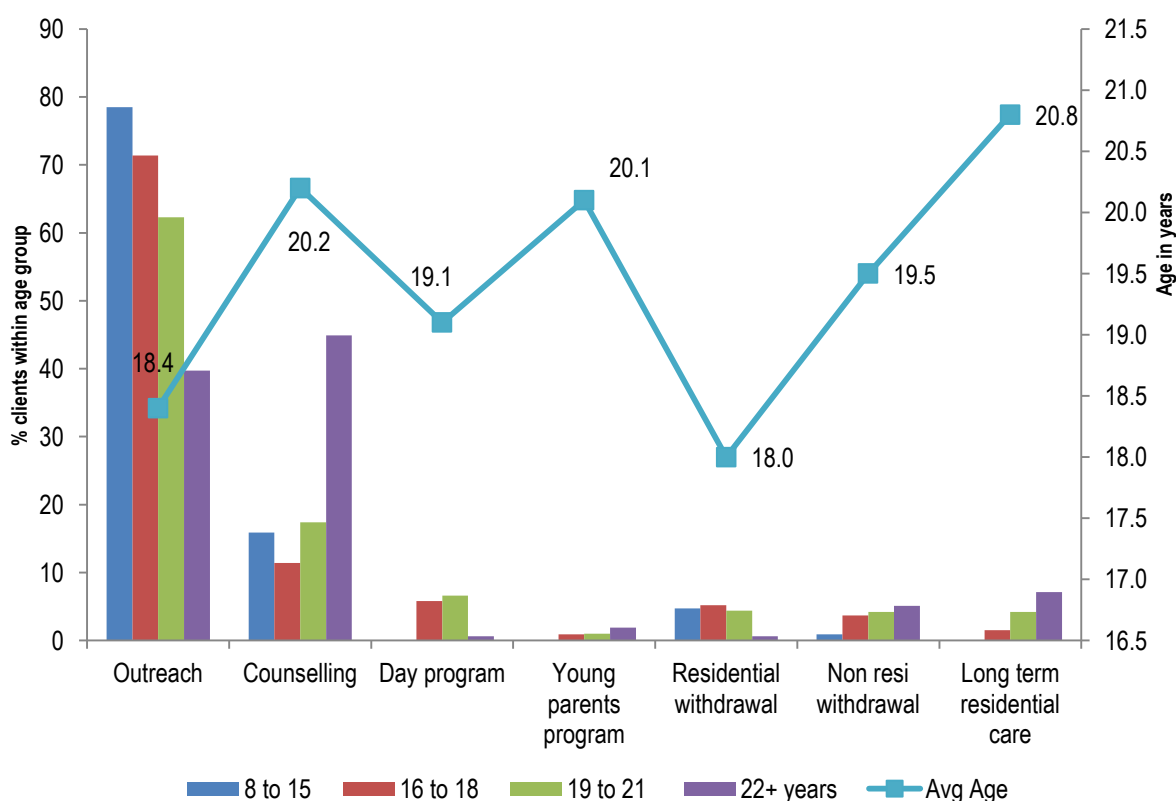
Young women were more likely to be involved in the young parents program (90% female vs. 10% male clients) and non-residential withdrawal programs (55% female vs. 45% male). For other treatment modalities the gender distribution did not differ from what would be expected given the total sample distribution (34% female vs. 66% male).

The distribution of COATS clients by treatment type also differed significantly. COATS clients were more likely to be engaged in outreach (70% COATS vs. 61% Non-COATS), were less likely to be involved in a day program (11% COATS vs. 89% Non-COATS), non-residential withdrawal (3% COATS vs. 97% Non-COATS) and none were involved in the young parents program.

Where 64% of clients were involved in outreach, clients from some cultural backgrounds were over-represented. Eighty percent of African and 74% of ATSI clients were engaged in outreach. Hence, fewer were attending counselling programs (African 2%, Pacific 9%, ATSI 11%) compared to the average of 19%. Clients from Pacific Island cultures (17%) and African cultures (11%) were also more likely to participate in day programs compared to the average (5%). There were no cultural differences for residential withdrawal or long term residential care, but sub-sample sizes were small.

Average age of clients within each main treatment type differed significantly (see Figure 6). Clients engaged in residential withdrawal were younger (18 years) than those in counselling (20.2 years) or long term residential care (20.9 years). Clients engaged in outreach (18.4 years) were significantly younger than those in counselling (20.2 years).

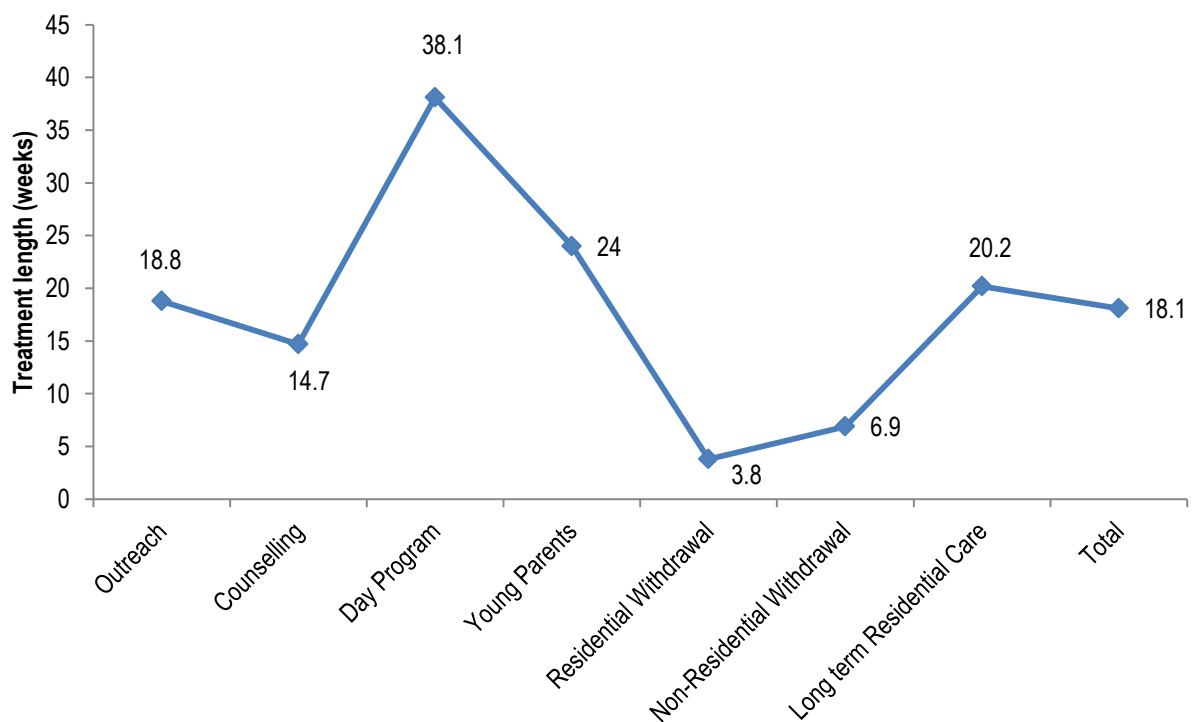
Figure 6. Average age of clients engaged in each main treatment type (N = 997).



Workers were asked to indicate the length of current treatment. This does not reflect what would be an episode length as a course of treatment may comprise many “episodes of care” of differing treatment types. This length of time in treatment may or may not reflect the length of time engaged in their current main program type. In addition, the current phase of treatment has not yet been finalized; hence there is no end date. It is only an indication of how long a client had been in treatment at the time of census. The average length of treatment course was 18.1 weeks ( $SD = 33$  weeks,  $N = 970$ ).

Notwithstanding the concerns raised above, Figure 7 depicts the average number of weeks clients have been engaged with AOD treatment at the time of the census. What can be seen quite clearly from this graph is that clients, who are currently in residential withdrawal, are in the very early stages of engagement (3.8 weeks) whereas those that have entered the day program have been involved in AOD services for on average 38 weeks.

**Figure 7. Average length of time (weeks) already in treatment at the time of the census and current main treatment type (N = 967).**

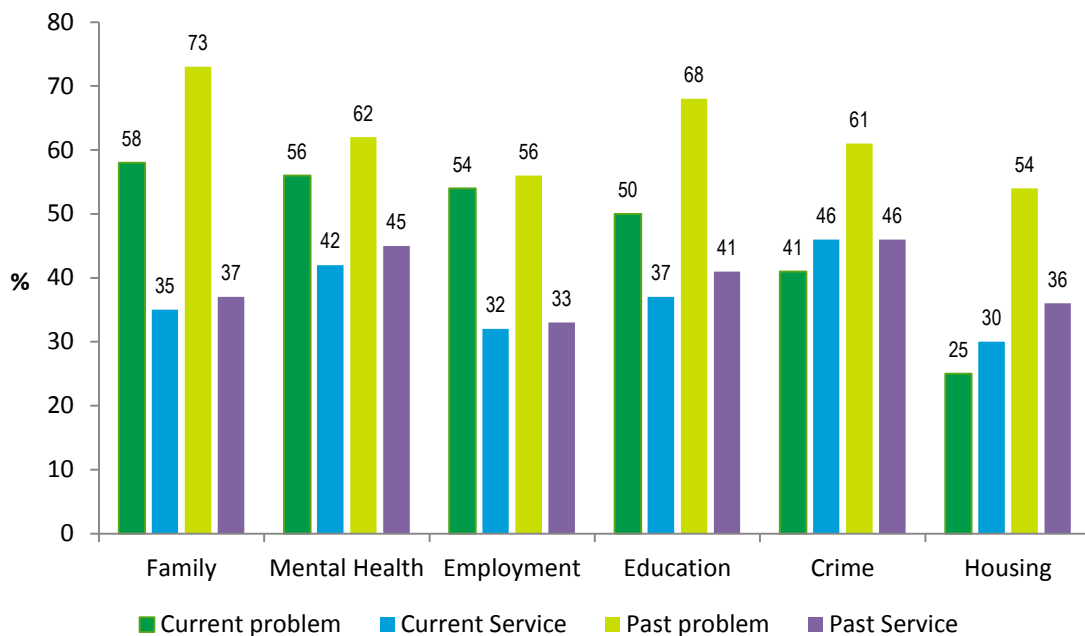


A very small proportion of clients were known to be engaged in AOD programs at different organisations (8%). This suggests strongly that the overlap in clients across treatment agencies is very small. The programs attended were listed as outreach, dual diagnosis programs, residential withdrawal or rehabilitation, or supported accommodation.

### Service Need and Utilisation

A summary question was asked at each survey section to quantify whether a client had a current problem in the given area and whether they were receiving services for that need. The service provision does not need to be delivered by the client's AOD service. These questions attempted to quantify client treatment needs and unmet needs. Service utilization was asked in relation to education, employment, housing, family issues, mental health, and criminal offending (Figure 8).

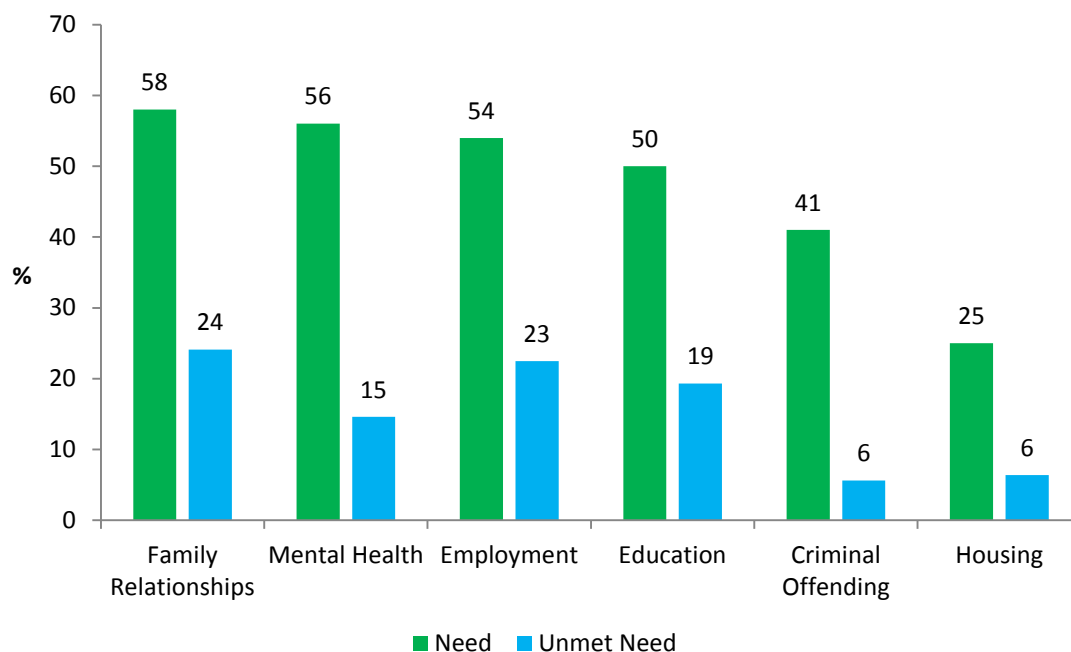
**Figure 8. Percentage of clients with a current problem, past problem, current service and past service for the six areas of need.**



A more detailed analysis, which appears in Figure 9 below, highlights the unmet need for each problem area. That is, the client has been identified as having a current problem, but is not currently receiving services to address that problem.

There are significant numbers of clients who have current problems in education (19%), employment (23%), and family relationships (24%) who are not currently accessing services. These results are summarised in Figure 9. The level of unmet need for addressing problems of criminal offending (5.6%) and housing (6.4%) is low.

**Figure 9. Percentage of clients with service needs in specific areas and percentage of clients whose needs are unmet.**



Clients from African cultural backgrounds were more likely to have unmet educational needs (44%) compared to Non-CALD (19%), Pacific cultural groups (24%), other cultures (16%) and ATSI clients (13%).

Older clients (22 years +) were more likely to have unmet employment service needs (35%).

Clients in DHS regions Loddon Mallee (25%), Gippsland (30%) and Southern Metropolitan (28%) had higher levels of unmet educational needs compared to the average (20%). Of the clients in the Grampians region (n = 81) 30% had unmet mental health treatment needs compared to the state average of 14%.

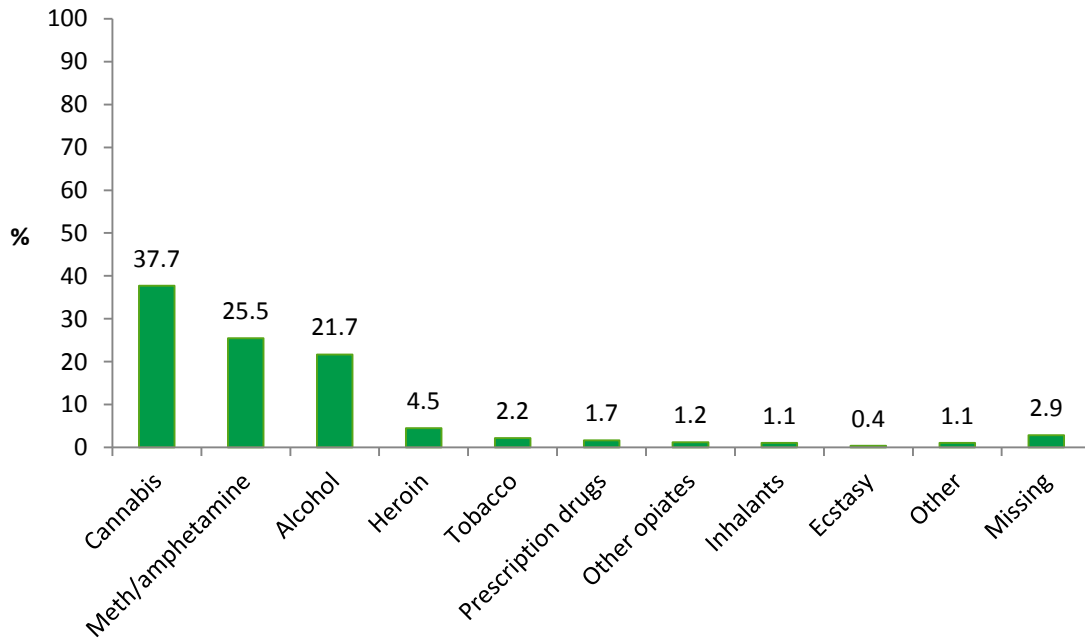
There were no gender or COATS status differences for unmet service needs.

# SUBSTANCE USE, SEVERITY & HARMS

## Primary Drug of Concern

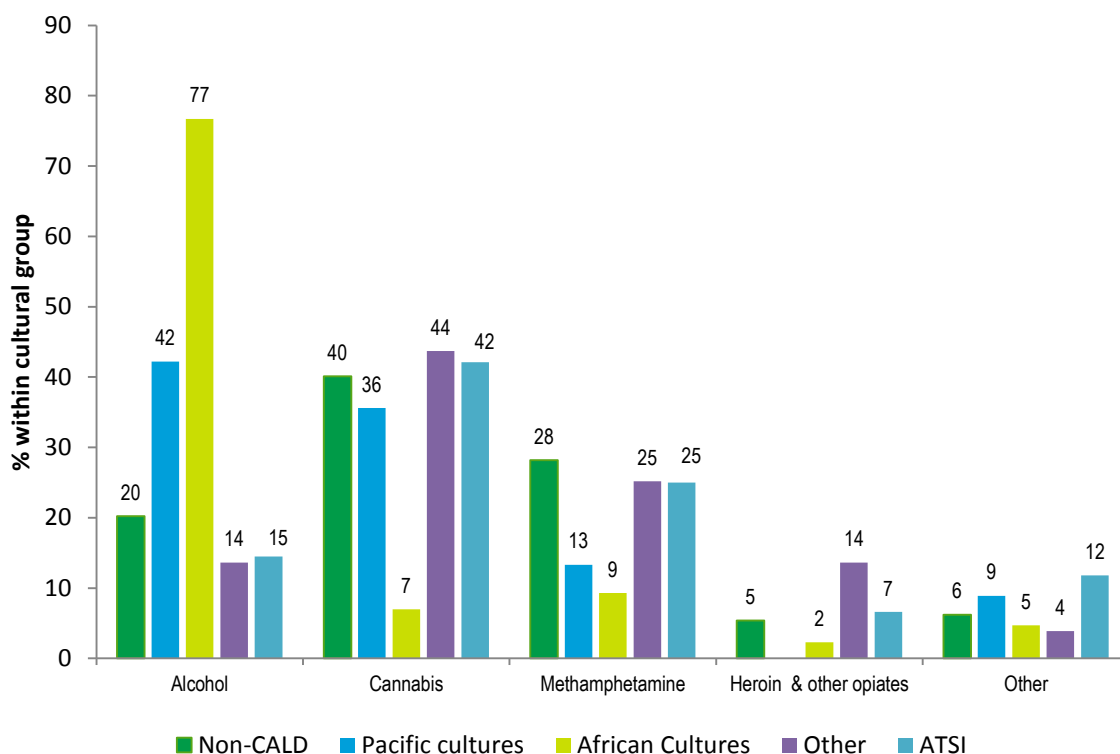
The primary drug of concern for 38% of clients was cannabis. Meth/amphetamine was cited as the second most common drug of concern (26%) followed by alcohol (22%).

Figure 10. Primary drug of concern (N = 1,000).



For the purposes of analysis primary drugs of concern were collapsed into 5 categories: alcohol, cannabis; meth/amphetamine; heroin and other opiates; and other drugs. There were no gender differences for primary drug of concern, nor differences in distribution for COATS clients.

**Figure 11. Primary drug of concern by cultural background (percentage within each cultural group).**



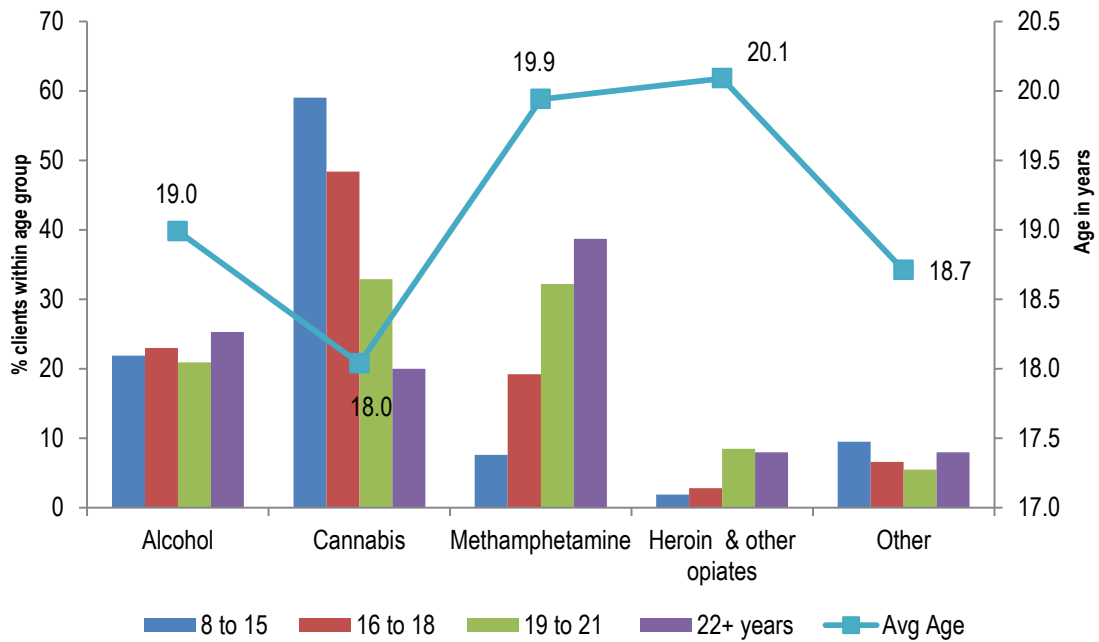
Primary drug of concern differed significantly among those from the five cultural background groupings.

The greatest differences lie in the comparison with clients from African cultural backgrounds where they were more likely to have alcohol as their primary drug of concern (77% vs. sample average of 23%). Clients from ‘Other’ cultural backgrounds were more likely to use heroin and other opiates (14% vs. sample average of 6%).

The profile of primary drug of concern also differed by age group (see Figure 12). There was a significant difference in the average age of clients for each drug type and the distribution of primary drug within each age group. Clients whose primary drug of concern was methamphetamines or heroin were older than clients whose primary drug of concern was cannabis.

Figure 12 depicts the decreasing use of cannabis with increasing age, and the increasing use of methamphetamine with increasing age. Alcohol and other drugs are stable across the age groups. Heroin and other opiates as a primary drug of concern is more common among those in the 19+ years groups.

**Figure 12. Primary drug of concern by age group and average age.**

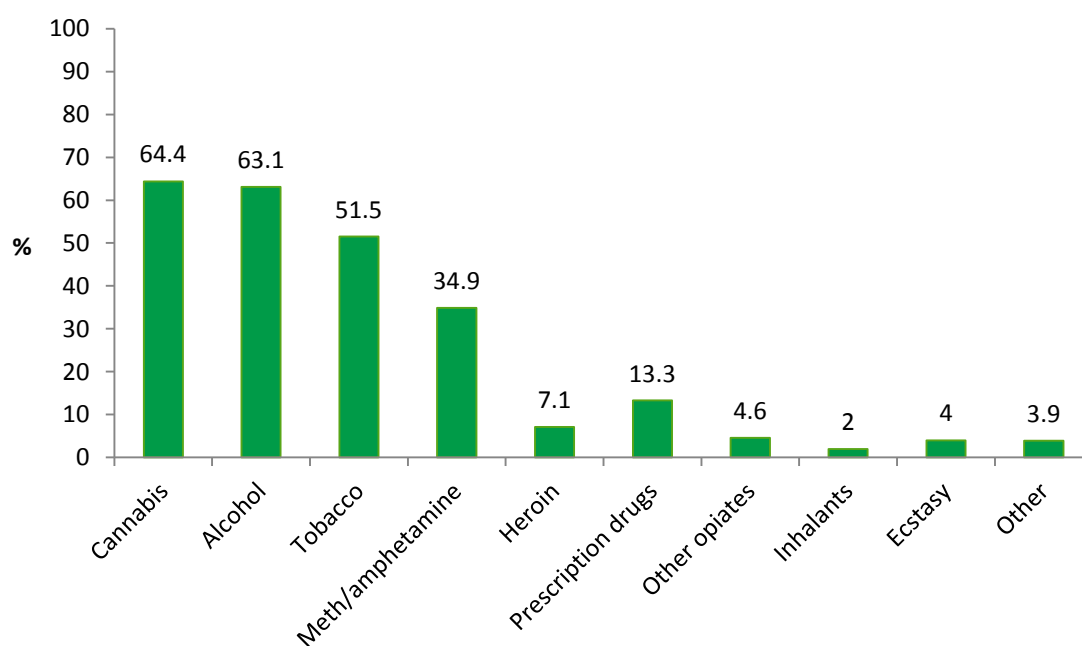


## Drugs Used in the Last 4 Weeks

Primary drug of concern may not reflect frequency of drug use, nor all drugs used. Drugs used in the last 4 weeks, and drugs used daily or almost daily were also recorded, independent of primary drug of concern (that is, more than one drug could be chosen).

Again the most commonly used drug in the last 4 weeks was cannabis (64%), followed by alcohol (63%), tobacco (52%), and methamphetamines (35%). Only 10% of clients did not use any drug (excluding tobacco) but 29% of clients had used 3 or more drugs in the last 4 weeks (excluding tobacco). The average number of drugs used, excluding tobacco, was 1.97 ( $SD = 1.3$  drugs).

Figure 13. Drugs used in the last 4 weeks ( $N = 1,000$ ).



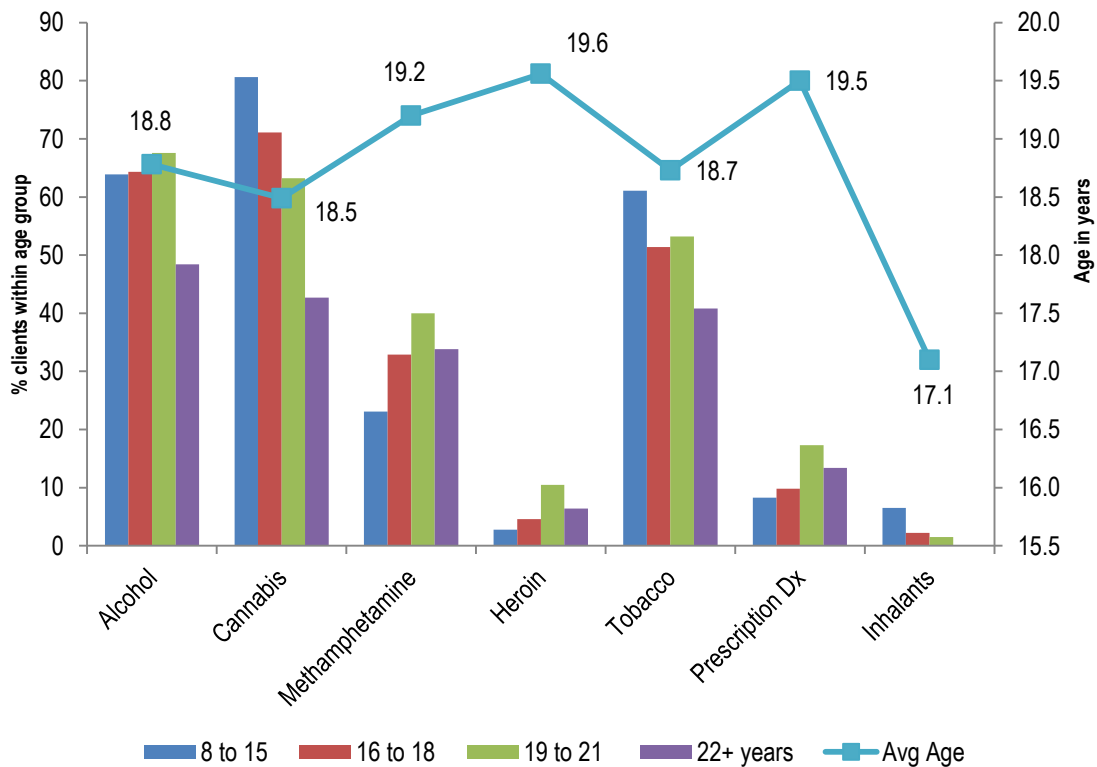
There were few gender differences for drugs used in the last 4 weeks. Young women were less likely to use alcohol (58%) compared to young men (66%); were more likely to have used heroin (10%) compared to males (6%); and were more likely to have used prescription drugs (17%) compared to young men (11%).

Nearly all drug categories demonstrated age group related differences except for other opiates and ecstasy. Figure 14 depicts the percentage of clients within each age group who have used each drug in the last 4 weeks. Superimposed is a line graph depicting the average age of clients who have used each drug. Clients that have used methamphetamines, heroin and prescription drugs were on average older than clients who have used inhalants and cannabis. Inhalant users, although a small number in total (only 20 clients), were over represented in the youngest age group (7%) compared to the total sample prevalence of 2%.

Figure 14 also depicts decreasing use of cannabis, tobacco and inhalants by age, and increasing use of methamphetamines, heroin and prescription drugs. Alcohol is used equally among the age groups between 8 and 21 (average 65%), then drops to 48% of those over 22 years of age.



Figure 14. Drugs used in the last 4 weeks by age group and average age.



When cultural background is investigated in relation to drugs used in the past week, the only differences are seen with the use of alcohol, methamphetamine and inhalants. Clients from African cultural backgrounds (87%) and Pacific Island backgrounds (78%) were more likely to use alcohol in the last four weeks than those from Non-CALD (61%), Other (63%) or ATSI (68%) backgrounds.

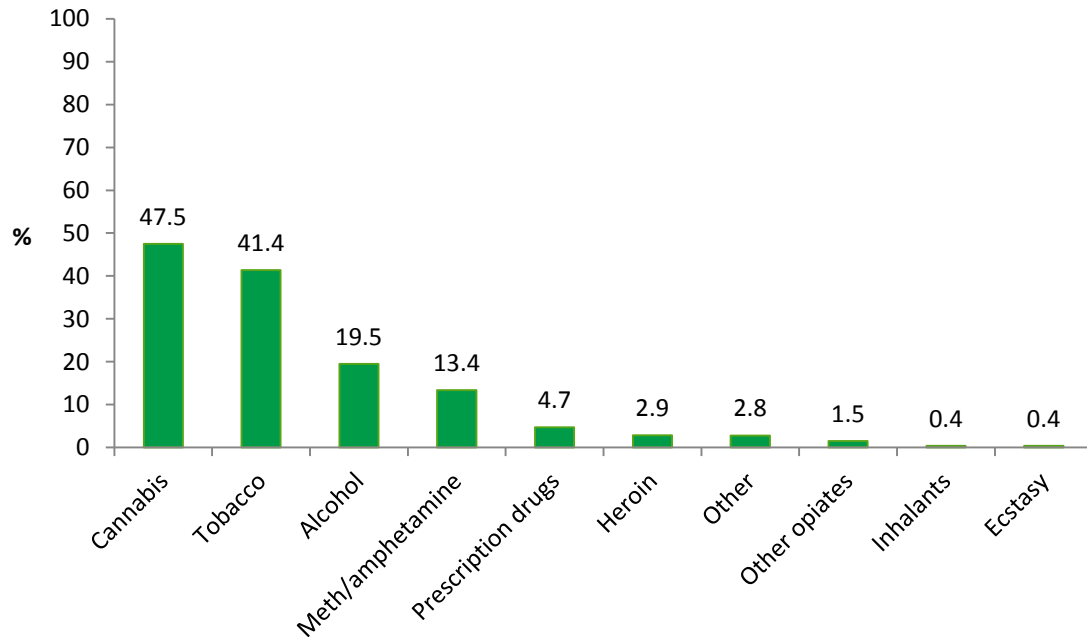
With respect to methamphetamine, the sample average was 35% and clients from African cultures were significantly below this average (7% had used methamphetamines in the last 4 weeks). The significant cultural differences for inhalant use was the higher proportion of use among youth from Pacific Islands (7%) and ATSI (8%) backgrounds than what would be expected, with use in other cultural groups non-existent or low (Non-CALD 2%, Other 0%, African 0%).

The only statistically significant difference in drug use in the last 4 weeks and COATS client status was for the use of tobacco: COATS clients were less likely to have used tobacco (46%) compared to non-COATS clients (55%).

## Daily or Almost Daily Drug use

Cannabis was the drug most frequently used daily or almost daily (48%) followed by tobacco (41%), alcohol (20%) and meth/amphetamines (13%, see Figure 15).

Figure 15. Drugs used daily or almost daily in the last 4 weeks ( $N = 1,000$ ).

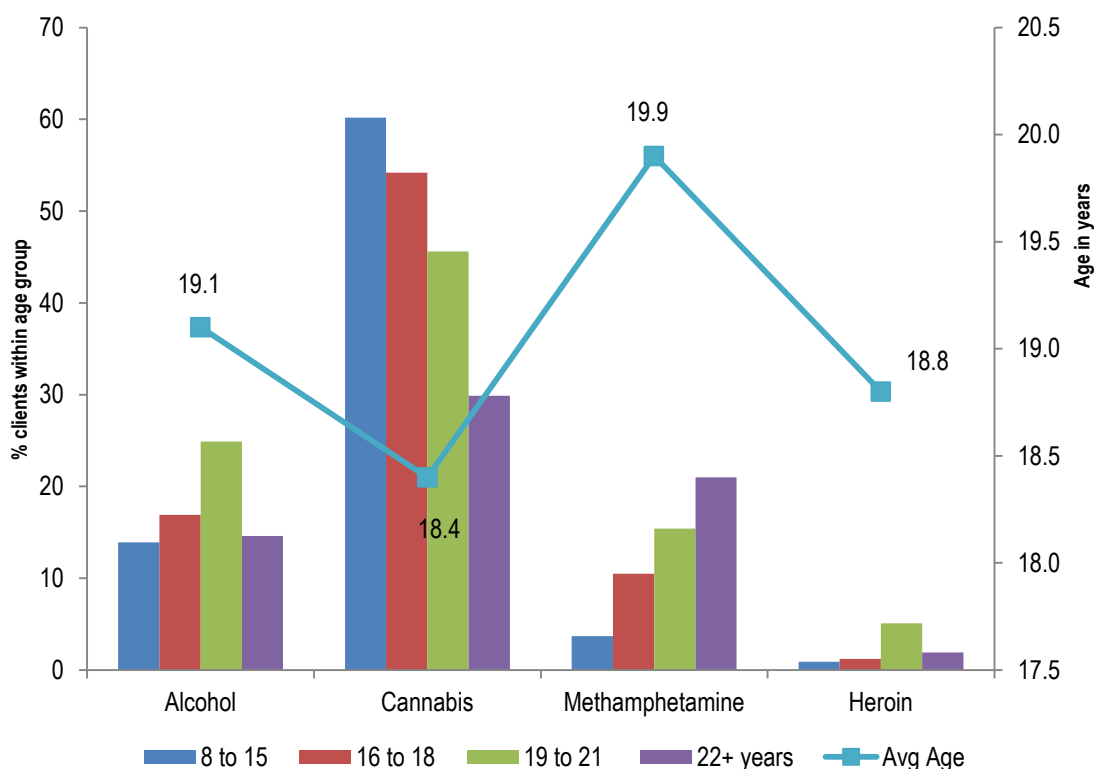


Sixty-six percent of clients used at least one drug daily or almost daily (excluding tobacco): 452 clients had only used one drug daily, a further 15% used 2 drugs daily, and 5% of clients used 3 or more drugs daily or almost daily. The average number of drugs used daily or almost daily (excluding tobacco) was 0.93 ( $SD = 0.91$  drugs).

The only gender difference with respect to daily drug use was for tobacco: 47% of young women smoked tobacco daily compared with 38% of young men.

Age group differences were evident for daily use of only the main four drugs: alcohol, cannabis, heroin and methamphetamine. Clients who used cannabis daily (18.4 years) were on average younger than those who did not (19.4 years). Clients who used methamphetamines daily or almost daily were on average older (19.9 years) than clients who did not use methamphetamines daily (18.8 years). Figure 16 depicts the distribution of daily drug use within each of the four age categories.

Figure 16. Drugs used daily or almost daily in the last 4 weeks by age group and average age.



Clients from African cultural backgrounds were more likely to record daily alcohol use (42% compared to sample average of 20%). Although the sample size was very small the daily use of inhalants was more common in the ATSI client group (4%) compared to the total sample (0.4%).

Daily drug use patterns for COATS compared to non-COATS clients was only significant for tobacco: COATS clients were less likely to be smokers (36%) than non-COATS clients (44%).

### Dependence

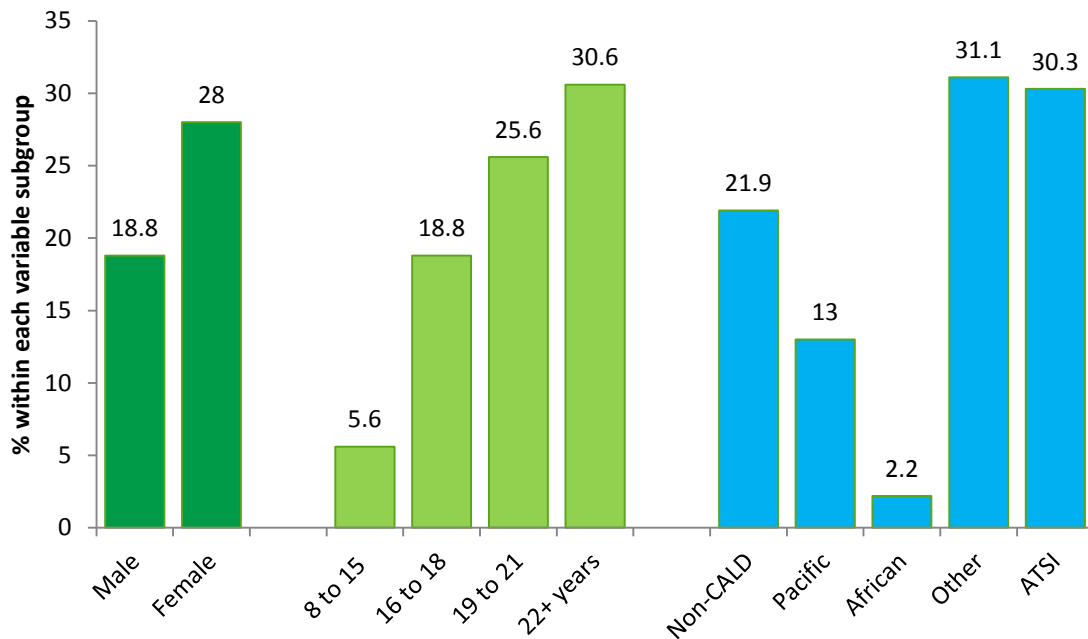
Workers rated 544 clients as being dependent “on any of the drugs the client used in the last 4 weeks, excluding tobacco” (54%).

There were no significant differences based on gender, age group, cultural background or COATS status on this measure of dependence.

### Injecting History

There were 120 clients (12%) who had used a drug by injection in the last 4 weeks, and 22% of clients had a history (including current) of injecting drug use. Young women were more likely to have a history of injection (28%) compared to young men (19%). With the increasing age groups, the percentage of history of injection increased (from 6% in the youngest group, to 31% in the oldest group) and clients from Pacific Island cultures and African cultural groups had lower rates of history of drug injection (see Figure 17). There was no difference based on COATS status and drug injecting history.

Figure 17. History of drug injection by gender, age and cultural background.



### Substance Use Related Harms

With regard to harms, 29% of clients used 3 or more different drugs in the last 4 weeks (excluding tobacco). Workers assessed 386 clients as having experienced serious drug use related harms<sup>1</sup> in the last 3 months (38.6%).

There were no significant differences based on gender, age group, cultural background or COATS status on this measure of drug use harms.

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<sup>1</sup> Examples of “drug use related harms” given in the survey were: required hospital admission or ambulance attendance, suffered injuries or physical harm, driven a vehicle when substance affected, had unwanted sex when substance affected or been a victim or perpetrator of violence.

## Workers' Ratings of Drug Use Severity

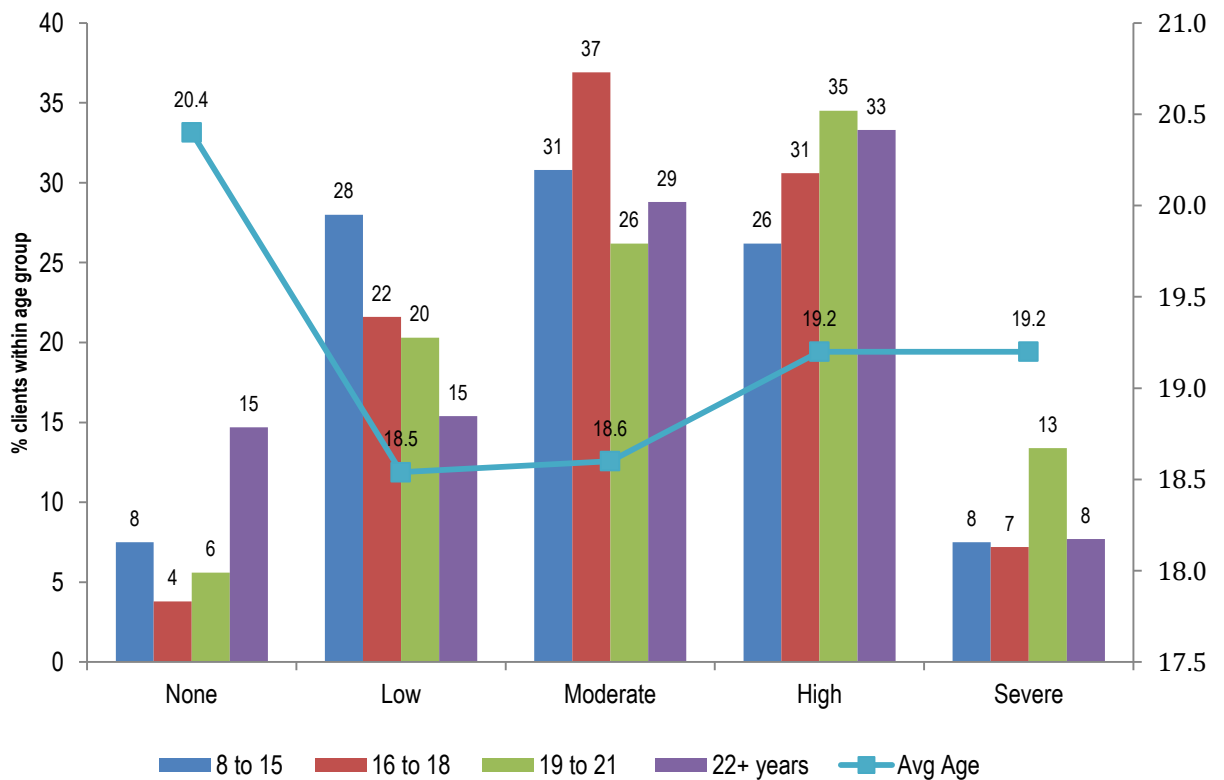
Workers were asked to rate the client's "overall severity of substance use (excluding tobacco)" and 42% of clients were rated as having "High" or "Severe" substance use severity (see Figure 18).

In relation to drug use severity, there were no differences based on gender, cultural background or COATS status.

There were significant differences across the age groups and also with respect to average age (see Figure 18). The older two cohorts were more likely to be rated as High/Severe (48% and 41%) compared to the younger two groups (34% and 38%). The youngest clients were more likely to be rated as 'Low' (28%) compared to the oldest group (15%).

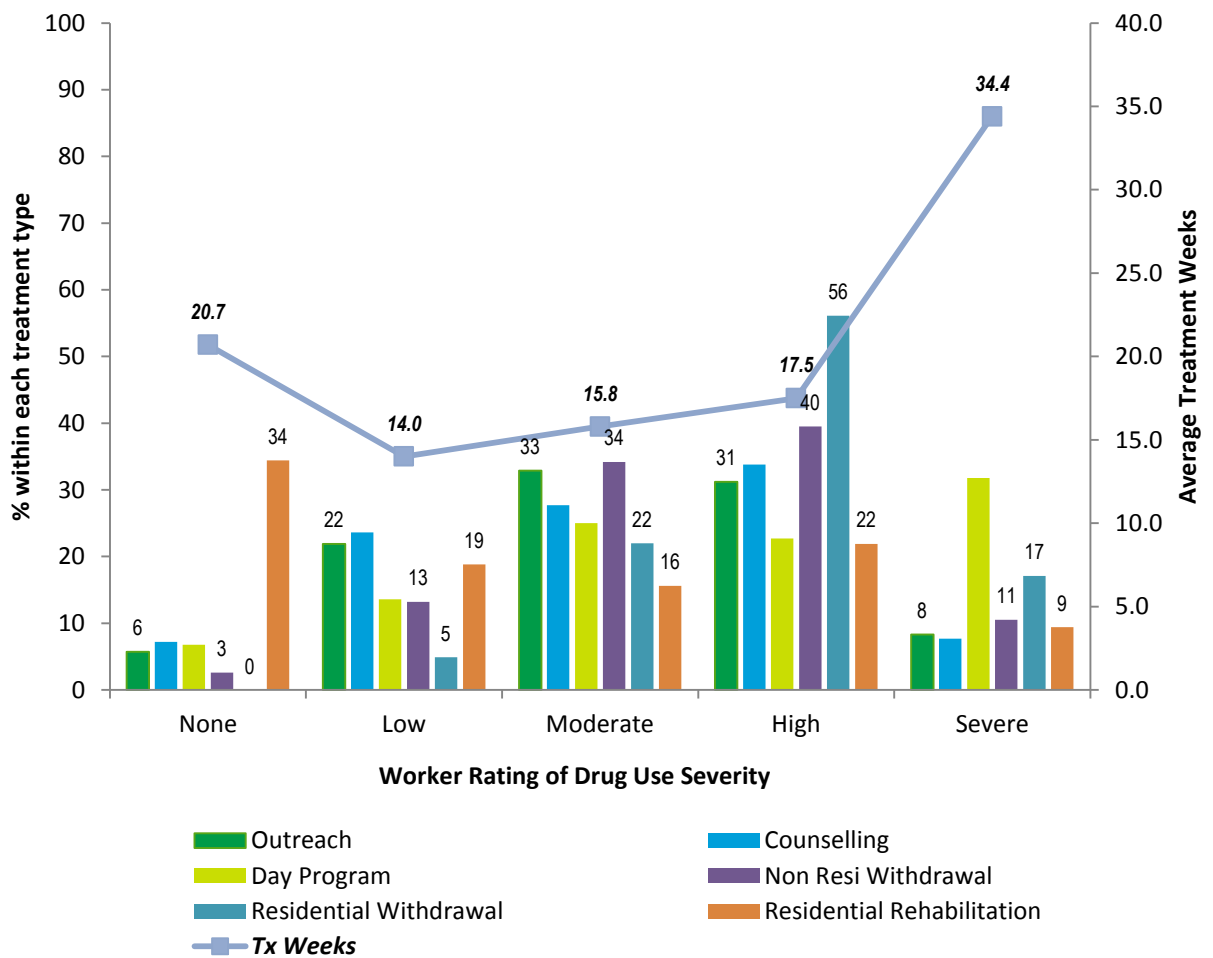
Clients rated as "Not Using" were on average older (20.4 years) than clients in the other categories.

**Figure 18. Worker rating of client drug use severity (excluding tobacco) by age group, including average age within each rating (N = 992).**



When worker severity rating was compared across the current main treatment types there were significant differences in distribution of ratings: of those clients who were in residential withdrawal programs ( $n = 41$ ) 73% were in the High/Severe category of drug use severity (see Figure 19). Clients involved in day programs were also more likely to be rated in the High/Severe category (55%) as were those in non-residential withdrawal programs (50%). Clients engaged in residential withdrawal were less likely to be classified as High/Severe, and more likely to be in the None category (34%).

**Figure 19. Worker rating of client drug use severity (excluding tobacco) by current main treatment type, and average number of weeks in treatment.**



Average length of time in current treatment differed significantly for worker ratings of severity: clients rated as 'Severe' were in treatment for an average of 34.4 weeks, which was significantly higher than the averages for the Low, (14.0 weeks), Moderate (15.8), and High (17.5), but not significantly different to the None group (20.8 weeks). (The average age for clients in the High and Severe groups is the same: 19.2 years).

# PSYCHOSOCIAL FACTORS: COMPLEXITY

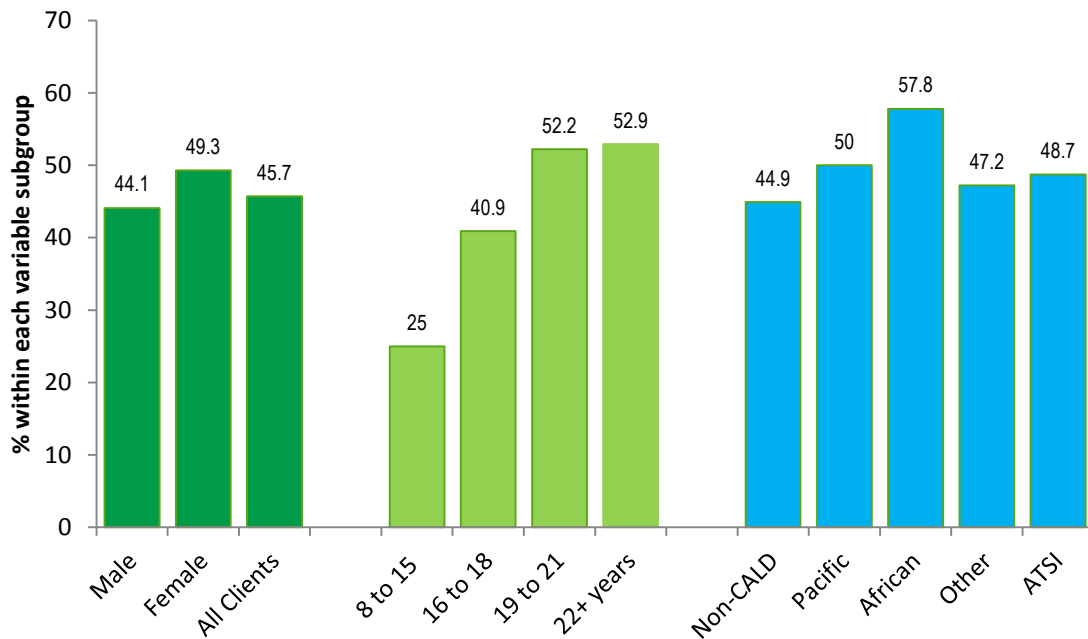
## Education & Employment

A significant proportion of young people in this sample were not employed or not involved in education or training at the time of the census (46%).

The majority of clients (63%) had not attended any education or training in the last 4 weeks and 73% were not employed. Of the clients who are legally required to attend school, 30% had not.

Young women were less likely to be employed (18%) compared to male clients (25%) but there were no gender differences when employment and educational status were combined ('meaningful activity') where young women were equally likely to have attended education or training or be employed in the previous four weeks (see Figure 20).

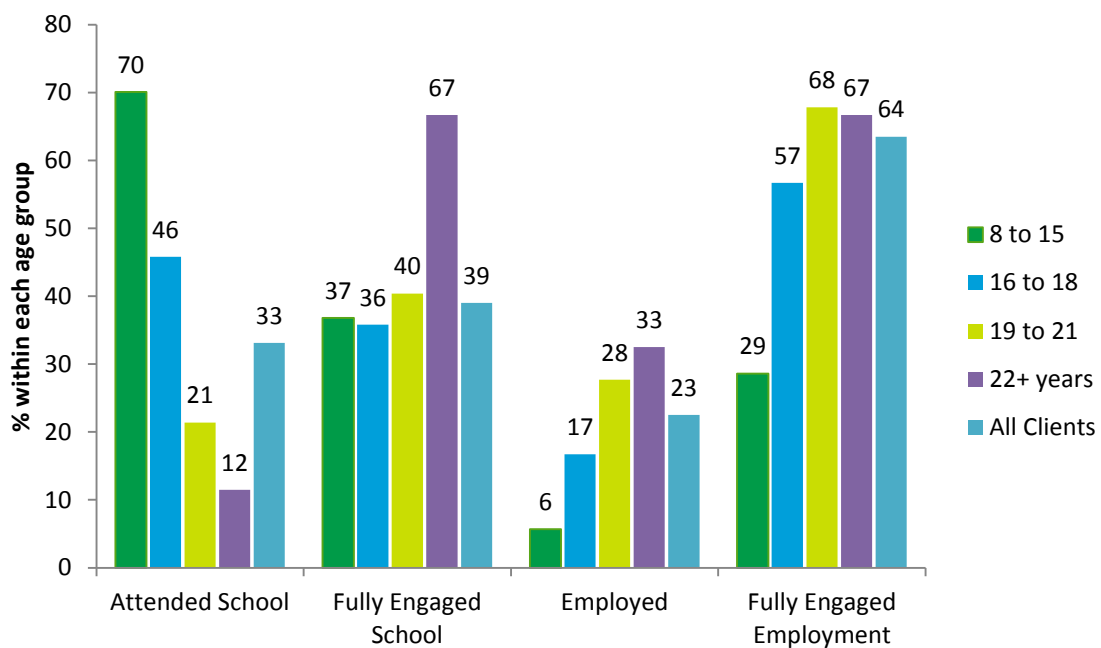
**Figure 20. Percentage of clients not engaged in meaningful activity (employed or attending education/training) by gender (NS), age group ( $p < .0001$ ), and cultural background (NS).**



As expected there were age-group differences with respect to participation in employment and education. Seventy percent of clients between the ages of 8 and 15 had attended school or training in the last 4 weeks (see Figure 21). Of all of those who had attended school ( $n = 331$ ) only 39% were fully engaged with their education. However, for clients who were 22 years or older and attending education or training, 67% were fully engaged.

With regard to employment, older clients were more likely to be employed but still only 33% of clients 22 years or older were employed. There were no differences by age as to how engaged they were with their employment, and apart from the youngest group, the majority were fully engaged in their employment.

**Figure 21. Education and employment participation and engagement by age group.**



There were no differences in whether clients had participated in employment or education based on their cultural background. However, of the clients who were attending school, only 19% of ATSI clients were fully engaged, compared to the total sample average of 39%. With respect to COATS client status, COATS clients were less likely to have attended education or training (26%) compared to those who were not referred by COATS (37%). There were no other statistically significant differences for cultural background or COATS status.

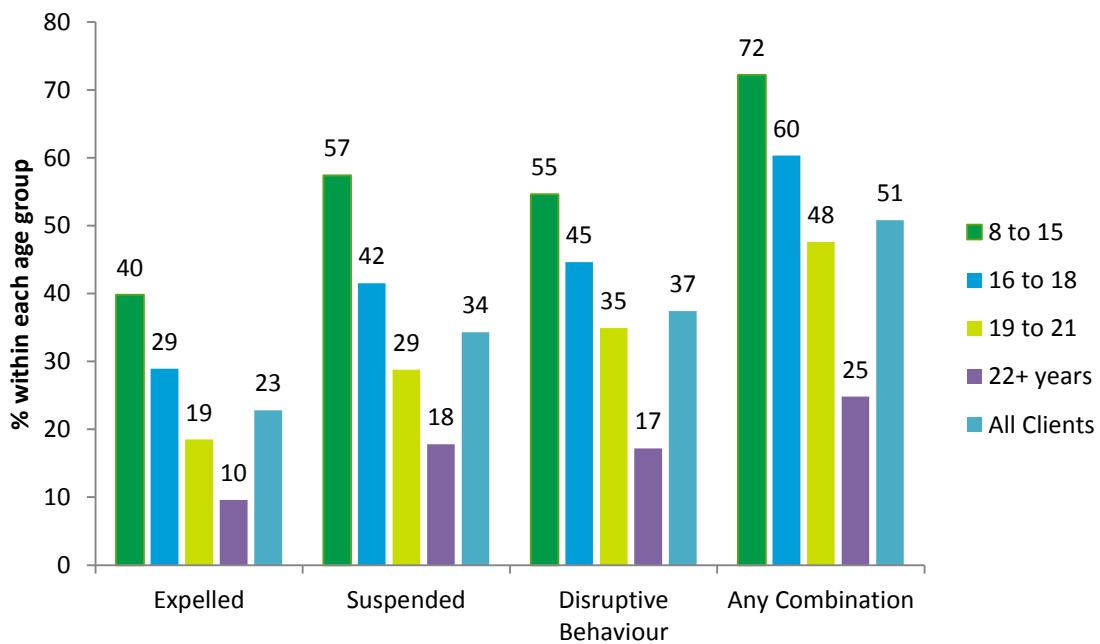


## Expelled & Suspended from School

Almost 23% of clients have been expelled from school, 34% suspended and 37% had problems with disruptive behaviour in class. Half of the client population (51%) had ever been expelled, suspended or were otherwise disruptive in class. There were no gender differences: young men and women had a similar history with regard to expulsions and suspensions. Similarly there were no cultural background differences. Workers of COATS-referred clients reported more disruptive behaviour (43%) compared to 34% for non-COATS clients.

The greatest differences were seen between the different age groups. The prevalence of all three factors decreased with increasing age (see Figure 22). This may be attributable to biases in the assessment process whereby workers are more likely to focus on educational issues when clients are of school age. When we look closely at our youngest cohort, where this data is likely to be most reliable, the rate of school expulsions and suspensions is incredibly high (40% expelled and 57% ever suspended from school). This stands to reason, given that problems at school and disruptive behaviour are likely to lead to a referral in younger clients more so than older clients.

**Figure 22. Percentage expelled or suspended or problems because of disruptive behaviour at school by age group.**



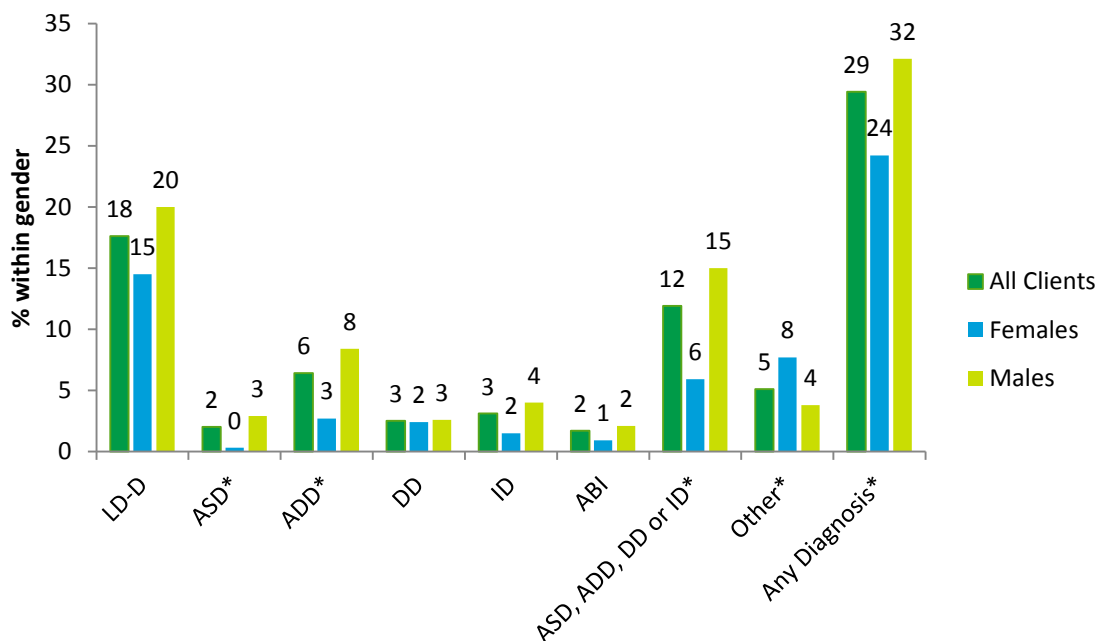
## Learning Difficulties (LD) & Developmental Delay (DD)

Workers were asked to identify any learning or education related difficulties their clients may experience. The diagnoses specified were: learning difficulty or disability or dyslexia; Autism Spectrum Disorder (ASDs); Attention Deficit Disorder (ADD) with or without hyperactivity; other developmental delay disorder (DD); intellectual disability (ID); acquired brain injury (ABI) or 'other' reason. This data should be used with caution as such assessments or questions are not routinely asked in youth AOD assessments. If a client has been referred because of difficulties at school and is currently of school age, one would expect more attention to these areas, but in general AOD workers are not trained in the assessment and identification of learning difficulties or developmental delay. This data was collected to provide a indicative measures of these issues.

The prevalence of identified learning difficulties and developmental delay is detailed in Figure 23 for all clients, and by gender.

Although the prevalence rates are quite low, boys were more likely to be identified with an Autism Spectrum Disorder, Attention Deficit Disorder, or either of these diagnoses. The level of learning difficulties, disability or dyslexia (LD-D) in the total client population was 18%, and for any of the learning difficulty related diagnoses, it was 29%. Young women were more likely to be identified with "other" difficulties that had an impact on their learning which most often was identified as 'mental health issues'. Given the level of LD and DD identified, further investigation is warranted into the relationship between LD, DD, AOD use and treatment engagement.

Figure 23. Percentage of clients with learning related difficulties by gender<sup>2</sup>.



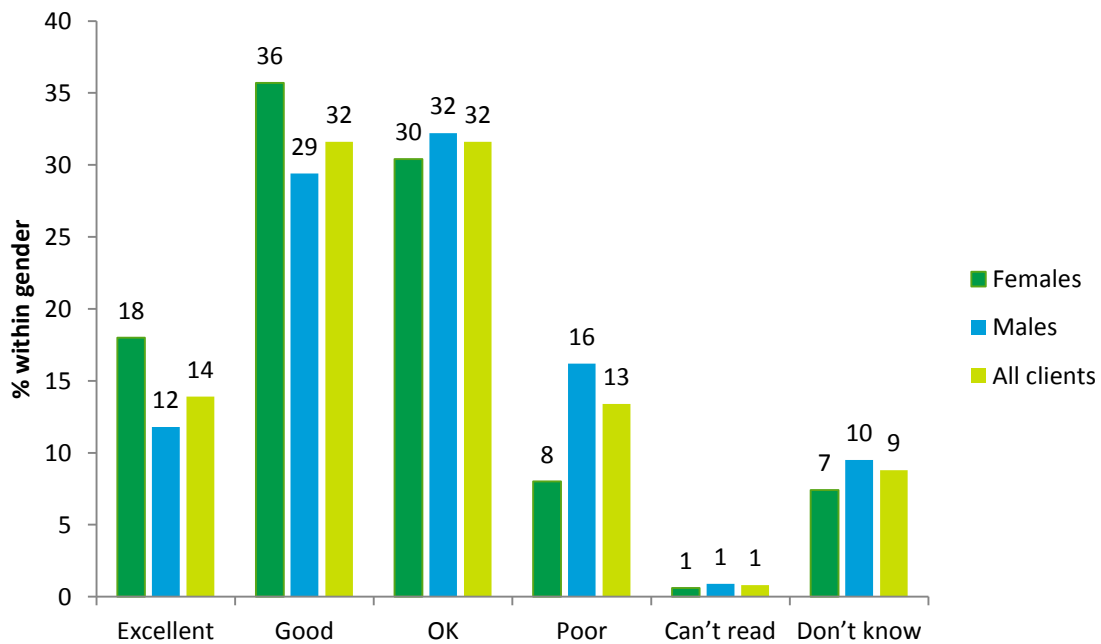
<sup>2</sup> \*Indicates variables with statistically significant gender differences.

There were no age group related differences with regard to LD and DD. Intellectual Disabilities (ID) was more prevalent in Pacific Island and ATSI cultural groups. The total sample prevalence of ID was 3.2%, but in the Pacific Island client group this was 6.5% and within ATSI clients 11%. There were also differences between COATS and non-COATS clients. COATS clients were more likely to have a learning difficulty, disability or dyslexia (25%) compared to non-COATS clients (14%). They were also more likely to have any diagnosis (ASD, ADD, DD or ID) 35% compared to non-COATS clients (26%).

### Literacy & Numeracy

Workers were asked to rate (as best as they could, and if they could) their client’s level of reading ability using a scale from “Excellent” to “Can’t Read”. This would have been a difficult task as it is not standard procedure for workers to assess literacy and numeracy among their clients. It is also unclear as to what benchmark of “reading ability” workers would be using to assess clients. Nonetheless the data provides a conservative indication of literacy and numeracy issues.

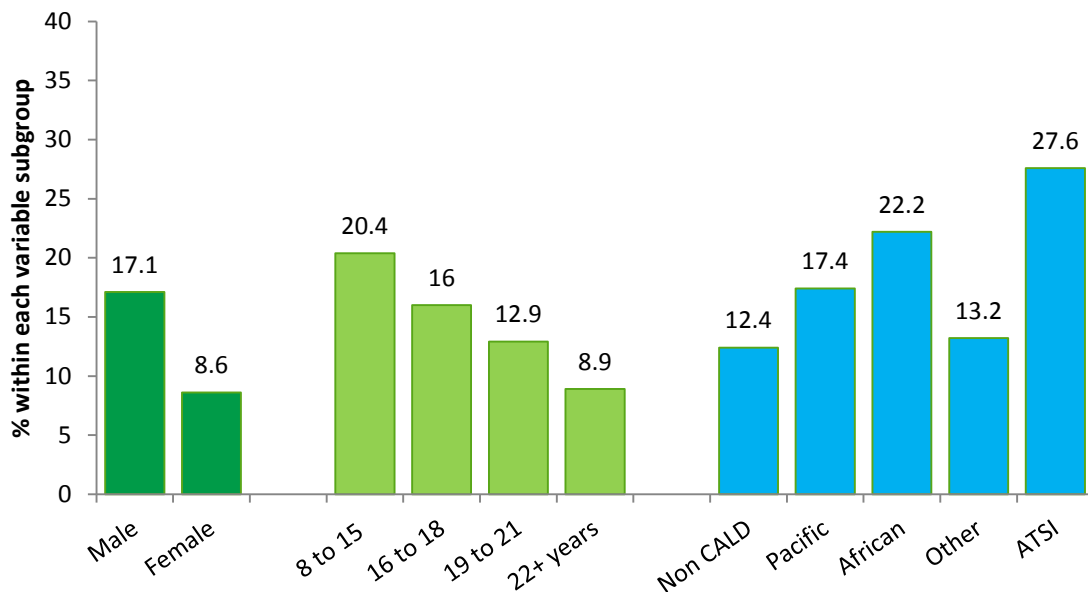
**Figure 24. Worker rating of reading ability by gender (N = 992).**



Response categories were combined to facilitate analysis: Excellent, Good or OK versus Poor or Can't read. Young men were more likely to be rated as unable to read or have poor reading skills (17%) compared to young women (9%). There were no differences by age group.

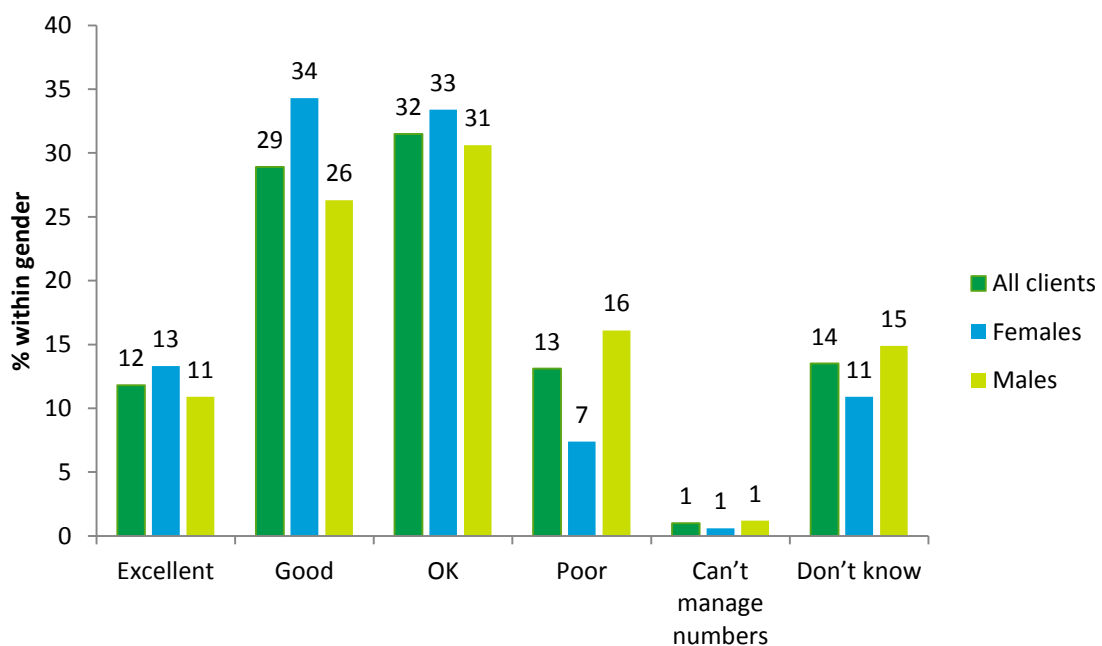
ATSI clients had the highest rate of poor or no literacy (28%) followed by clients with African cultural backgrounds (22%) and those from the Pacific Islands (17%). Similarly COATS clients were more likely to have poor or no literacy (18%) when compared to non-COATS clients.

**Figure 25. Percentage of clients where literacy is 'poor' or who 'can't read' by gender ( $p < .0001$ ), age group ( $NS$ ), and cultural background ( $p = .003$ ).**



Workers were less able to rate their client's numeracy skills (13% of responses were "Don't know") compared to reading ability (9%). Forty-five percent of clients were rated as having OK, Poor or no numeracy skills and 40% were rated as either Excellent or Good. Numeracy ratings were similar to reading ability ratings, and the two were very highly correlated (Spearman  $r = 0.852$ ,  $p < .0001$ ).

**Figure 26. Worker rating of day to day numeracy skills by gender ( $N = 989$ ).**



Male clients (17%) were more likely than female clients (8%) to have poor or no numeracy skills (see Figure 26). Similarly the clients in the youngest age group (25%) were more likely to have poor or no numeracy compared to older clients (sample average 14%). There were no cultural background or COATS status differences in relation to numeracy skills.

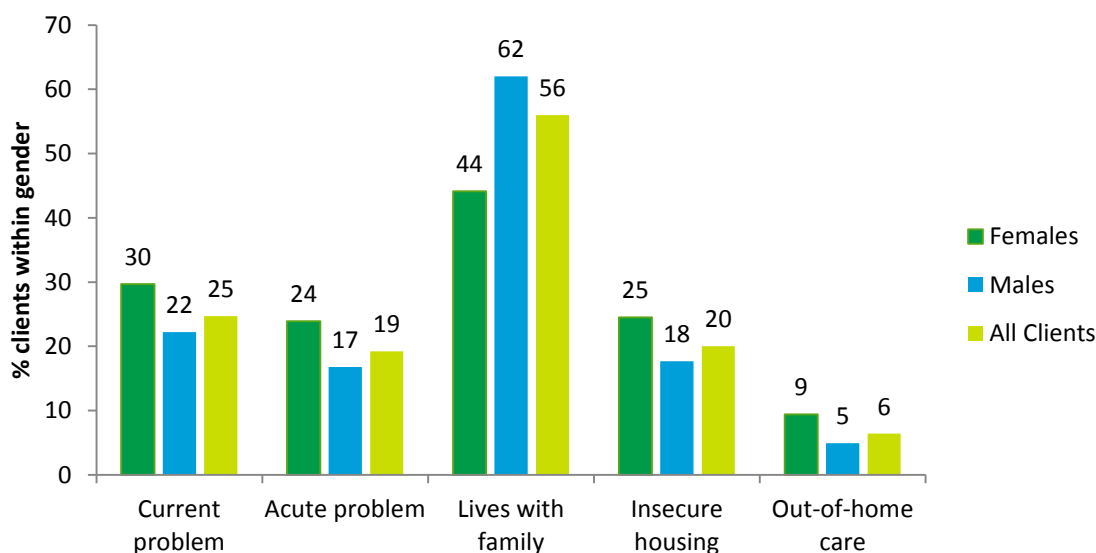
## Housing

Nineteen percent of clients had experienced acute housing problems in the 4 weeks prior to the census date ( $n = 193$ ). A quarter of clients were assessed as having a “current housing problem” and 6% of clients had housing needs but were receiving no services.

Only 10 clients were recorded as living in public places or homeless but when the accommodation categories are divided into “secure housing” and ‘insecure housing’,<sup>3</sup> 20% of clients lived in insecure housing (see Figure 27). Insecure housing is more common in the older two age groups (19 to 21: 19%; and 22+: 25%) whereas only 6% of 8 to 15 year olds lived in insecure housing (which includes out of home care). Similarly the youngest age group was more likely to be still living with their parents or other family members (69%) compared to the other age groups (52% to 59%).

More female clients (24%) had acute housing problems compared to young men (17%). Specifically, female clients were more likely to be living in accommodation types categorised as ‘insecure’ (25%) compared to male clients (18%). And again, more female clients (9%) were likely to be living in out of home care (kinship, non-kinship or residential) compared to male clients (5%). There were no differences based on cultural background or COATS status for these housing-related questions.

**Figure 27. Housing problems and accommodation status by gender (N = 994).**



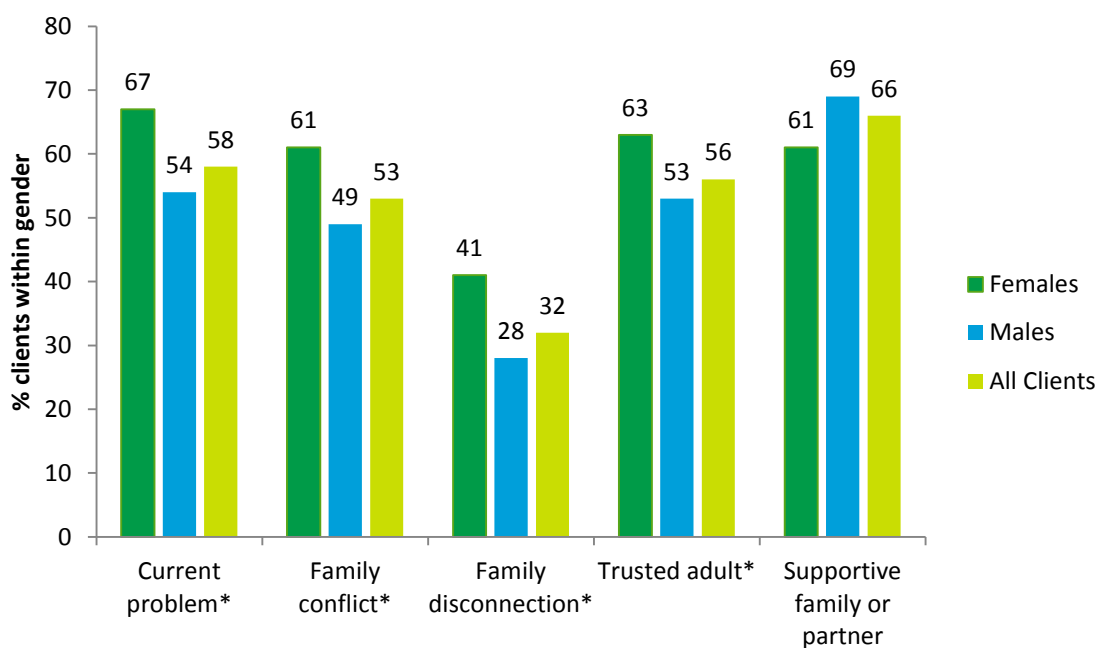
<sup>3</sup> Secure housing included accommodation options of living with family, other family, in a private residence, or in out of home care. Insecure housing included all other options.

## Family Relationships

With family relationships, 58% of clients have current problems in this area, and 73% have ever had family relationship problems. Consistently, 53% of clients were identified as having conflict with family in the 4 weeks prior to the census, and 33% were disconnected from their family. Despite these circumstances, 56% of clients were identified as having a trusted adult outside the immediate family that they could go to for help, and 66% were reported to have a supportive family or partner.

Young women are more likely than young men to have current or past family problems (see Figure 28), to have conflict with family and relatives and be disconnected from their family. They are also less likely to have a supportive family or partner when compared to young men, but they were more likely to have an adult outside the family that they trusted.

Figure 28. Family related issues by gender<sup>4</sup>.



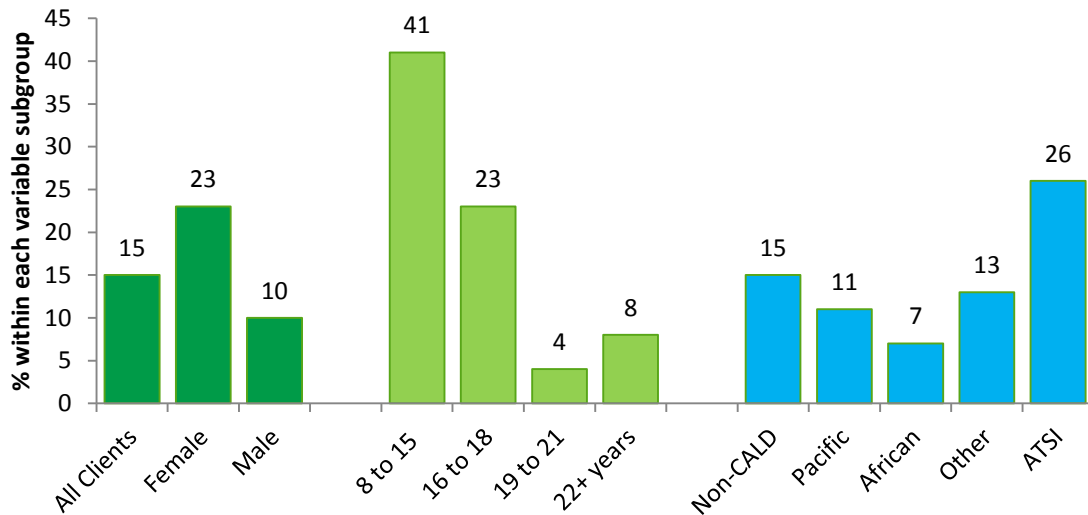
There was some variation by age groupings whereby the youngest group were more likely to have current family problems (73%) compared to the overall percentage (58%). Clients under the age of 18 were more likely to have conflict with family compared to those over 18 years. In relation to cultural groups, clients from an African background were least likely to have a trusted adult they could turn to (33%) compared to Non-CALD clients (57%) and clients from an ATSI background were the most likely to have a trusted adult they could rely on (71%). COATS clients were less likely to have conflict with their families (45%) compared to non-COATS clients (57%).

<sup>4</sup> \*Indicates statistically significant differences.

## Child Protection Involvement

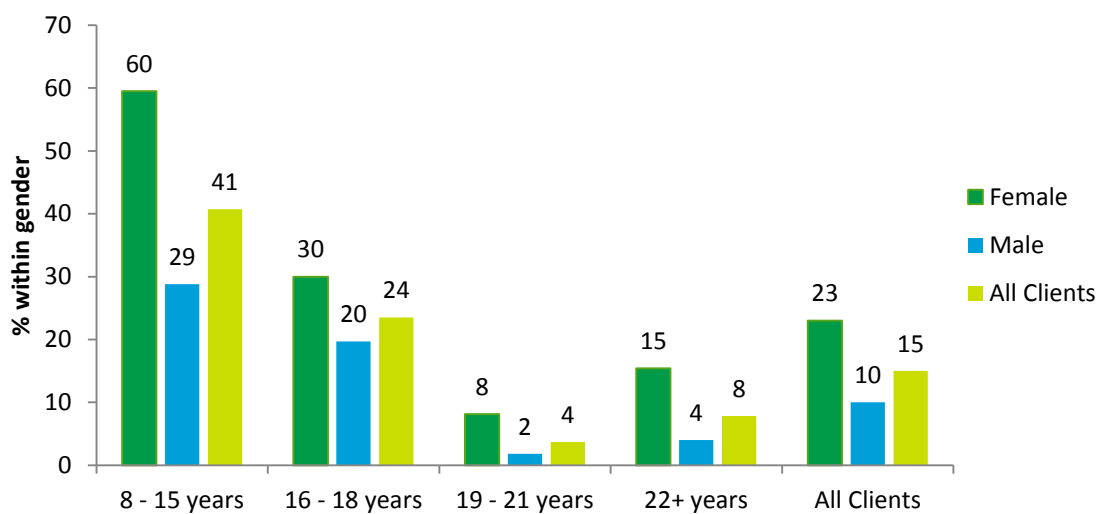
Fifteen percent of all clients were currently involved in the child protection (CP) system. Female clients were more likely to be currently involved in child protection (23%) than male clients (10%). Clients in the youngest group (8 to 15 years; 41%) were also more likely to be currently involved in child protection compared to the other age groupings and ATSI clients had the highest proportion of CP clients of all the cultural groups (26%; see Figure 29).

**Figure 29. Clients currently involved in child protection by gender, age group and cultural background.**



The gender difference is most significant in the 8 to 15 year old group, where 60% of girls this age are current child protection clients, compared to 29% of boys (see Figure 30).

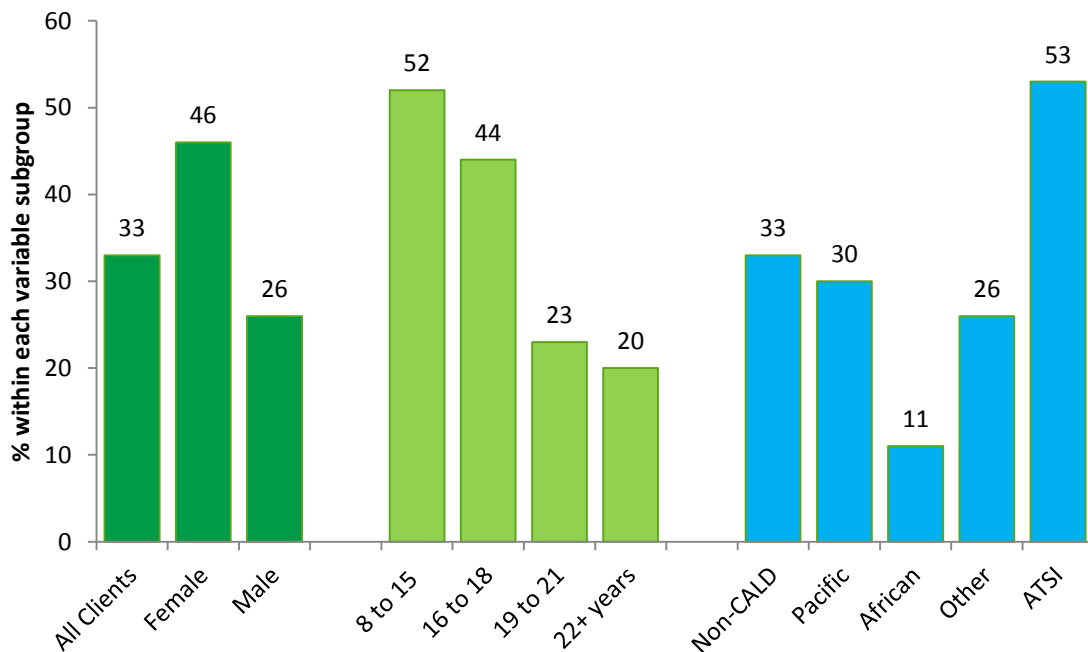
**Figure 30. Percentage of clients currently involved in child protection by gender within each age group (N = 989).**



Current involvement in child protection was combined with past involvement in child protection and this was relevant for 33% of clients (see Figure 31). Again, female clients were more likely to have ever been involved in child protection (46%) compared to male clients (26%). There is also a significant difference by age group, where younger clients (aged 8 to 15 years, and 16 to 18 years) are more likely to have ever been involved (52% and 44% respectively) than older client groups (23% and 20% respectively).

ATSI clients had the highest proportion of clients with a history of child protection involvement (53%) whereas clients with African backgrounds were least likely to have involvement (11%). There were no differences by COATS status for child protection status.

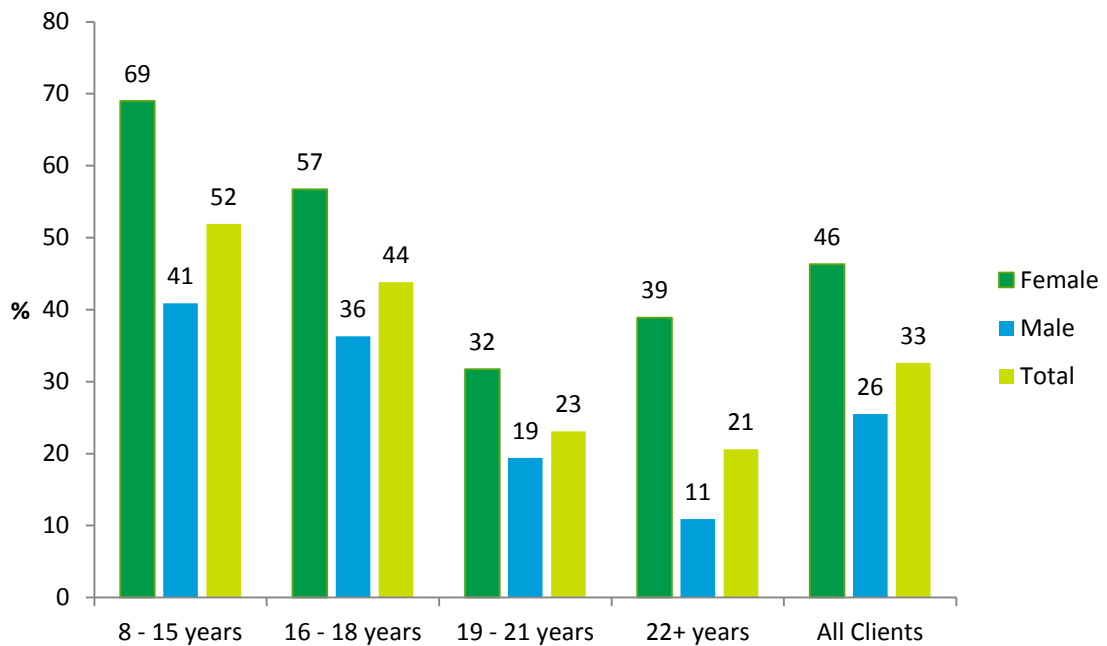
**Figure 31. Clients ever involved in child protection (current and past) by gender, age group and cultural background.**





The analysis of age and gender for past (including current) history of child protection involvement is significant for gender across the age groups. Among the 8 to 15 year olds, 69% of girls had a history of child protection involvement compared to 41% of boys (see Figure 32). The greatest difference is for clients aged 22 years and older: women were 3.5 times more likely to have a history of child protection involvement, suggesting that involvement in child protection, for girls, may be predictive of ongoing involvement in AOD treatment services.

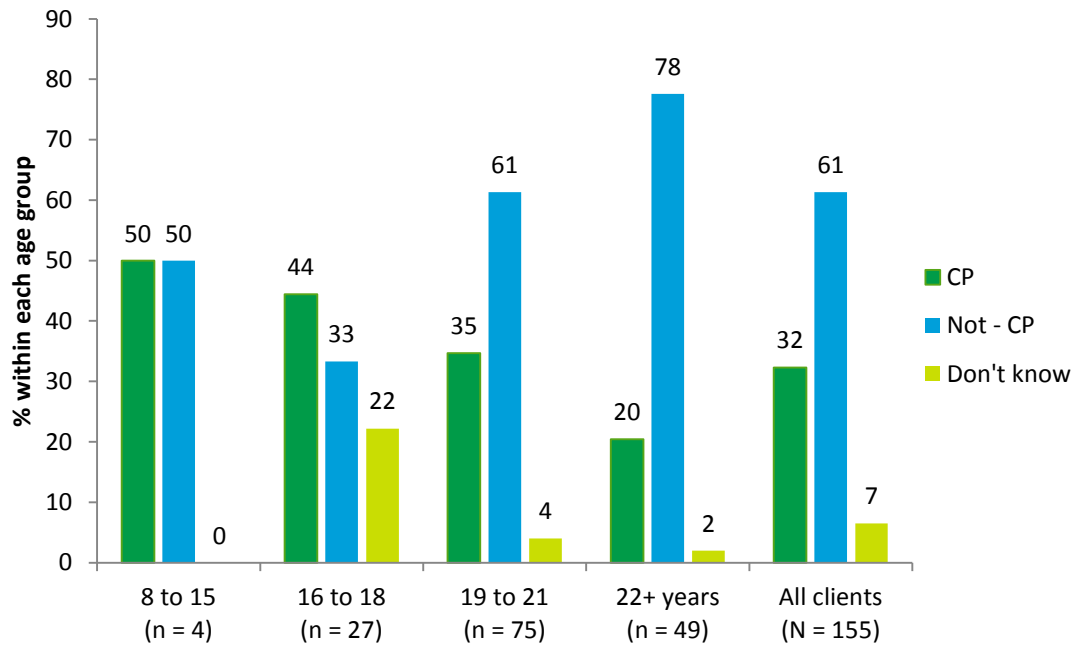
**Figure 32. Percentage of clients who were EVER involved in child protection by gender within each age group (N = 994).**



## Clients as Parents and Child Protection

Of the total sample, 151 clients were identified as being parents (15%). Of these parents, 64 were females (42%) and 87 were male (58%). A third (32%) of these parents have children under child protection orders. Figure 33 demonstrates that the younger the parent the more likely the client's children will be involved in child protection.

**Figure 33. Percentage of clients who are parents whose children are under a child protection order by age group of client (N = 155).**



Parents whose children were also under a child protection order were more likely to be female (48%) than male parents (21%). COATS clients who were parents, were less likely to have children subject to a child protection order (19%) than those who were not COATS clients (40%).

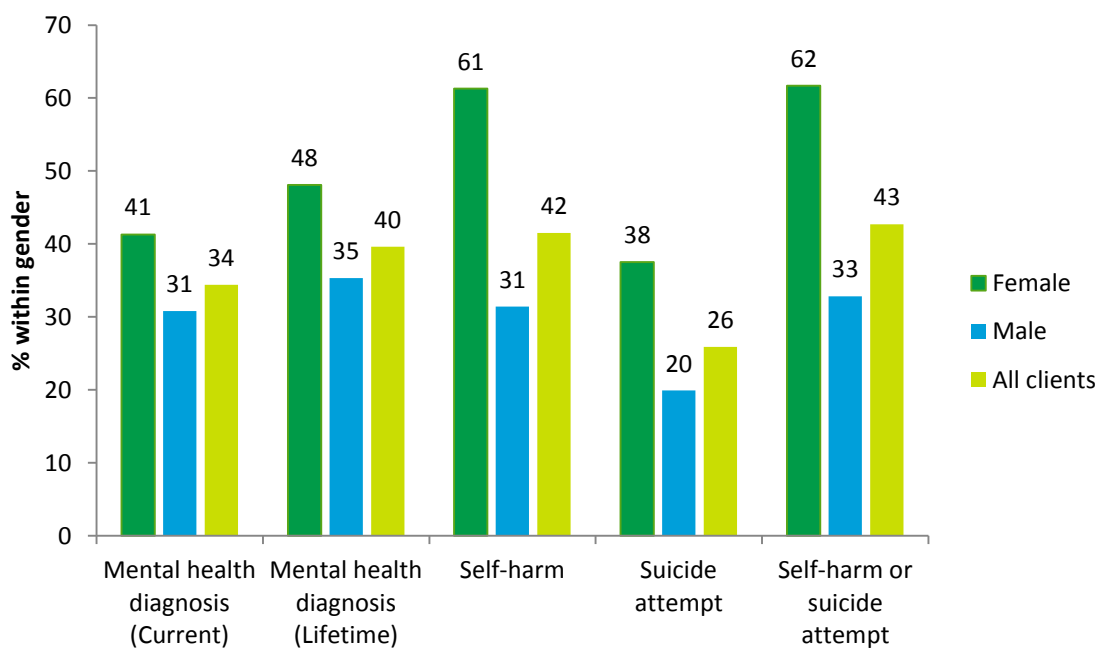
## Mental Health, Self-harm, & Suicide Attempts

The mental health question with regard to service need has identified that 56% of clients have current problems in this area, and 62% have ever had mental health problems. In terms of clients who have a mental health diagnosis, 35% of clients have a current diagnosis, and an additional 5% had had a diagnosis in the past (total 40%).

Workers reported that 41% of clients had ever intentionally injured themselves and 25% had attempted suicide in the past. Combining these two factors together, 43% of clients had either self-injured or attempted suicide in the past.

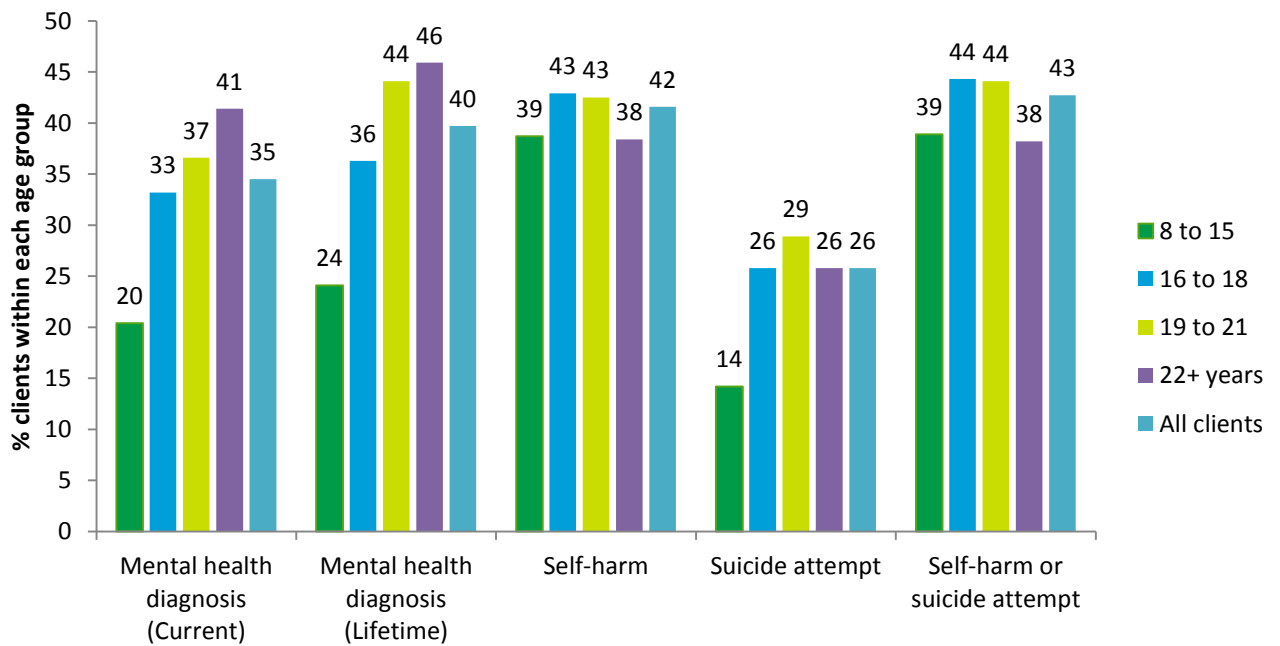
There were significant differences between female and male clients: young women were more likely to experience mental health problems than young men. Young women in AOD treatment services were twice as likely to have a history of attempted suicide or self-injury compared to young men (see Figure 34).

**Figure 34. Current mental health diagnosis, and history of mental health diagnosis, self-harm, and suicide attempts by gender.**



When comparisons are made across the age cohorts, mental health diagnoses are more prevalent in the older age groups. There were no differences between the age groups for rates of self-harm or suicide attempts (see Figure 35).

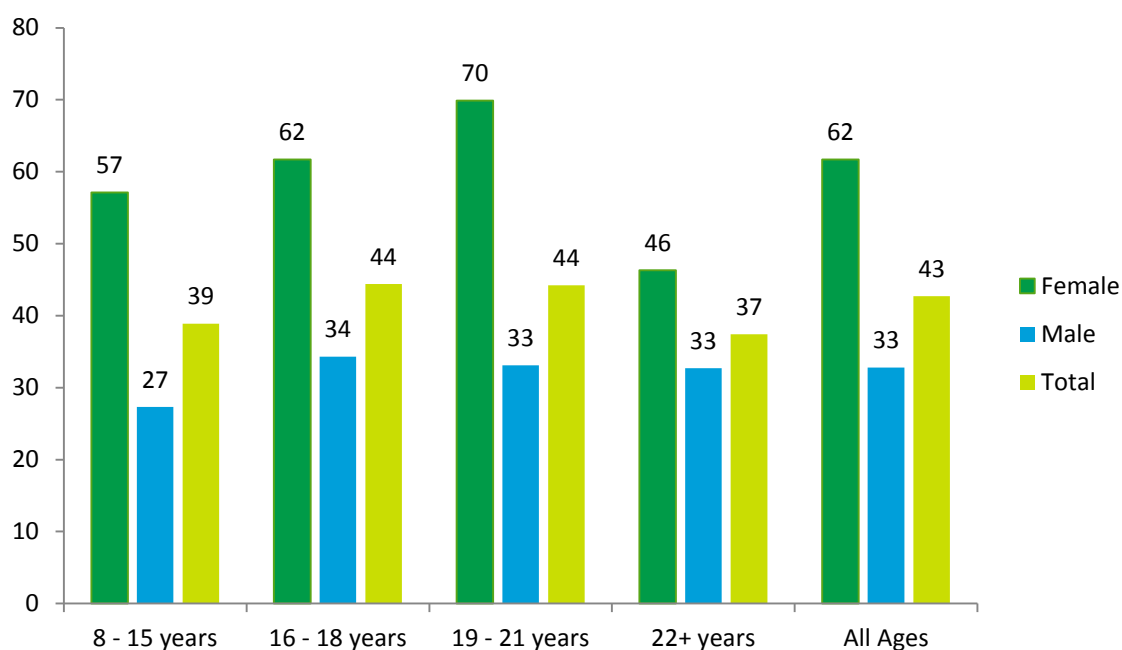
**Figure 35. Current mental health diagnosis, and history of mental health diagnosis, self-harm, and suicide attempts by age group.**



When mental health issues were compared by gender, controlling for age cohorts, young women in the 19 to 21 year group were most likely to ever have a mental health diagnosis (61% and 37% respectively), and more likely to have a current mental health diagnosis (51% and 30% respectively). With respect to self-injury the gender differences were consistent except for the cohort over 22 years, with the 19 to 21 year old women reporting such a history (67%) compared to the young men (32%).

Suicide attempts were equally prevalent between 8 to 15 year boys and girls, but in the cohorts 16 to 18 years and 19 to 21 years, young women were more likely to have a history of suicide attempts than young men. After age 22 there were no gender differences. When the two behaviours were combined (history of self-injury or suicide attempts) the gender differences were significant in all age cohorts (see Figure 36) with an alarming 70% of young women aged 19 to 21 who have a history of self-injury or suicide attempts.

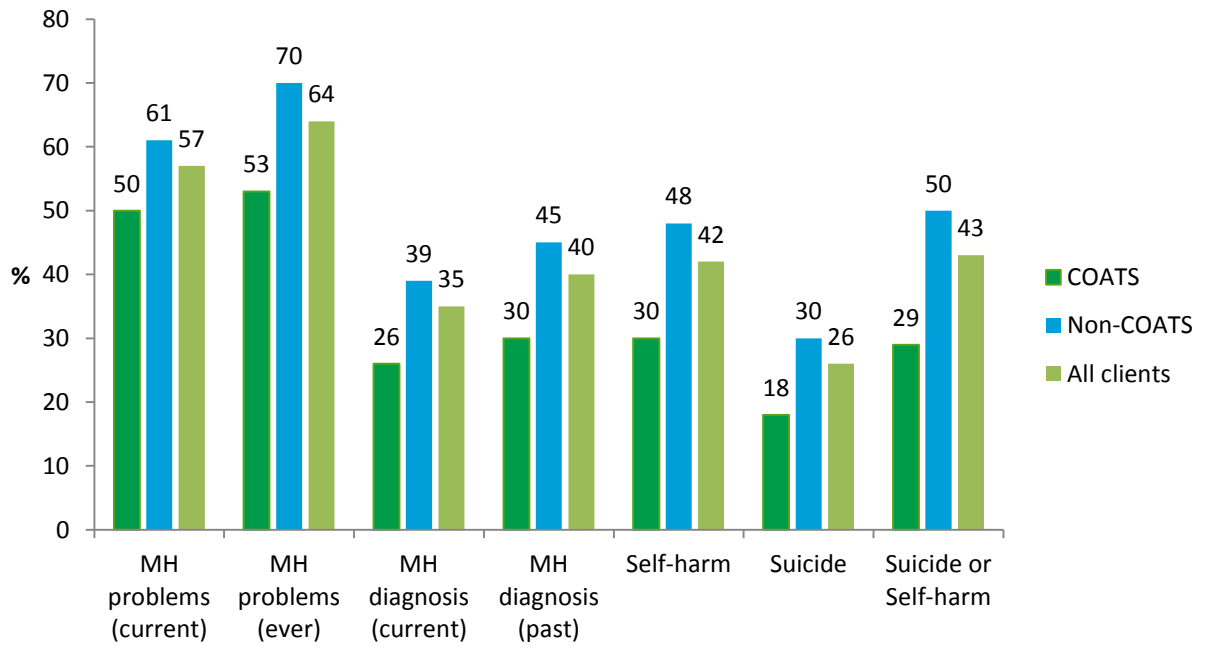
**Figure 36. Percentage of clients who have a history of self-injury or suicide attempt by gender within each age group (N = 994).**



When cultural background was taken into account, clients from Other (62%) or ATSI (65%) backgrounds were more likely to have current mental health problems when compared to non-CALD clients (57%), Pacific Island (52%) and African cultures (42%). With respect to diagnoses (current or past) clients from African and Pacific Island cultures had lower rates than those from non-CALD, ATSI or other cultures. There were no cultural differences in the prevalence of suicide or self-injury.

Significant differences were found on all the measures of mental health for COATS clients: that is, COATS clients were less likely to have mental health problems, diagnoses, history of self-harm or suicide attempts, than clients who were not identified as COATS clients.

**Figure 37. Mental health problems, diagnosis, self-harm and suicide by COATS client status.**



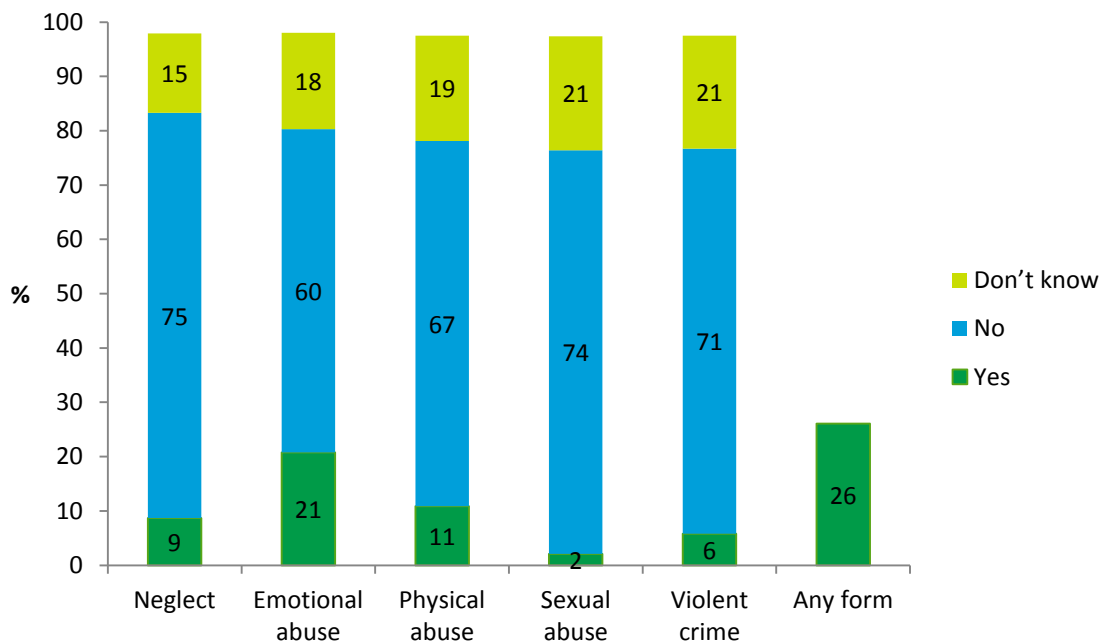
## Neglect, Abuse & Violence

Workers were asked to indicate whether their client was a victim of neglect, physical, sexual and emotional abuse, or violence, both for the last 4 weeks, and ever in the past. These questions also elicited the highest “Don’t know” responses in the survey ranging from 14 to 38%. Given their significance, the unknown responses are also included in the following data tables. There were 261 clients who had experienced at least one form of abuse, neglect or violence in the last 4 weeks (see Figure 38).

Gender differences were significant for the experience of emotional abuse in the last 4 weeks (33% female clients compared to 15% male clients), physical abuse (18% and 8% respectively), sexual abuse (6% and 0.5% respectively) but not neglect or violent crime. Therefore, female clients were more likely to experience at least one form of abuse or neglect in the last 4 weeks (37%) compared to male clients (20%).

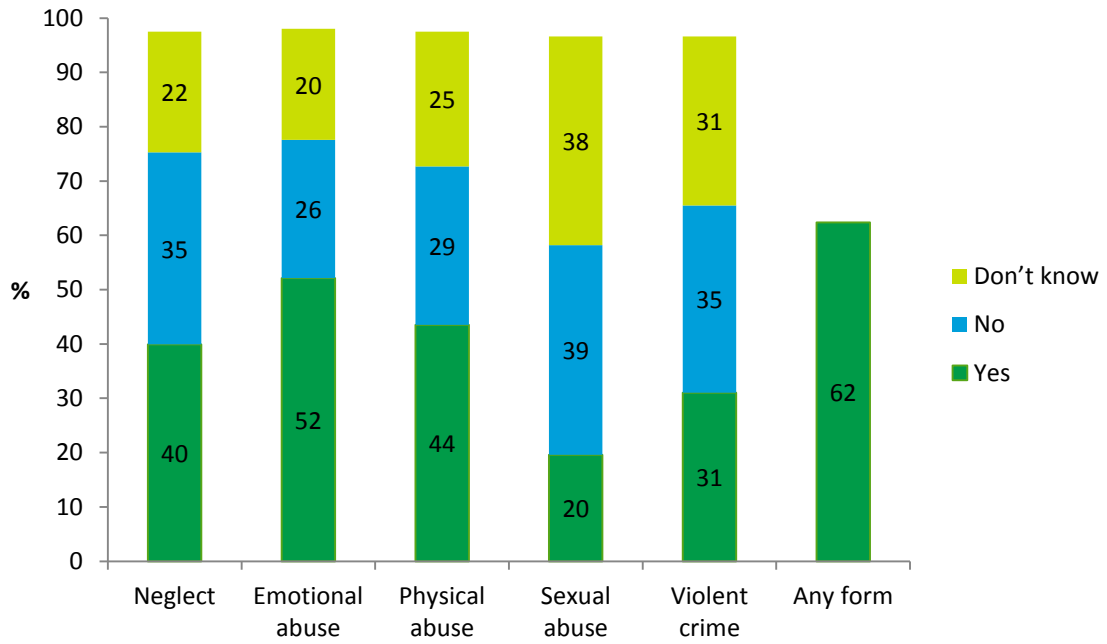
There were no age cohort differences for experiencing abuse, neglect or violent crime in the last 4 weeks or lifetime prevalence.

**Figure 38. Prevalence of abuse, neglect and violence (%) in the last 4 weeks.**



When reporting a history of neglect, abuse or violence, over half of the clients have experienced emotional abuse, over a third experienced violent crime, neglect or physical abuse. One in five clients had a history of sexual abuse. A lifetime experience of abuse and neglect was reported for 624 clients (see Figure 39).

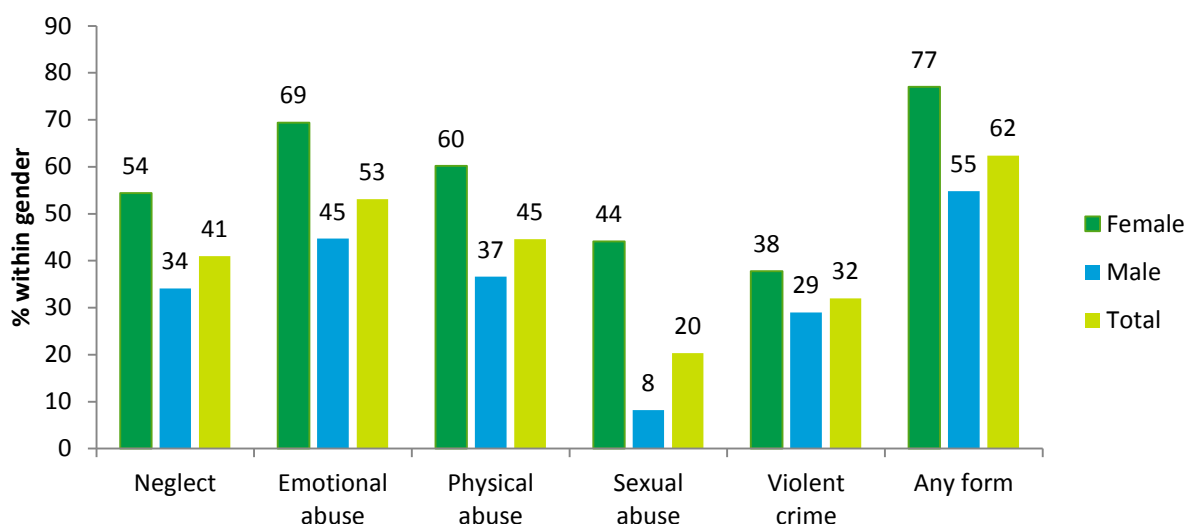
**Figure 39. Life time prevalence of abuse, neglect and violence (%) (ever, including the last 4 weeks).**





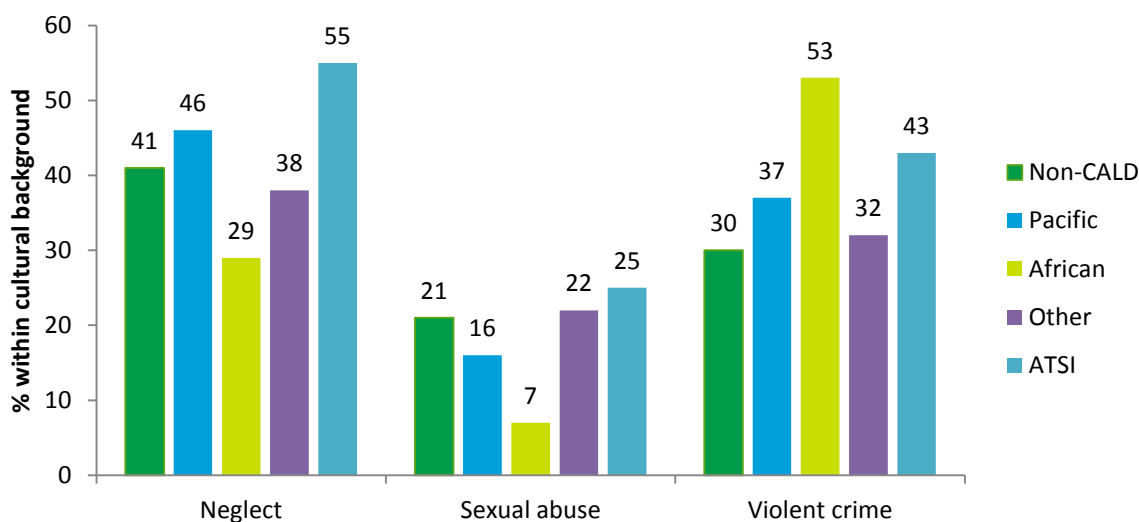
Gender differences in relation to abuse and neglect are significant for all items, and in all cases, young women are more likely to experience abuse and neglect more so than young men. Figure 40 represents this data graphically.

**Figure 40. Percentage of clients who have a history of neglect, physical, emotional and sexual abuse, and violent crime by gender (N = 994).**



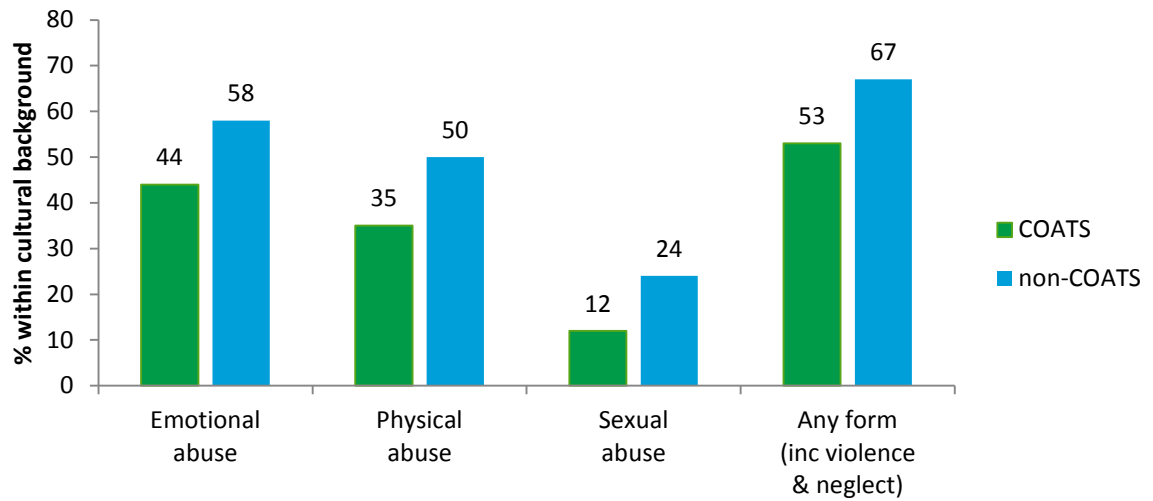
There were several significant differences based on cultural background. Figure 41 highlights that there were significant differences for history of neglect, sexual abuse and being a victim of violence. Over half of the clients from African cultural backgrounds had been victims of violence but were least likely to be victims of sexual abuse. ATSI clients were more likely to have a history of childhood neglect (55%), and the highest rate of sexual abuse.

**Figure 41. Percentage of clients who have a history of neglect, sexual abuse, and violent crime by cultural background (N = 968).**



For these variables there were also significant differences between the COATS and non-COATS clients whereby COATS clients had lower rates of sexual, emotional and physical abuse than non-COATS clients. There was no difference between COATS status and neglect or violence.

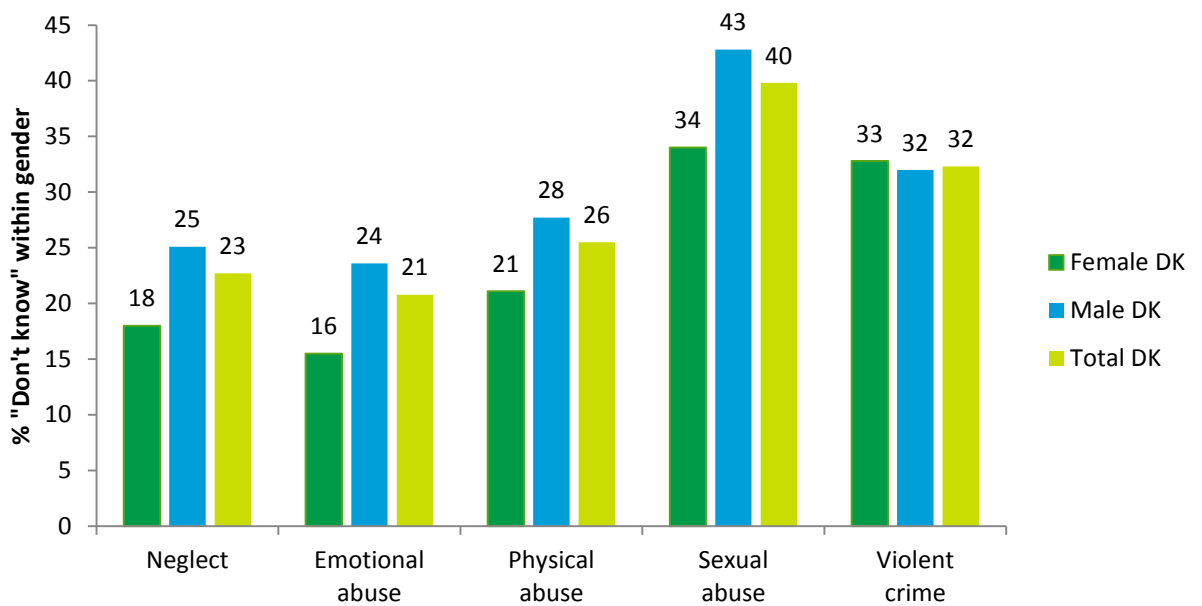
**Figure 42. Percentage of clients who have a history of neglect, physical, emotional and sexual abuse, and violent crime by COATS status (N = 1,000).**



As stated above, the abuse and neglect questions attracted the highest proportion of “Don’t know” of all the survey questions. There were significant gender differences for all forms except violent crime: the information was more frequently not known for male clients compared to female clients. The proportion of “Don’t know” for each abuse and neglect type, by gender is detailed in Figure 43. Workers were most likely not to know whether a client had a history of sexual abuse or not, and this was significantly more so for male clients.

The sexual abuse history question generated the highest number of “Don’t know” responses (40%), and even more so if the client was male (43%).

**Figure 43. Percentage of clients where their history of neglect, physical, emotional and sexual abuse, and violent crime was “Don’t know” by gender (N = 994).**

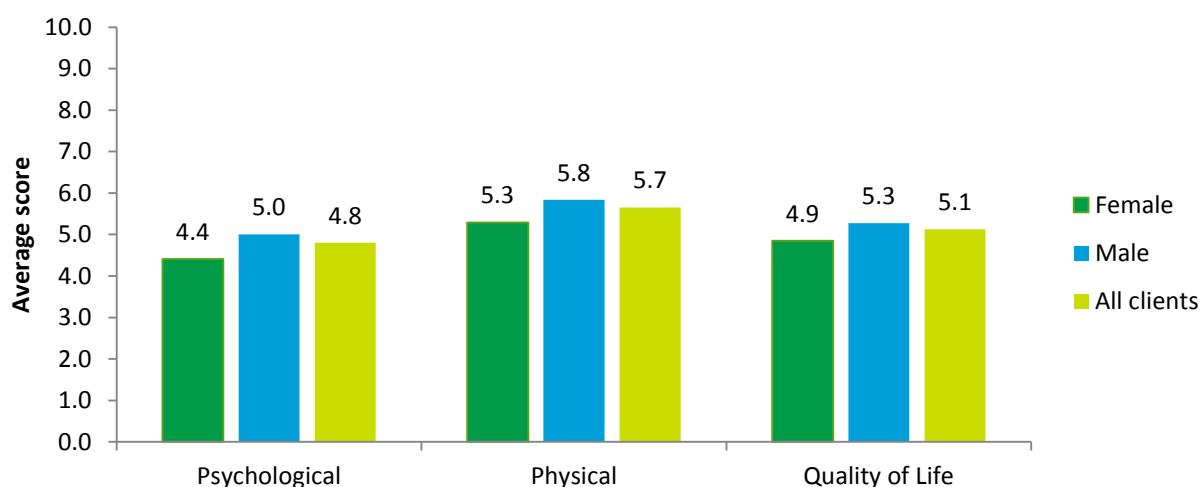


### ATOP: Psychological Health, Physical Health & Quality of Life

Three rating scales were used by workers to rate the psychological health, physical health and general quality of life. The scales comprised 11 points, 0 equating with “Poor” and 10 equating with “Good”. The overall average score for psychological health was 4.8 ( $SD = 2.26$ ), physical health 5.7 ( $SD = 2.19$ ) and quality of life was 5.1 ( $SD = 2.21$ ).

The scores were low for all three measures for all clients and average scores for female clients were statistically significantly lower when compared to male clients for all three measures (see Figure 44).

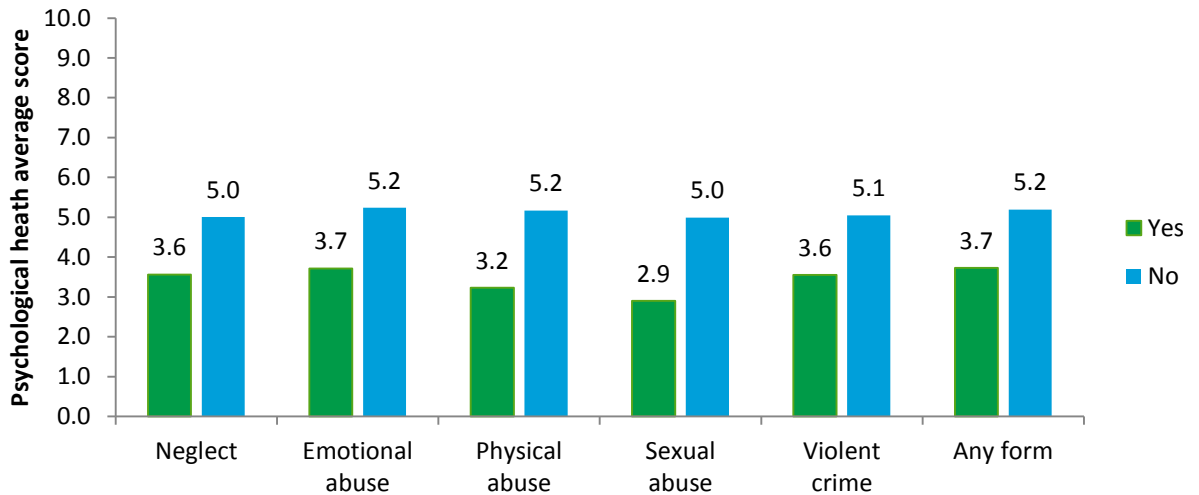
**Figure 44. Average scores for psychological health, physical health and quality of life by gender ( $N = 980, 979,$  and  $977$  respectively).**



There were no significant differences between the age groups, cultural background or COATS status for average scores any of these factors.

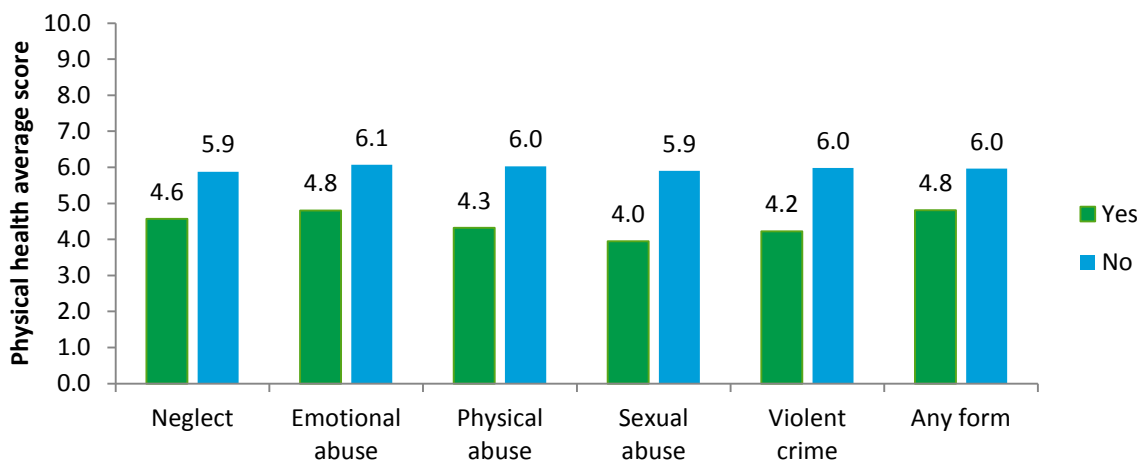
These global health and wellbeing scores were compared for clients who had experienced abuse, neglect or violence in the last 4 weeks or ever in their lifetime and all comparisons were significant. The lowest scores were for those who had experienced any of the types of abuse in the last 4 weeks, on all three measures: psychological, physical and quality of life. Ratings of psychological health were the worst, followed by quality of life, then physical health. Clients who had experienced sexual abuse in the last 4 weeks had the lowest average rating of all at 2.9 for psychological health.

**Figure 45. ATOP average psychological health scores of clients who have or have not had experienced neglect, physical, emotional and sexual abuse, and violent crime, in the last 4 weeks (N = 1,000).**



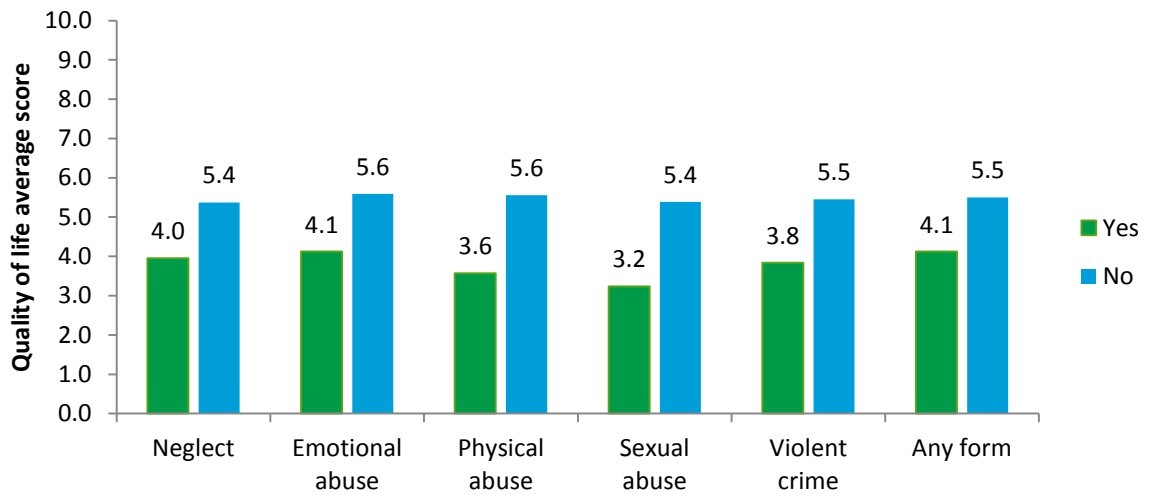
Similarly all comparisons of the ATOP physical health scores were significant when those who had experienced abuse were compared with clients who hadn't. Clients who had a experienced sexual abuse in the last 4 weeks had the lowest score.

**Figure 46. ATOP average physical health scores of clients who have or have not had experienced neglect, physical, emotional and sexual abuse, and violent crime, in the last 4 weeks (N = 1,000).**



Clients who had experienced sexual abuse in the last 4 weeks had the lowest score for quality of life and all comparisons were significant: clients who experienced abuse, neglect or violence had poorer quality of life scores.

**Figure 47. ATOP average quality of life scores of clients who have or have not had experienced neglect, physical, emotional and sexual abuse, and violent crime, in the last 4 weeks (N = 1,000).**

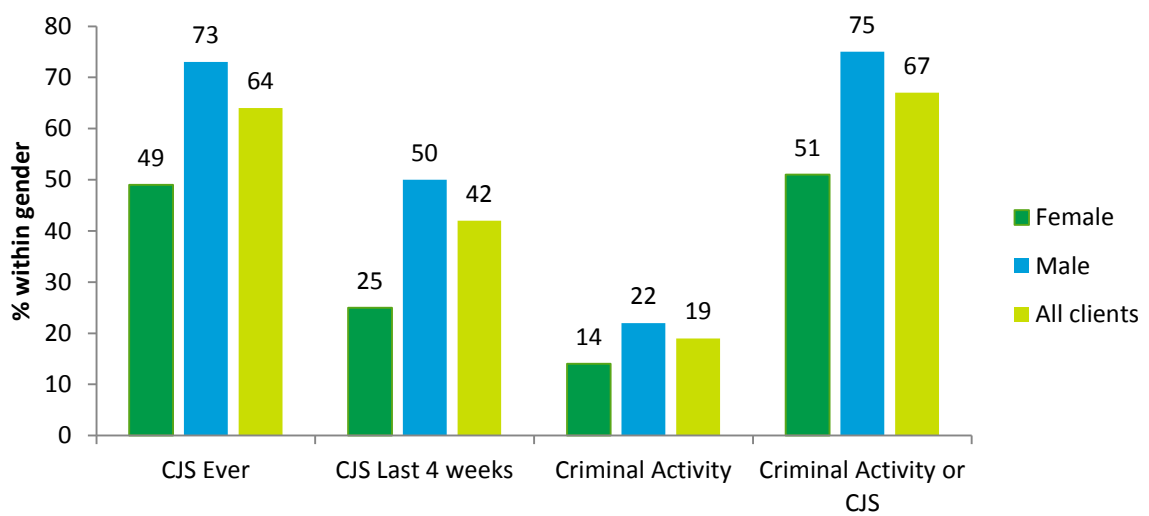


## Justice & Crime

Forty-one percent of clients were identified as having a current problem in relation to criminal offending, 62% had a history of problems in the past. Workers also reported that 19% of clients had been involved in criminal activity (apart from illegal drug use) in the last 4 weeks, and that 42% were currently involved in the criminal justice system. An additional 23% had ever been involved in the criminal justice system, totalling to 64% of clients with a current or past history of involvement.

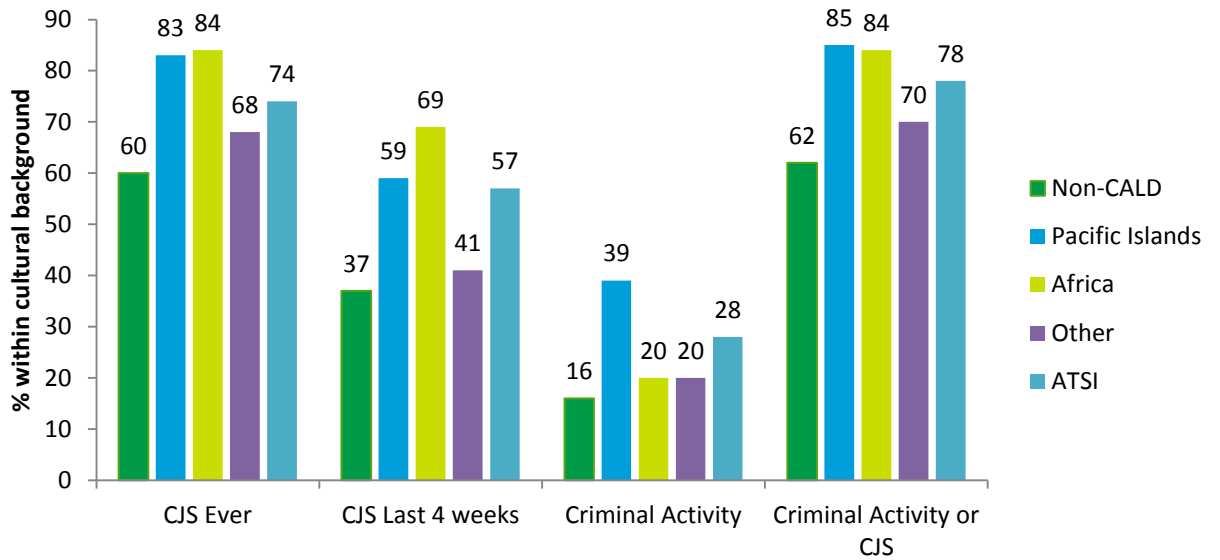
There were significant differences between male and female clients with respect to criminal justice system (CJS) involvement and recent criminal activity: male clients were more likely to have CJS involvement. 85% of all COATS clients were male. There were no age cohort differences for CJS involvement.

**Figure 48. Criminal justice system involvement and criminal activity by gender.**



There were significant differences between clients based on cultural background with respect to the CJS involvement items. In general, clients from cultural groups of the Pacific Islands and Africa were more likely to be involved in the CJS compared to clients with non-CALD or other backgrounds. ATSI clients generally had the third highest prevalence of involvement in CJS or crime.

**Figure 49. Criminal justice system involvement and criminal activity by cultural background.**



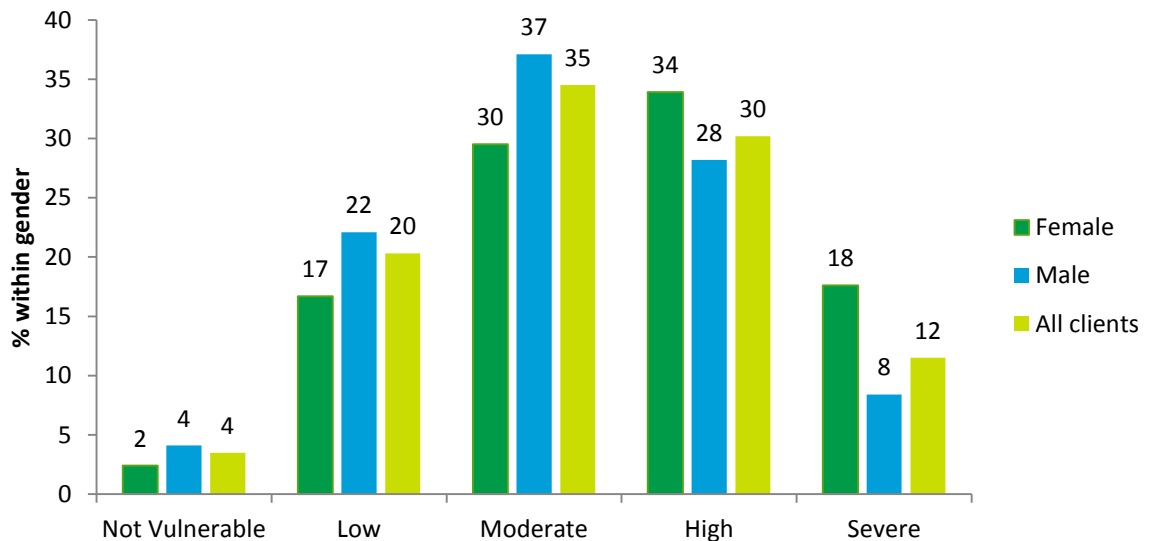


## Worker Rating of Psychosocial Vulnerability

Workers were asked to rate their client's level of vulnerability on a five point scale: None, Low, Moderate, High and Severe. Due to small numbers in the "None" group (n = 35), "None" and "Low" ratings were combined.

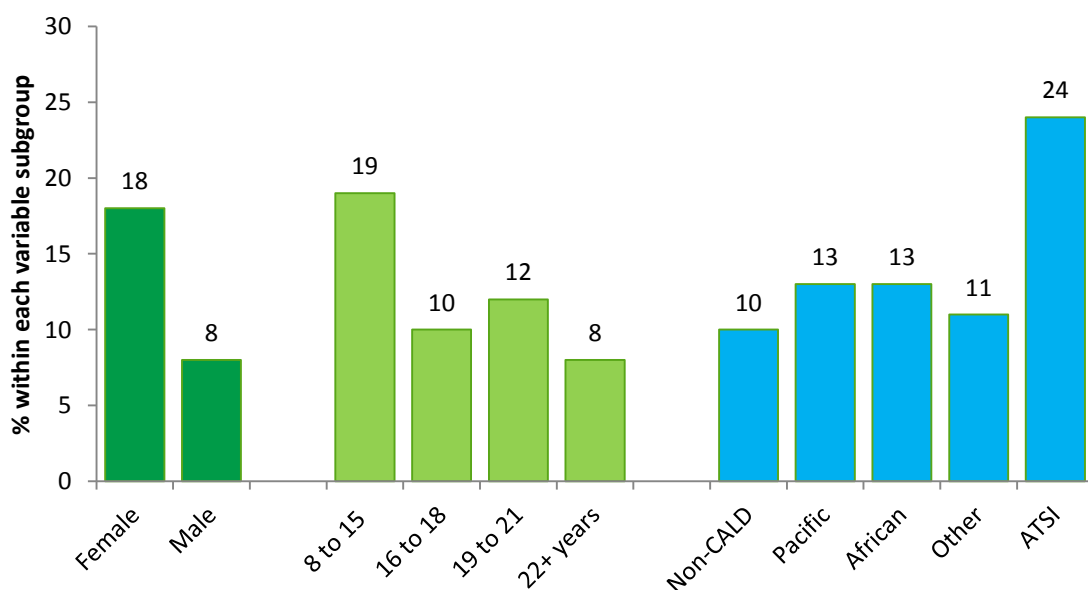
The distribution of worker ratings of vulnerability is depicted in Figure 50.

**Figure 50. Worker ratings of client level of psychosocial vulnerability by gender (N = 991).**



Female clients were significantly more likely to be rated with Severe psychosocial vulnerability when compared to male clients. Younger clients were also more likely to be rated with Severe psychosocial vulnerability, as were as those from ATSI backgrounds.

**Figure 51. Percentage clients with 'Severe' worker rating of psychosocial vulnerability by gender, age group and cultural background.**

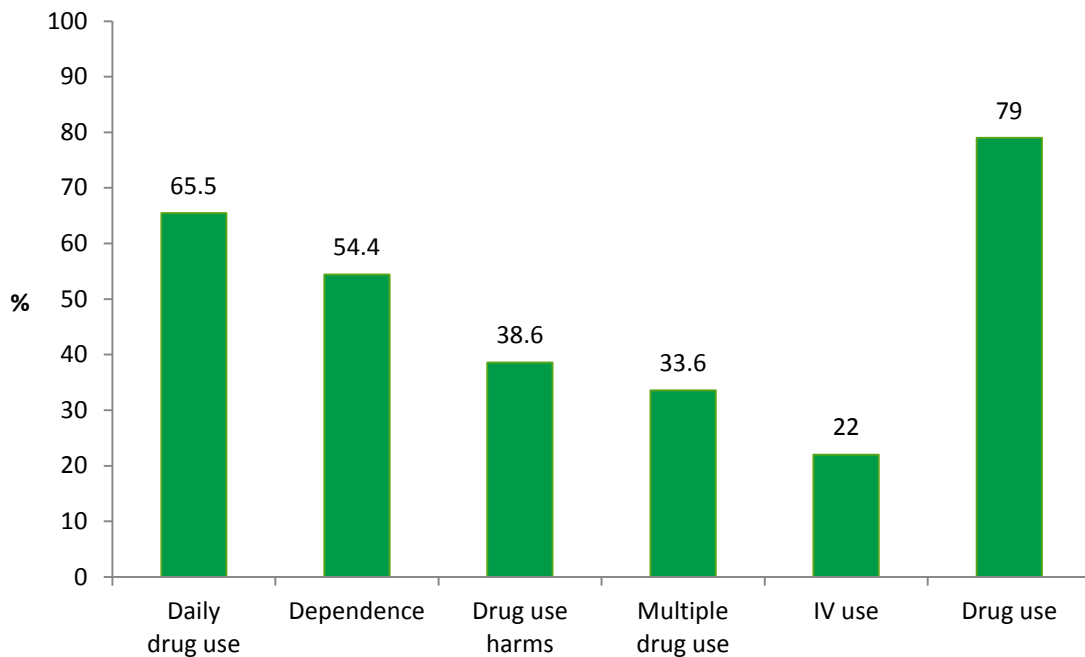


# SEVERITY, COMPLEXITY & MATRIX CLASSIFICATION

## Substance Use Severity Score

The factors used to calculate the drug use severity score were detailed in the Methods section (Figure 1. Severity of Substance use definition and criteria. The prevalence of the drug use severity score factors is depicted in Figure 52.

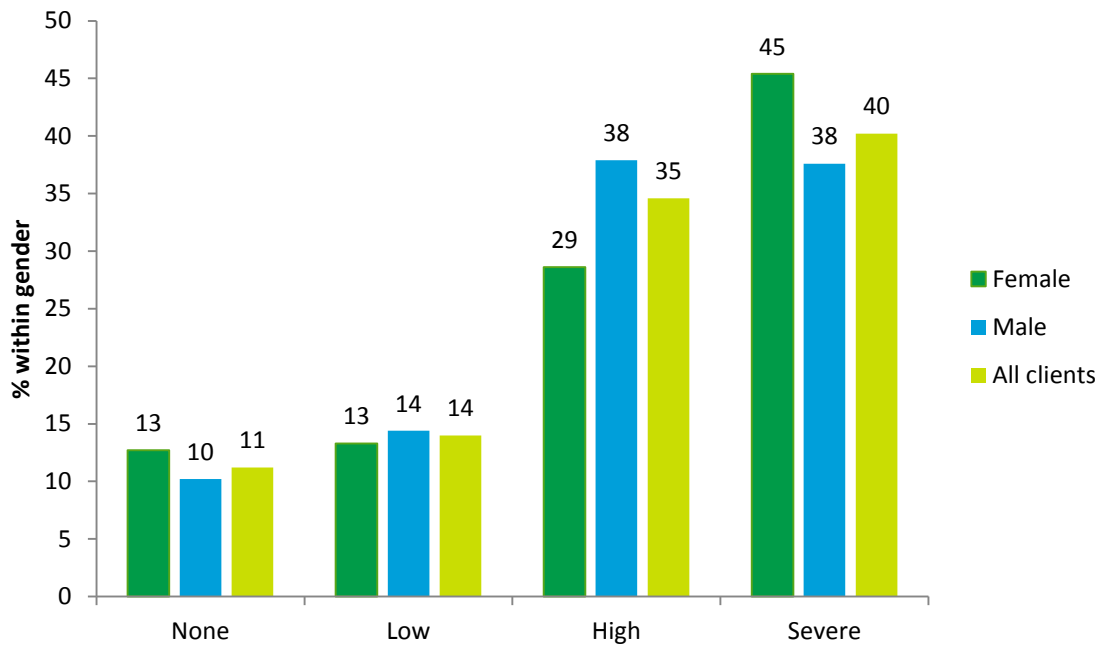
Figure 52. Prevalence of drug use severity factors (N = 1,000).



The average severity score (using the 6 factors) was 2.93 ( $SD = 1.76$ ). There was no difference between male and female clients for average severity scores. Nor were there differences on this total score for cultural background, age group or COATS status.

When the scores were categorised as detailed in the Methods section. Of all clients, 112 clients were coded as “Not using” or “None” severity, 140 as “Low” severity, 346 as “High” severity, and 402 as “Severe”. The distribution of complexity score categories and gender differences are detailed in Figure 53 below.

Figure 53. Severity classification for all clients and by gender (N = 994).

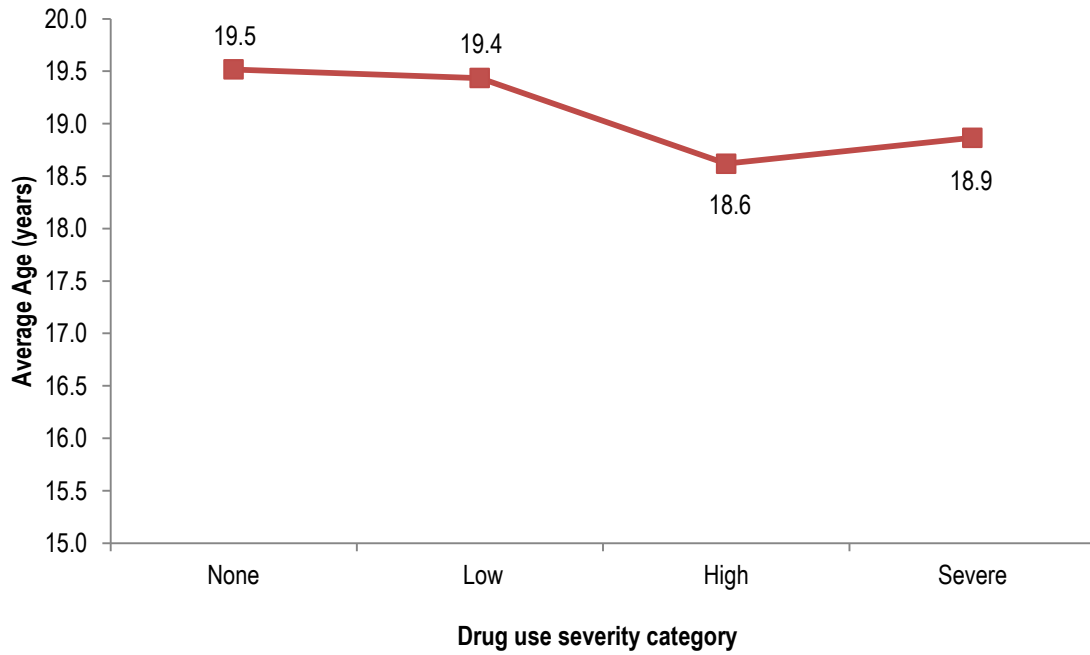


Female clients were more slightly more likely to be in the Severe category for drug use severity than male clients, and vice versa for the High category. There were no gender differences in the None and Low categories.

There were no differences in the distribution of clients in severity categories based on cultural background, or whether they were a COATS client or not.

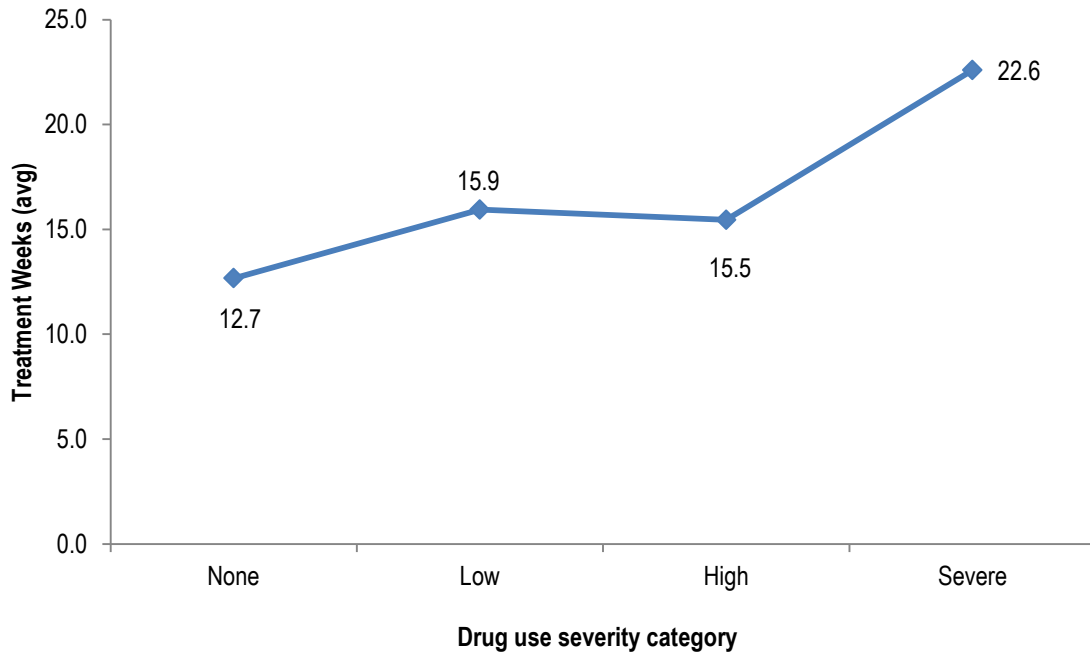
The comparison of average age and severity classification revealed significant differences. This difference was carried by the clients in the High category, who were younger than clients in the None and Low categories (see Figure 54). The total sample average age was 18.9 years.

**Figure 54. Average client age by client drug use severity classification (N = 1,000)**



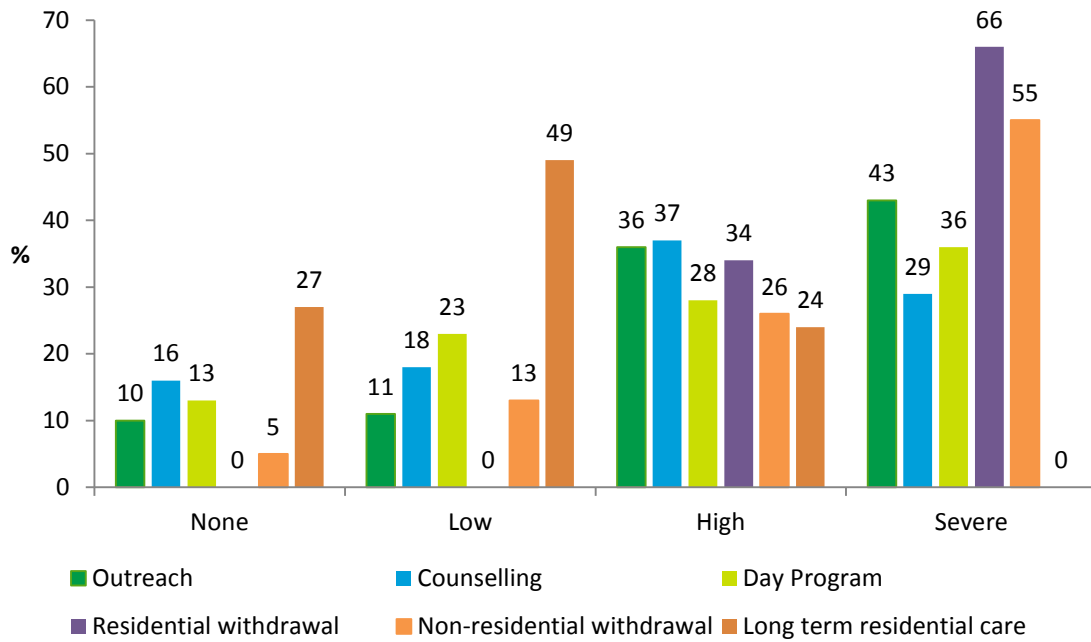
The comparison of average number of weeks in treatment and severity classification revealed significant differences. This difference was carried by the clients in the severe category, who were in treatment for longer than the other categories (see Figure 55).

**Figure 55. Average number of treatment weeks by client drug use severity classification (N = 970)**



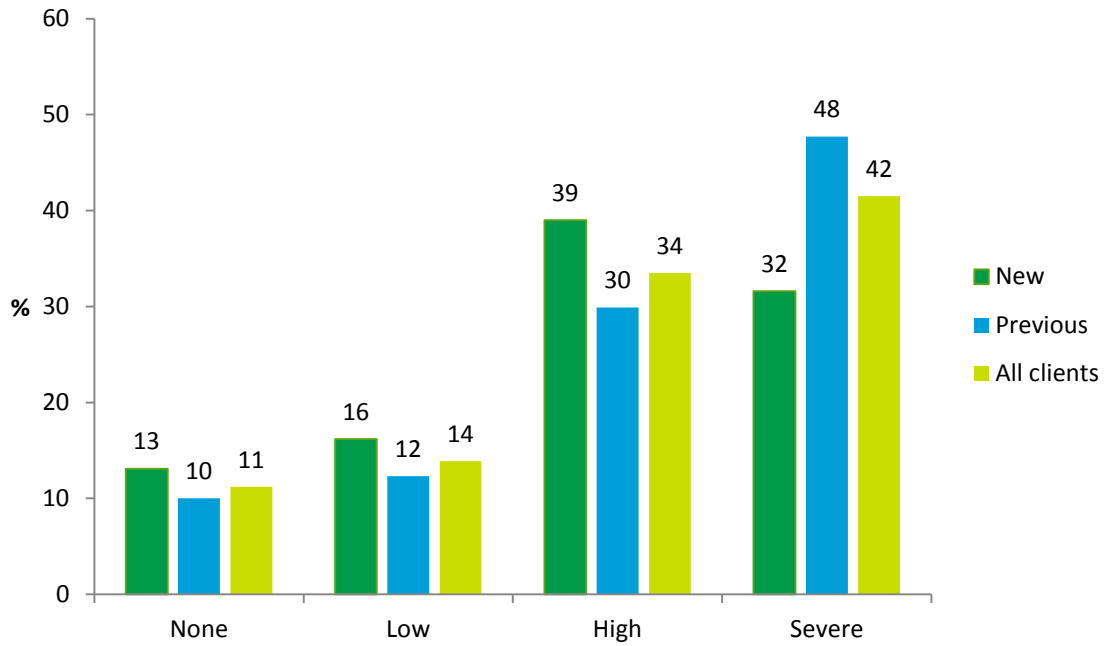
The distribution of clients in each severity category was analysed by main treatment type (see Figure 56). There were significant differences in severity distribution. The residential withdrawal program, parent support program and non-residential withdrawal program had more clients in the Severe drug use severity category than expected. The outreach program and day program, had similar proportions to the overall distribution. The counselling program had fewer than the average and there were no clients in the Severe category who were attending long term residential care programs.

**Figure 56. Distribution of severity classifications within each treatment type (N = 969).**



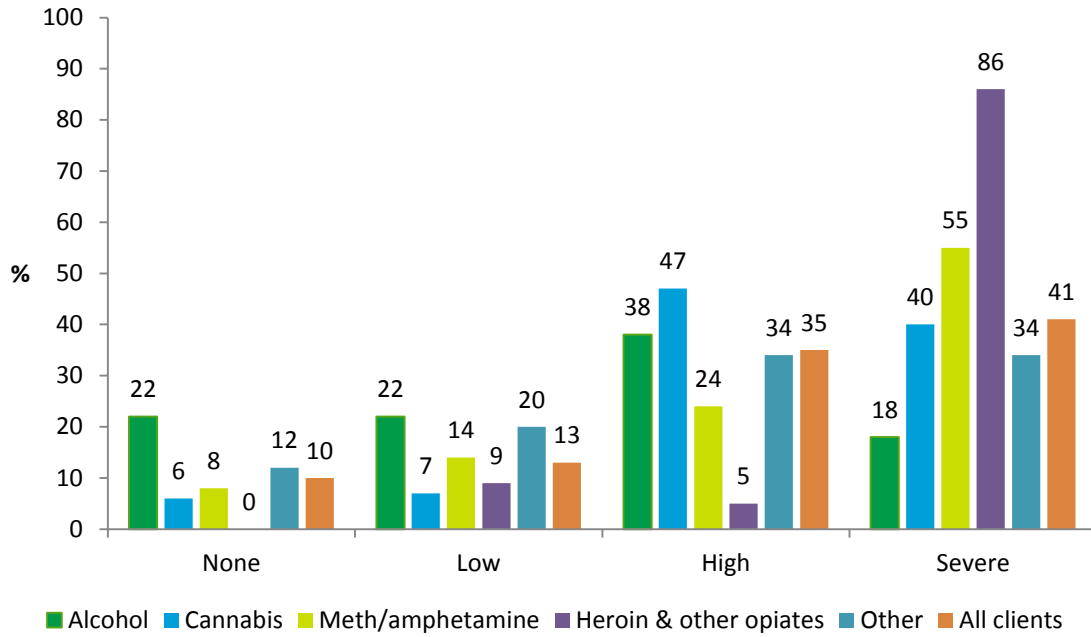
The distribution of clients in each severity category was also analysed by whether a client was new to AOD treatment or not (see Figure 57). Clients who had previously been involved in AOD treatment were more likely to be represented in the Severe drug use severity category, and less prevalent in the High category, than those clients for whom this was their first experience of AOD services.

**Figure 57. Severity classification by new to treatment (N = 902).**



There were significant differences between the distribution of drug use severity categories for each primary drug of concern. Clients with alcohol as their primary drug of concern were more likely to be in the None category and less likely in the Severe category whereas, heroin and other opiate users were almost all in the Severe category. Meth/amphetamine users were overrepresented in the Severe category.

**Figure 58. Distribution of severity classifications within each primary drug of concern (% of clients) (N = 971).**

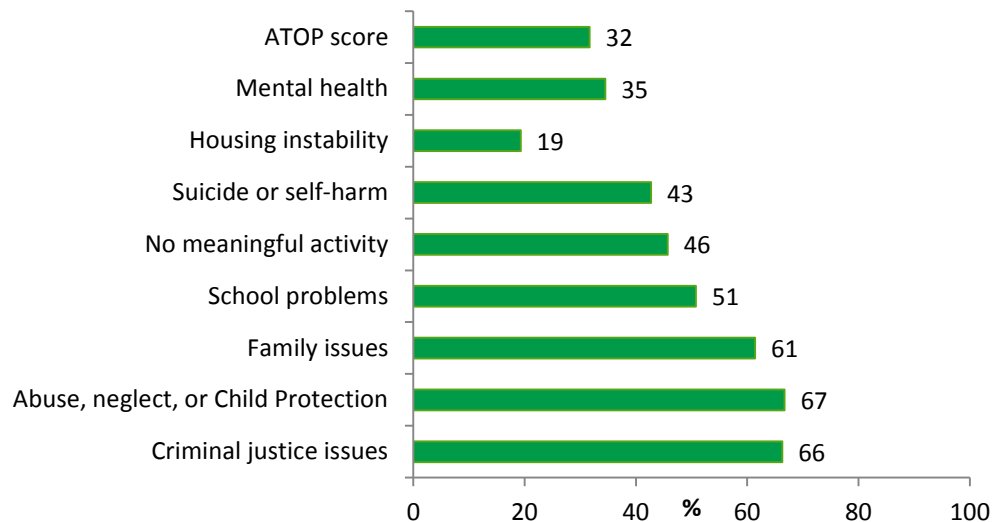




## Psychosocial Vulnerability - Complexity Score

To summarise, the prevalence of psychosocial complexity factors is detailed in Figure 59. The definition of each factor is detailed in the Methods section (Figure 2. Complexity of psychosocial issues: definition and criteria.

Figure 59. Prevalence of psychosocial complexity factors (N = 1,000).

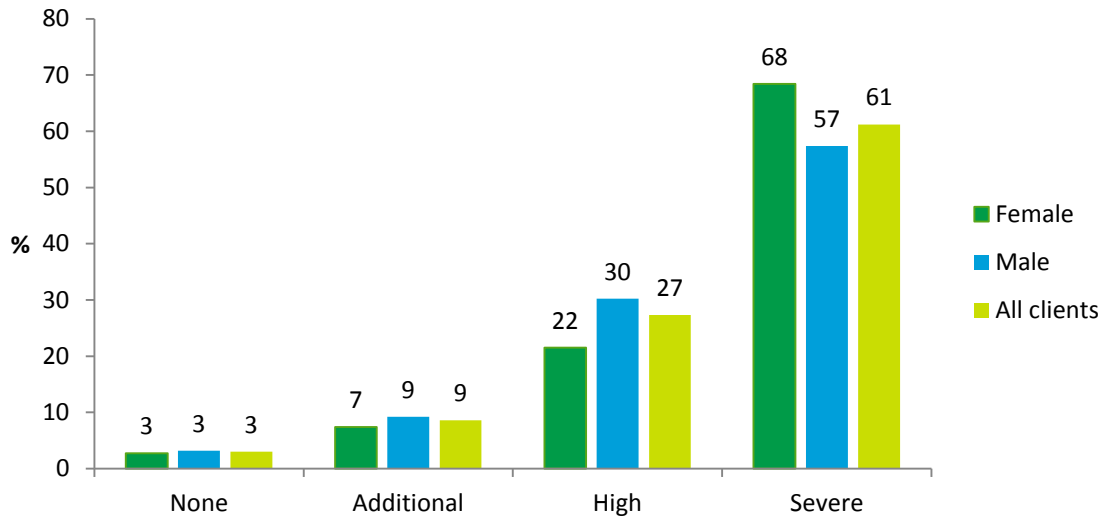


A composite score for complexity was calculated. One point was assigned to each of these factors (if present), then summed. The minimum was 0 with a possible maximum score of 10.

The average complexity score was 4.19 ( $SD = 2.1$ ). Average complexity scores for male (4.0) and female (4.6) clients differed significantly: young women were presenting with more complexity.

Complexity total scores were then recoded: a score of 0 was coded as “Typical” or “None”, 1 as “Additional”, 2 or 3 as “High”, and 4 to 9 as “Severe”. There were 30 clients in the Typical or None group, 86 in Additional, 271 in High, and 613 coded in the Severe complexity group. When the categories were collapsed the distribution of complexity score categories and the significant gender differences are detailed in Figure 60.

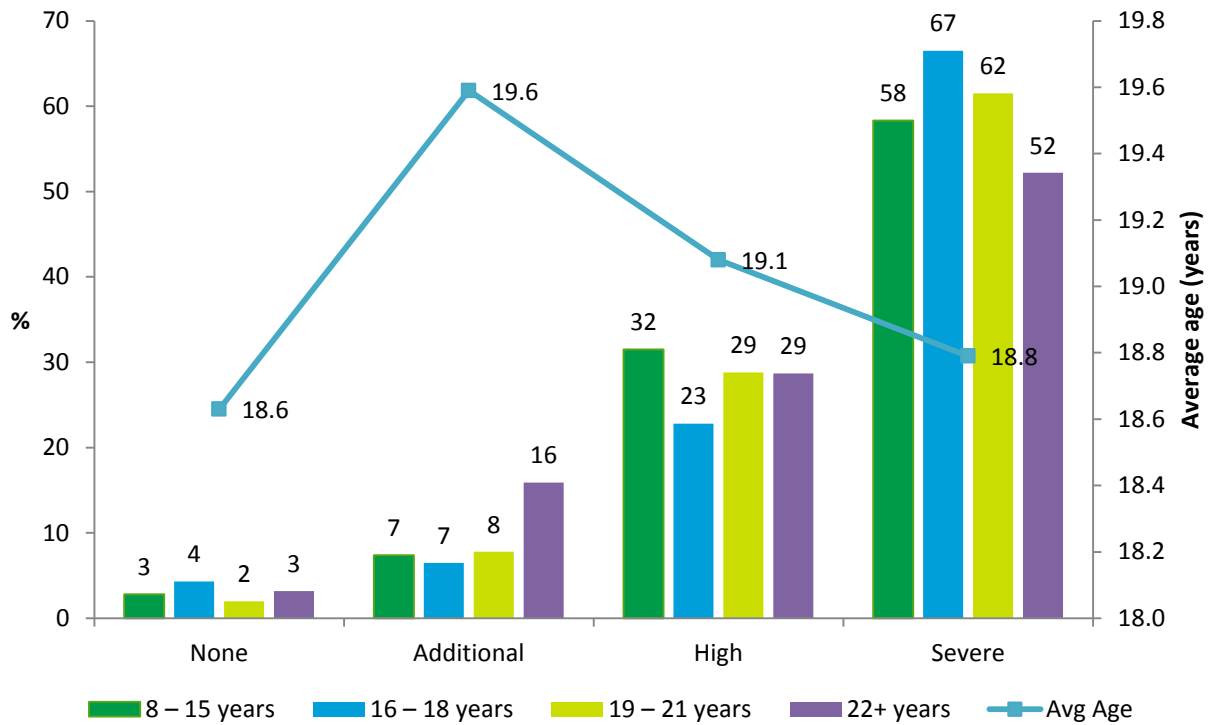
**Figure 60. Complexity classification for all clients and by gender (N = 994).**



Female clients were more likely to be in the Severe category for complexity than male clients, and vice versa for the High category. There were no gender differences in the None and Additional categories.

There were also significant differences for complexity classification by age group (but not for average age) (see Figure 61) with the 16 to 18 year old clients more likely to be classified as Severe and fewer in High complexity category. The difference in average age only approached significance, and this difference lay in the fact that clients in the Additional complexity group were older than those in the Severe complexity group.

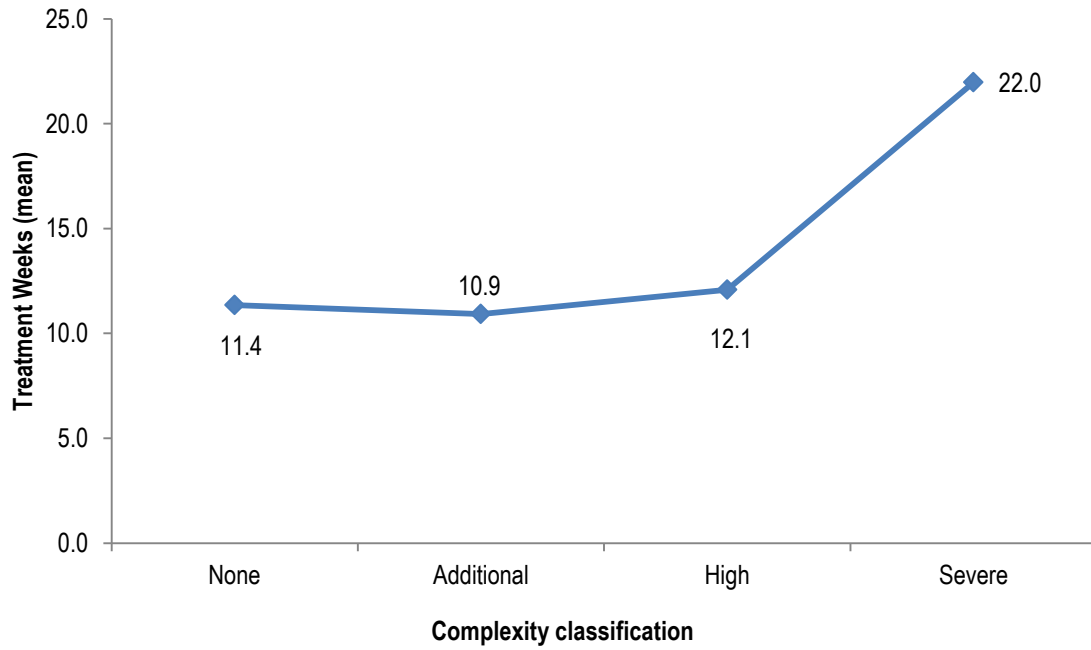
**Figure 61. Complexity classification by age group (N = 1,000).**



There were no differences in the distribution of clients in complexity categories based on cultural background, or whether they were a COATS client or not.

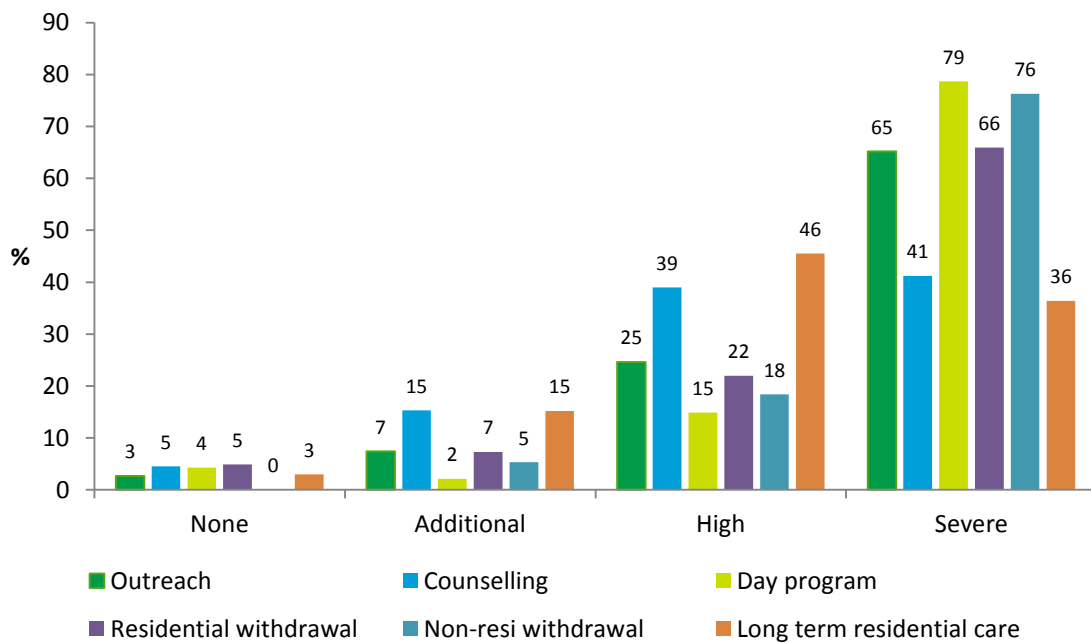
The comparison of average number of weeks in treatment and complexity classification revealed significant differences. This difference was carried by the clients in the Severe category, who were in treatment for longer than clients in the other categories (see Figure 62).

**Figure 62. Average weeks in treatment at time of census and complexity category (N = 970).**



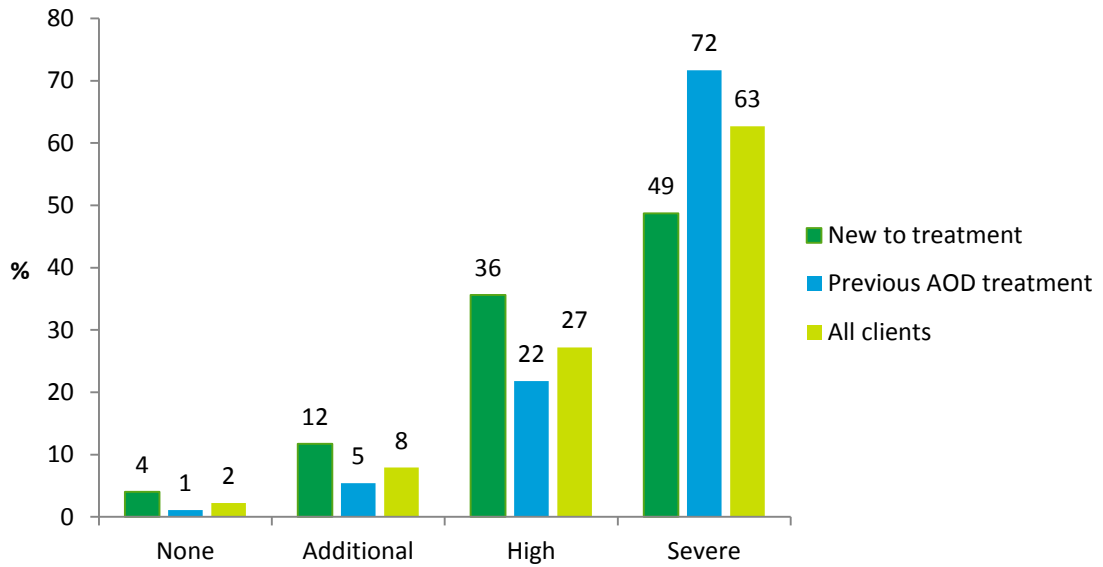
The distribution of clients in each complexity category was analysed by main treatment type (see Figure 63). There were significant differences in complexity distribution. The day program, parent support program and non-residential withdrawal program had more clients in the Severe complexity category than expected. The outreach program, residential withdrawal program had similar proportions to overall distribution. The counselling and long term residential care programs had fewer clients in the Severe complexity group.

**Figure 63. Distribution of complexity classifications within each treatment type (% of clients within each treatment) (N = 969).**



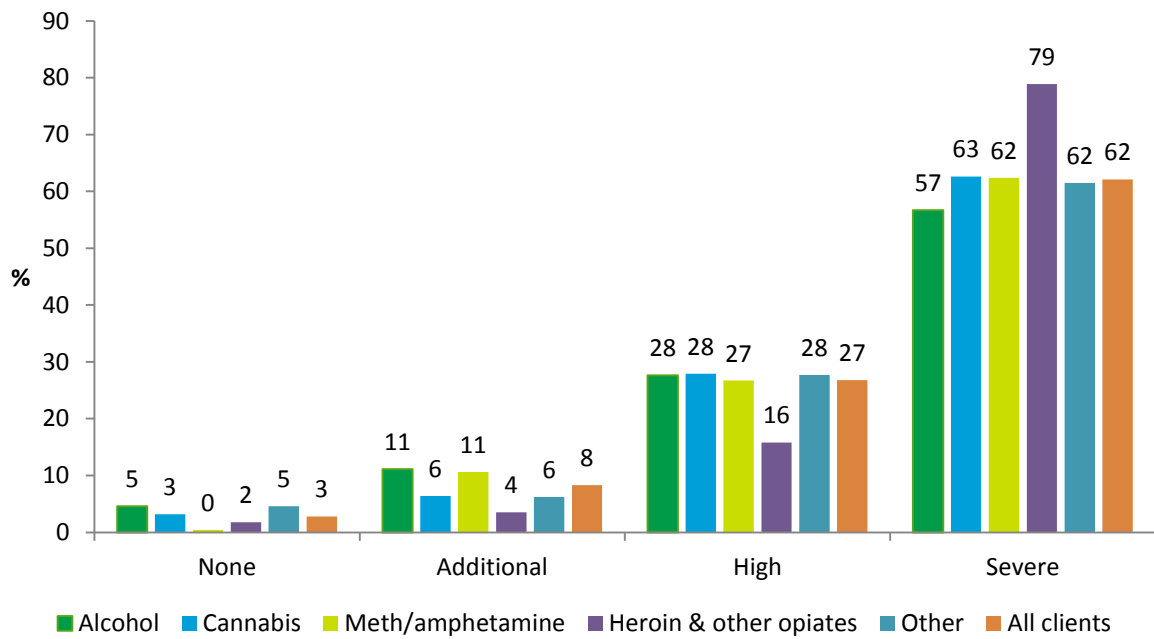
The distribution of clients in each complexity category was also analysed by whether a client was new to AOD treatment or not (see Figure 64). Clients who had previously been involved in AOD treatment were more likely to be represented in the Severe complexity category, and less prevalent in all the other categories, than those client for whom this was their first experience of AOD services.

**Figure 64. Complexity classification by new to treatment (N = 902).**



There was no significant difference between the distribution of complexity categories for each main drug category. However, where heroin and other opiates was the primary drug of concern, 80% of clients were classified at severe complexity.

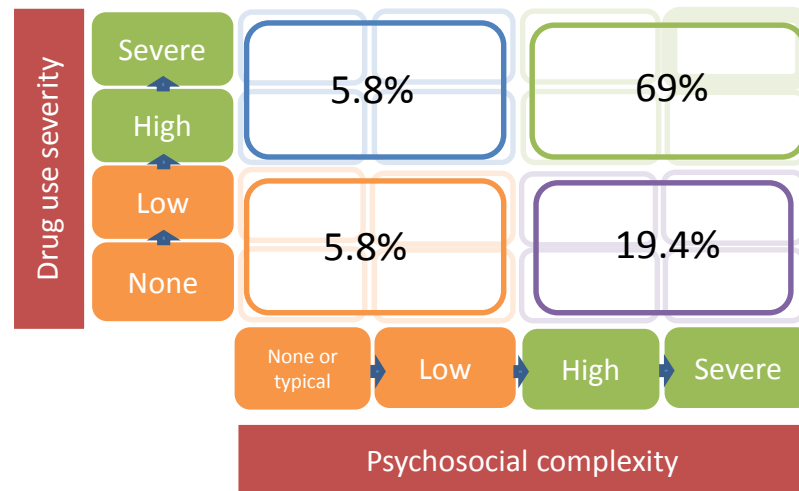
**Figure 65. Distribution of complexity classifications within each primary drug of concern (% of clients) (N = 971).**



## Matrix Classification

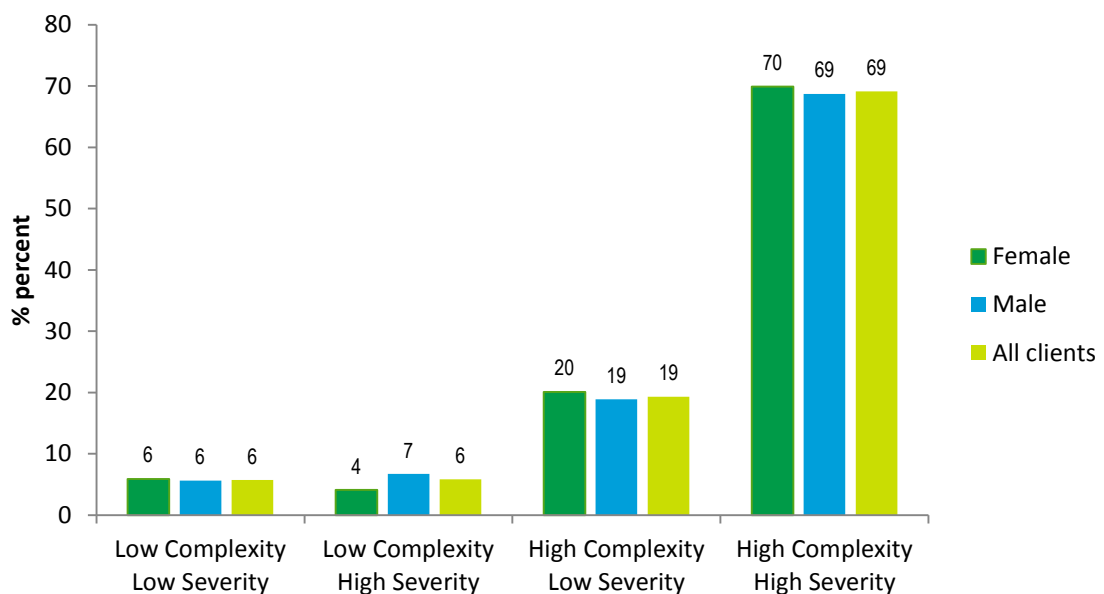
Severity and complexity scores were coded as detailed at the beginning of this report in Figure 1 and Figure 2. These two variables were then cross-tabulated to determine the number of clients that fell in each potential marker for intervention type, resulting in four global quadrants. Sixty-nine percent of all clients (n = 690) fell in the High/Severe-High/Severe quadrant.

**Figure 66. Percentage of total sample in each quadrant of YSAS categories of severity and complexity (N = 1,000).**



There were no differences in quadrant membership based on gender, cultural groups or COATS status.

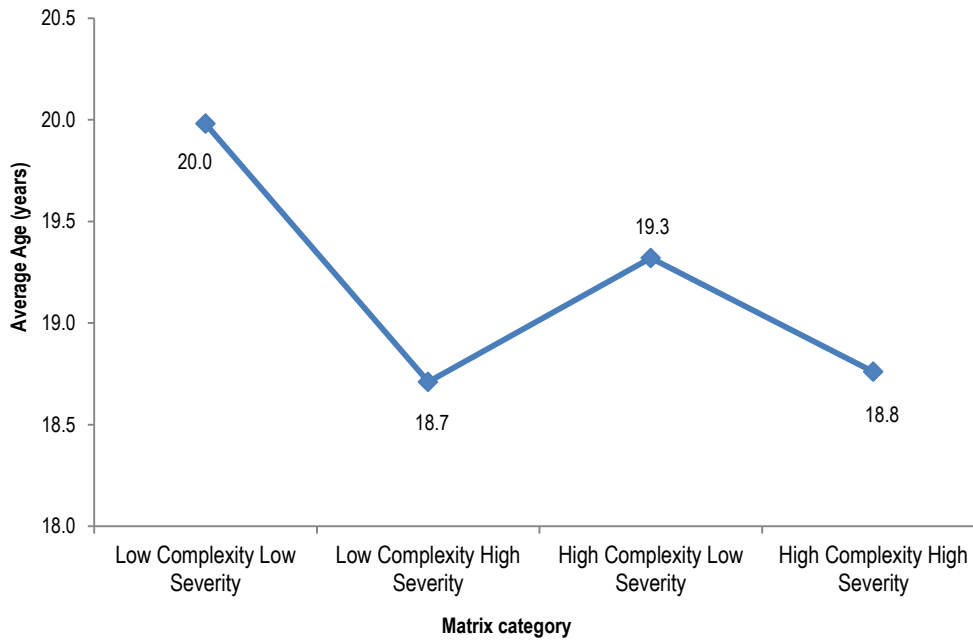
**Figure 67. Proportion of clients within each matrix quadrant by gender (N = 994).**





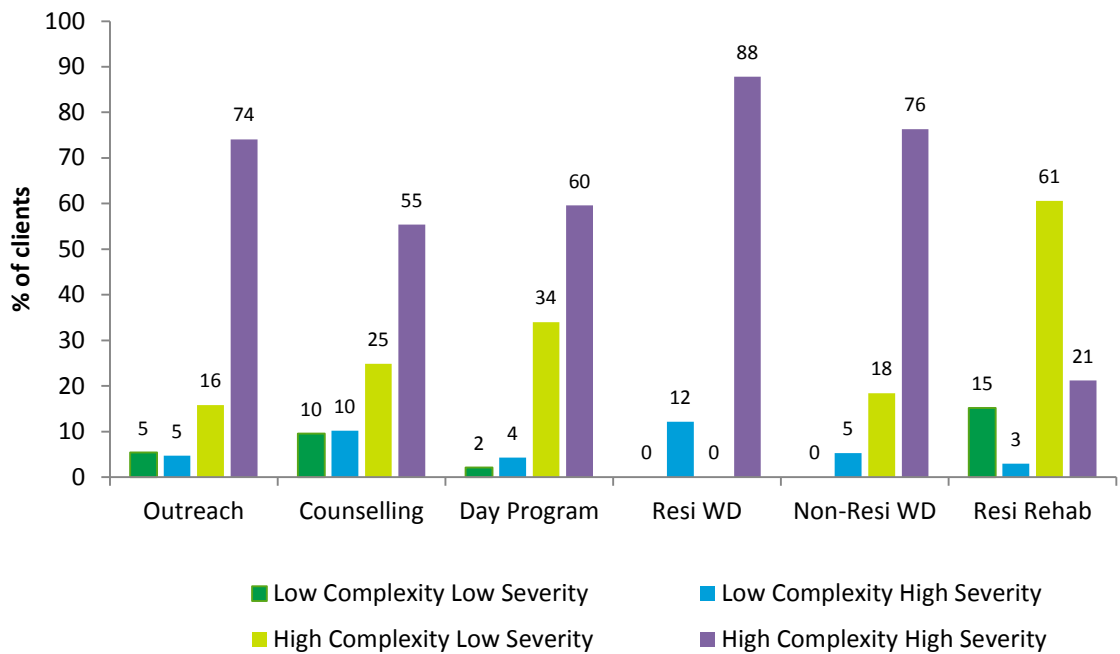
There was however statistically significant differences in average age of clients by matrix quadrant, and the mean difference was significant between the High-High group compared to the Low-Low group. Clients in the High-High group were on average younger than clients in the Low-Low group (see Figure 68).

**Figure 68. Average age of clients within each matrix quadrant (N = 1,000).**



There were statistically significant differences between the proportion of clients in the High-High quadrant by main treatment type. Residential withdrawal program consisted of 88% of clients who fell in this quadrant. Long term residential care had the lowest percentage, at 21%, which indicated that these clients were well on the road to leaving the treatment system. The young parents program only included clients with high levels of complexity and residential withdrawal did not include clients with low drug use severity.

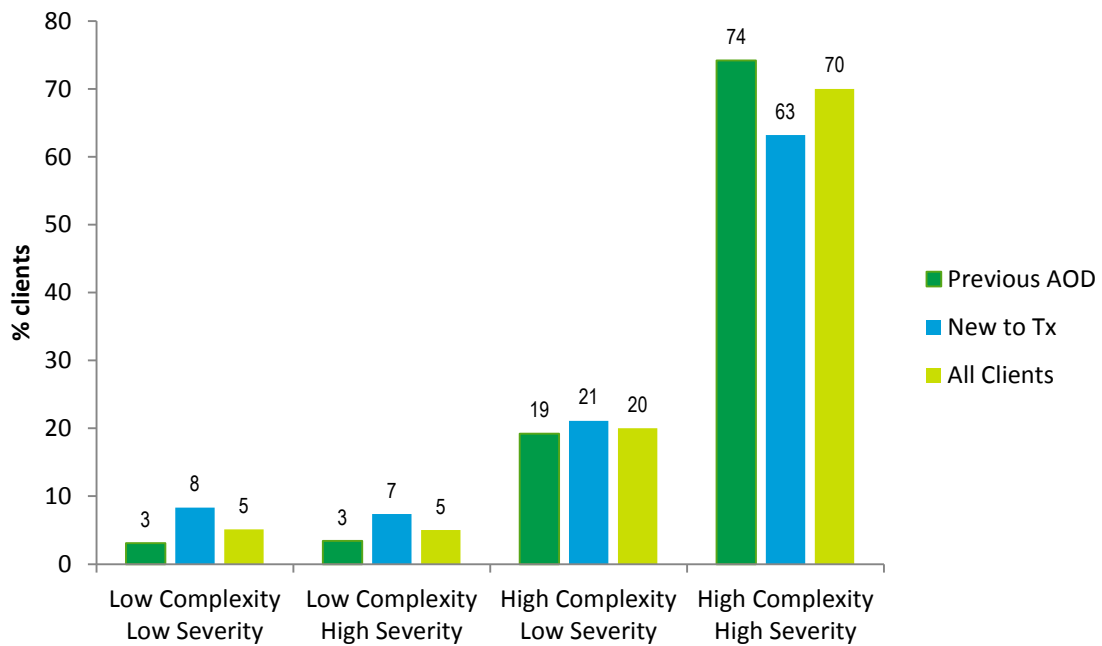
**Figure 69. Distribution of clients by matrix quadrant within each treatment type (N = 969).**



When looking at length of time in current treatment, the data approached significance ( $p = .024$ ) the greatest difference was between clients in the Low complexity-High Severity group (average weeks in treatment was 9.3) and the High complexity-High severity group ( $M = 20.1$  weeks).

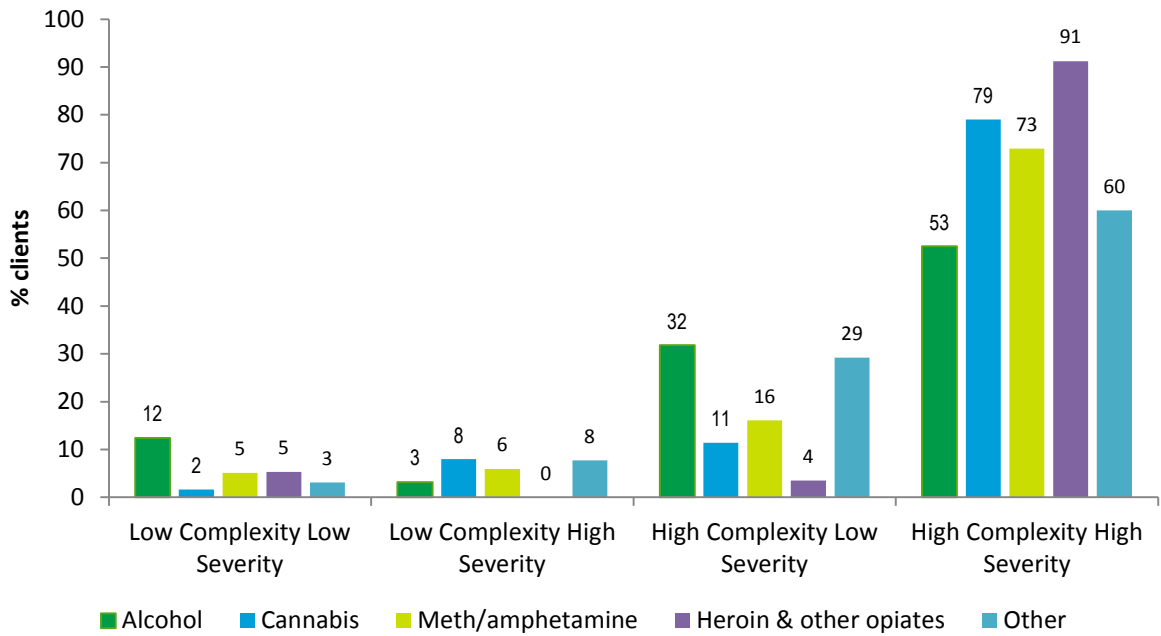
Clients who had previously engaged with AOD treatment were more likely to be in the High-High quadrant and less likely to be in the Low-Low group, or the Low-High group (see Figure 70 below).

**Figure 70. Distribution of clients within each matrix quadrant and whether they were new to AOD treatment, or had engaged in AOD treatment previously ( $N = 902$ ).**



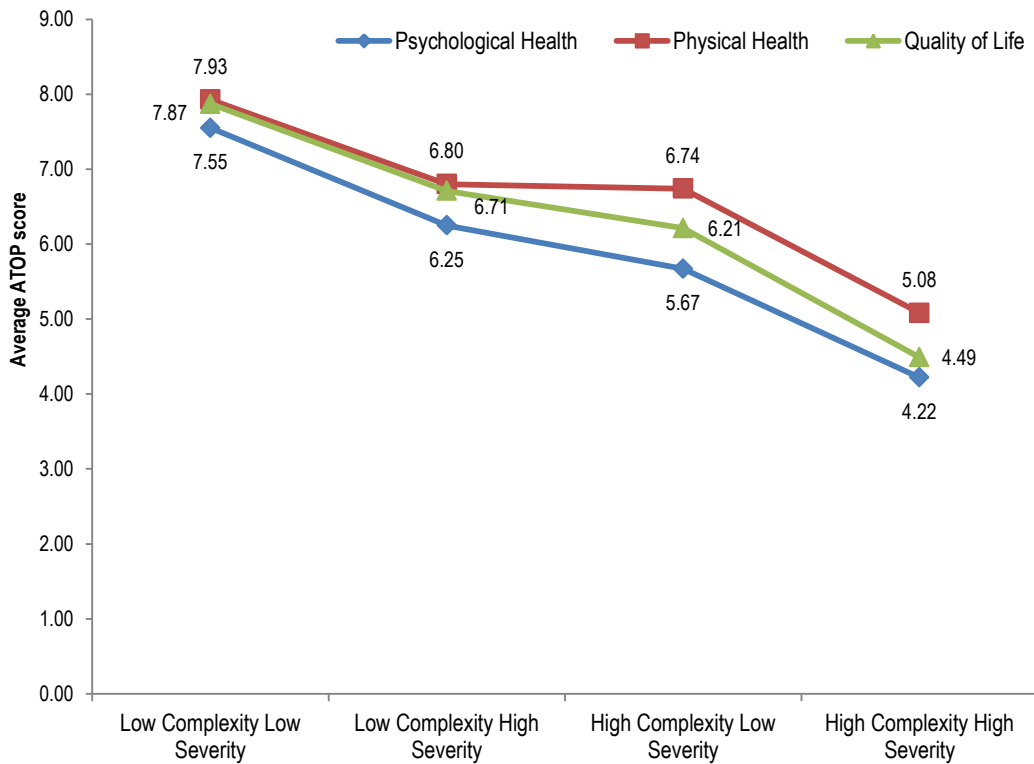
When analysed by primary drug of concern there were fewer clients whose primary DOC was alcohol or other drugs in the High-High quadrant. Nearly all the clients whose primary DOC was opiates were in the High-High quadrant. Cannabis and methamphetamine as primary drugs of concern were somewhat above the average.

**Figure 71. Distribution of clients within each primary drug of concern by matrix quadrant (N = 971).**



Similarly all comparisons of the average ATOP psychological health, physical health, and quality of life scores differed significantly across the four quadrants. Scores were significantly lower for clients in the top high severity-high complexity quadrant compared to all other quadrants. The average scores between quadrants 2 and 3 were not statically different (Low Complexity/High Severity compared to High Complexity/Low Severity).

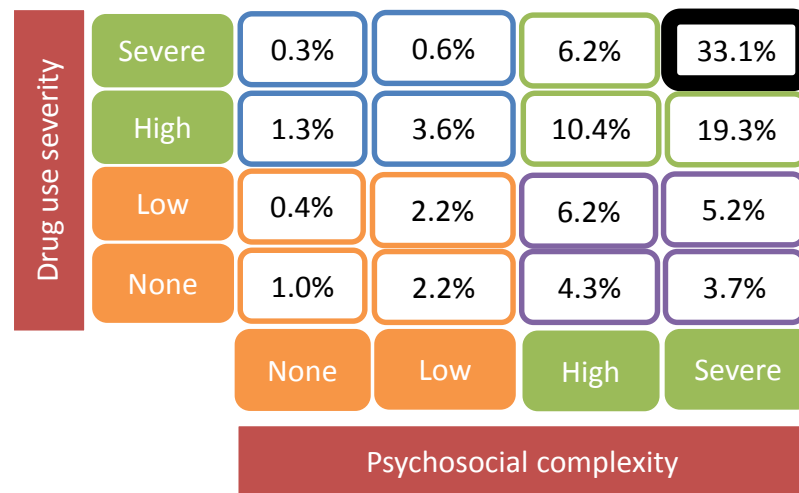
**Figure 72. ATOP average psychological health ( $n = 985$ ), physical health ( $n = 984$ ), and quality of life ( $n = 982$ ) scores for clients in each severity-complexity quadrant.**



## YOUNG PEOPLE MOST AT RISK

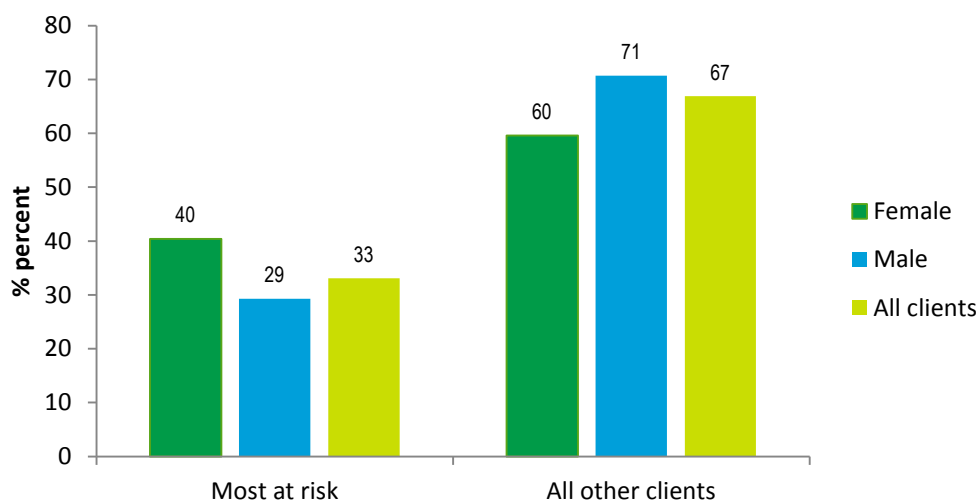
As depicted in Figure 73, there are 331 clients who fell into the Severe-Severe category. These clients have been identified those at most risk and need. The characteristics of this sub-population were compared with the rest of the client group.

**Figure 73. Percentage of total sample in the cross tabulation of YSAS algorithms of severity and complexity (N = 1,000).**



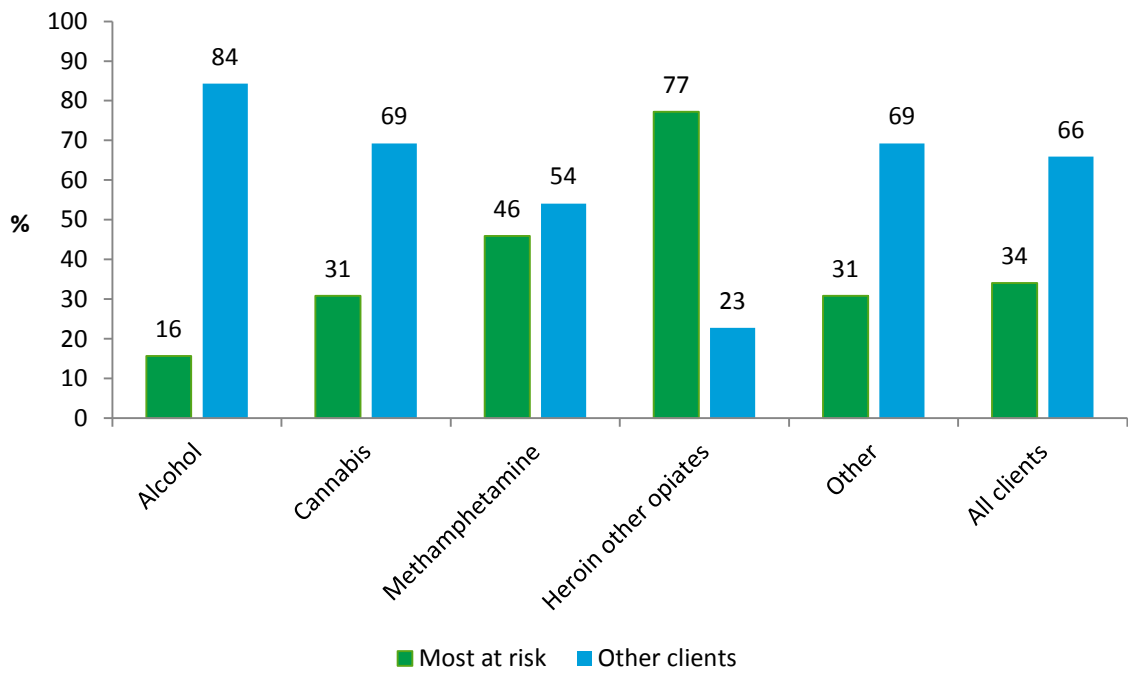
Those in the “most at risk” group, were more likely to be female. There were no significant differences based on age group, cultural background or COATS client status. The distribution of gender is depicted in the figure below.

**Figure 74. Youth most at risk by gender (N = 994).**



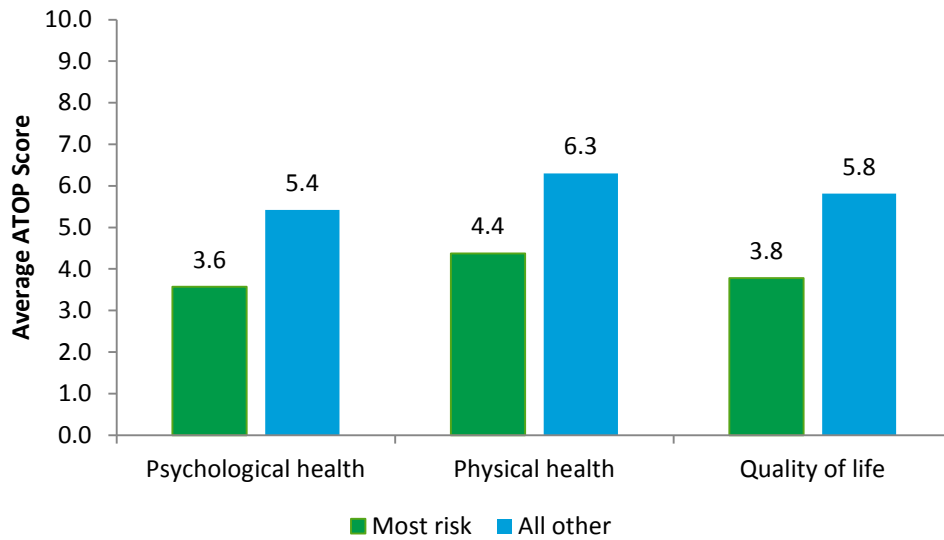
Clients whose primary drug of concern (PDOC) was heroin or other opiates were more likely to be in the top sixteenth category of Severe-Severe (Most at risk) (77%), similarly for those whose PDOC was methamphetamine (46%). Clients who used other drugs or cannabis were no more or less prevalent in this Severe-Severe category and clients whose PDOC was alcohol were less likely to be classified with the highest of severity and complexity (16%).

**Figure 75. Distribution of clients within each primary drug of concern by matrix category (N = 971).**



Similarly all comparisons of the ATOP physical health scores were significantly lower for clients in the top severity-complexity segment when compared to all other clients.

**Figure 76. ATOP average psychological health, physical health, and quality of life scores for clients who fall in the severe-severe segment.**

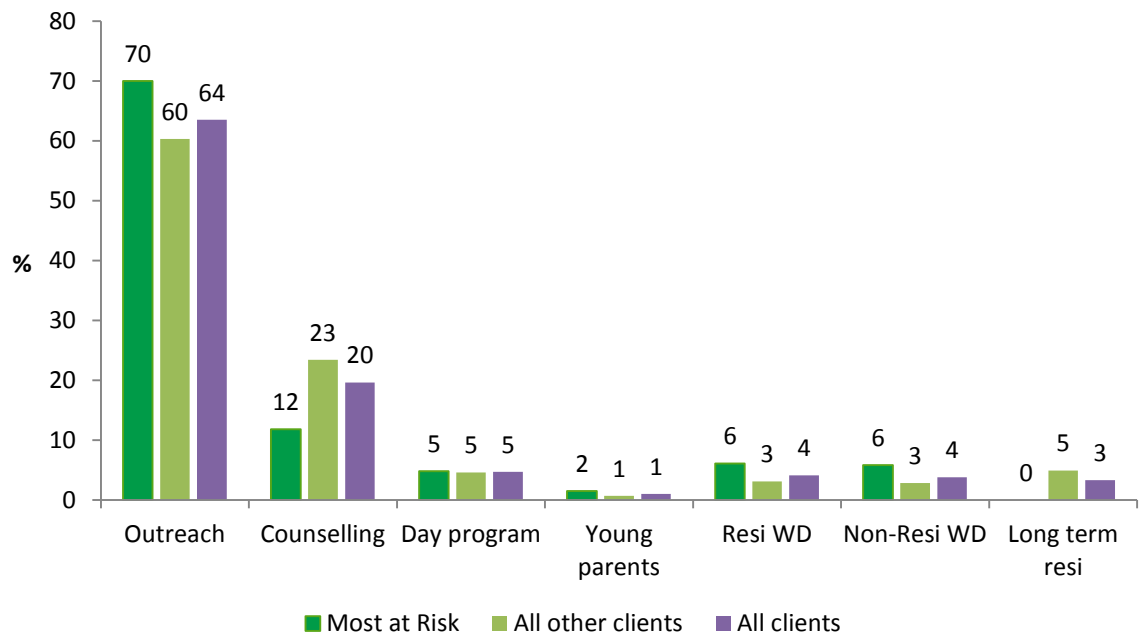


Of those who were in the top segment, most at risk, 72% had previous AOD treatment compared to all other clients where 55% had previous AOD treatment.



Young people most at risk were more likely to be engaged in different services than those not in the Severe-Severe category. Over the whole sample, 64% of clients participated in outreach programs but clients most at risk were more likely to be involved in outreach (70%) and were less likely to be involved in counselling programs (12% compared to 23% of all other clients). These clients are also more likely to participate in the withdrawal programs, both residential (6% vs. 3%) and non-residential (6% vs. 3%), and the young parents program (2% vs. 1%). There weren't any most-at-risk clients involved in long term residential care (supported accommodation or residential rehabilitation).

**Figure 77. Distribution of main treatment type for clients most at risk compared to all other clients (N = 1,000).**



Clients in the Severe-Severe category were also more likely to be involved in their current treatment on average longer than all other clients (24.5 weeks compared to 14.9 weeks) while the total sample average was 18.1 weeks.

# KEY FINDINGS

## General Characteristics of Clients

**In comparison to the general population of young people aged from 12 to 25 years old, young people who are clients of AOD services in Victoria were found to have extremely high levels of harmful substance use and complex psychosocial problems.**

On all indicators of substance use severity, youth AOD clients far exceed young people of the same age from the general population (AIHW, 2011a; Department of Health 2013). The results are:

- Dependent on one or more substance (54%)
- Using substances on a daily basis (66%)
- Regularly using 3 or more substances (34%)
- Experiencing serious substance use related harm (39%)
- Engaged in illicit substance use (79%)
- Involved in injecting as a route of administration (22% ever)

These results are commensurate with the previous studies investigating the substance use patterns of youth AOD clients (Dean, McBride, MacDonald, Connolly and McDermott 2012, MacLean, Kutin, Best, Bruun and Green 2013, and Best, Wilson, Reed, Harney et al., 2012).

The same comparison can be made between the psychosocial complexity of youth AOD clients and other Victorian young people of a similar age and developmental stage. Many youth AOD clients:

- Are involved in the criminal justice system at very high rates (66%).
- Have experienced or are experiencing abuse and neglect (62%).
- Experience high levels of current family conflict and disconnection (53%).
- Experience problems with school (51%).
- Lack meaningful activity (43%).
- Face acute housing instability (19%).
- Have ever had a mental health diagnosis (40%).
- Engage in self-harming behaviour (43%).
- Have ever been involved in child protection (33%).
- Meet the criteria for poor physical and psychological health and quality of life (32%).

The complexity experienced by youth AOD clients is brought into sharp focus when these results are compared with data on the general population of young people. For example:

- The high school retention rate for 2013 in Victoria is 87.6% for Year 7 to 12 (83% males; 92% females). In 2013, 88% of 20 to 24 year olds had completed year 12 or equivalent (DEECD, 2013).
- Recent rates of homelessness were at 3.59% (Chamberlain & MacKenzie, 2008).
- 0.3% of young Australians aged 10 to 17 are under youth justice supervision (AIHW, 2011, bulletin).
- In Victoria on the 30<sup>th</sup> June 2012, 0.8% of Victorian children were on a care and protection order (AIHW, 2013a).

**There is a correlation between the severity of youth AOD clients substance use problems and their level of psychosocial complexity.**

The correlation between the total severity score and total complexity score was significant ( $r = .512$ ,  $p < .0001$ ), a 26% association.

**High levels of both past and present abuse and neglect are associated with diminished quality of life and lower levels of psychological and physical health**

Global health and wellbeing scores based on questions taken from the 'Australian Treatment Outcome Study' (ATOP) demonstrate that clients who had experienced abuse, neglect or violence in the last 4 week or ever in their lifetime had diminished quality of life and poorer psychological and physical health. All comparisons were significant. The lowest scores were for those who had experienced any of the types of abuse in the last 4 weeks, on all three measures: psychological health, physical health, and quality of life. Ratings of psychological health were the poorest, followed by quality of life, then physical health. Clients who had experienced sexual abuse in the last 4 weeks had the lowest average rating of all for psychological health.

**The four most significant areas of unmet service need for youth AOD clients were for: assistance with family relationships; finding employment; engagement in education; and addressing mental health issues, particularly in rural Victoria.**

Clients in DHS regions Loddon Mallee (25%), Gippsland (30%) and Southern Metropolitan (28%) had higher levels of unmet educational needs compared to the average (20%). Of the clients in the Grampians region ( $n = 81$ ) 30% had unmet mental health treatment needs compared to the state average of 14%.

## Gender Differences

### **When compared to males, young women who are youth AOD clients experience significantly higher levels of psychosocial complexity**

Overall, females comprised 34% of the sample; but almost half of all voluntary (non-court mandated) clients were young women. The differences between genders was considerable (for a detailed report, see Daley & Kutin 2013).

- 77% of young women had experienced childhood neglect, sexual abuse and/or physical abuse, compared with 55% of young men.
- At least 44% of young women had a history of sexual abuse, compared with 8% of young men.
- Young women in AOD treatment had higher incidence of contact with the state care and protection system (46% cf. 26%). In the Australian care and protection system, 51% of young people are male.
- Young women also had higher rates of disconnection from family (41% cf. 28%).
- Women had higher prevalence of mental health issues (75% cf. 59%).
- Backgrounds of self-injury and suicide attempts were pervasive. 61% of young women had self-injured compared with 31% of young men. Likewise, 38% of women had attempted suicide compared with 20% of young men.

Women and men had similarities and differences in their drug use trends.

- The three primary drugs of concern were consistent (alcohol, methamphetamine, cannabis).
- In the past four weeks, young women were less likely than men to have used alcohol.
- While heroin use is relatively low among both women and men, its use is more prevalent among young women with 10% having used heroin compared with 6% of young men.
- Injecting drug use was more common in women, with 28% having ever injected, compared with 19% of men.
- The use of non-opiate prescription drugs such as benzodiazepines was more common among women, with 17% having used prescription drugs in the past month compared with 11% of men.
- 43% of women had experiences serious drug-related harms compared with 36% of men.

The average age of both men and women is 18, which may suggest that young women's drug using careers begins earlier than men's, or escalates more rapidly. Young women fare worse on all measures of psychosocial vulnerability. Whether this points to young women being more complex; or services only engaging females who are particularly problematic users, is unknown.

## **Age Differences**

### **Youth AOD clients who are 15 and under have high levels of psychosocial complexity but less substance use severity**

Alcohol and cannabis were far more likely to be the primary drug of concern in treatment for the youngest age cohort (15 years of age and under) who had not progressed to multiple substance use or injecting. Methamphetamine and heroin were rarely used and featured more in the substance use patterns of the older cohorts. While this younger cohort had almost equally high levels of psychosocial complexity as older clients they were likely to live with their family and be connected with education. While these connections were often fraught with problems there seems to be an opportunity for early intervention focused on strengthening family and school connectedness.

### **Young people in the 16 to 18 year old age group have the highest combined level of substance use severity and psychosocial complexity.**

All age cohorts have combined level of substance use severity and psychosocial complexity (15 and under - 62%, 16 to 18 - 68%, 19 to 21 - 61%, 22 and above - 53%). Even so, the 16 to 18 year age group seems to be the most at risk and in need of intensive intervention. Further 41% of 15 and under cohort and 23% of 16 to 18 year old cohort have current Child Protection involvement.

### **Clients who are 18 and under are much more likely to engage through outreach service type**

Of all clients in the 15 years of age and under group, 78% were engaged with the Outreach service type. 16 to 18 year olds also had a very high level of engagement in the outreach service type at 71%.

### **Clients' level of engagement in either education or employment (meaningful activity) decreases as client's age and plateaus in the 19 to 21 and 22 plus age cohorts**

Overall 46% of youth AOD clients are not engaged in education, training or employment. The rate of not being engaged is 25% for the 15 & under cohort, 41% for the 16 to 18 year old cohort and 52% for the 19 to 21 and 22+ and above cohorts. Lack of access to employment and training are the biggest issues for these two older cohorts.

## Cultural Background

### **Youth AOD clients are a culturally diverse group**

The major cultural groups of the 53 represented were Aboriginal and Torres Strait Islanders (8%), young people from African cultures (5%), and Pacific Islander or Maori young people (5%).

ATSI young people were more likely to have a trusted relationship with an adult outside of the family (71%) compared to the non-culturally diverse group (57%). Young people from African backgrounds were less likely to have a trusted with an adult outside of the family (33%).

### **There are significant differences for history of abuse, neglect and exposure to violence based on cultural background**

Over half of the clients from African cultural backgrounds had been victims of violence but were least likely to be victims of sexual abuse. ATSI clients were more likely to have a history of childhood neglect, and for more than half of the clients, this was the case. ATSI young people were the most likely of all groups to have involvement with the Child Protection system (current 26%, and ever, 53%)

### **Young people from ATSI and African Cultures had high levels of unmet need for education**

Young people from ATSI and African Cultures had extremely high unmet service needs for education at 39% and 44%. This is compared to non-culturally diverse young people at 19%. Both groups also had a greater incidence of literacy problems (ATSI 28%, African 22% compared to the rest of the sample 14%)

There was also a higher prevalence of intellectual disability among ATSI young people at 11% compared to 3% of the whole sample. Pacific Islander and Maori young people also had a higher prevalence of intellectual disability

### **ATSI, African and Pacific young people were more likely to be involved with the criminal justice system (CJS)**

There were significant differences between clients based on cultural background with respect to the CJS involvement items. In general, clients from Pacific Islander and African cultural groups were more likely to be involved in the CJS compared to clients with non-CALD or other backgrounds. ATSI clients generally had the third highest prevalence of involvement in CJS or crime.

### **The service type through which ATSI, African and Pacific young people were most likely to be engaged was Outreach and there were very low levels of their involvement in the counselling service type.**

The representation of young people from ATSI and African cultures in the outreach service type was particularly high (African 84% and ATSI 74%, compared to average of 64%). Alternatively the engagement of these groups and those from Pacific Islander and Maori backgrounds in the counselling service type was particularly low (African 2%, Pacific 9%, ATSI 11% compared to average of 17.7%)

## Alcohol & Other Drug Use

### Cannabis

- Cannabis was the most used drug with 64% of all youth AOD clients having smoked cannabis in the last 4 weeks.
- There was a high proportion of daily cannabis use (48%).
- Cannabis was also most likely to be the primary drug of concern for clients (38%).
- Status of cannabis as the primary drug of concern diminishes steadily with age (comparatively methamphetamine and heroin/other opiates as primary drug of concern increases steadily with age).
- Cannabis users are on average younger than the users of other drugs.

### Alcohol

- Alcohol was the second most commonly used drug - 63% of all youth AOD clients used alcohol in the last 4 weeks.
- Less likely to be used daily at 20%.
- Alcohol was the primary drug of concern for 20% of youth AOD clients, distributed evenly across all age cohorts.
- Alcohol was most likely to be the primary drug of concern for young people from African (77%) and Pacific Islander/Maori (42%) cultures.
- Of those for whom alcohol was the primary drug of concern, 12% were located in the quadrant featuring no/low substance use severity and no/low psychosocial complexity – significantly more than for any other substance.
- Alcohol was least likely to be the primary drug of concern among the 331 clients identified as 'most at risk'.

### Meth/amphetamine

- The third most used drug - 35% of all youth AOD clients used meth/amphetamines in the last 4 weeks.
- Meth/amphetamine was the second most common primary drug of concern (26%).
- Status as primary drug of concern increases steadily with age (comparatively cannabis as primary drug of concern decreases steadily with age).
- Those with meth/amphetamine as primary drug of concern (along with heroin/other opiates) are older than the users of other drugs.
- Meth/amphetamine was the second most common primary drug of concern among the 331 clients identified as 'most at risk' at 46%.

## **Heroin / other opiates**

- Heroin and other opiates were used by 7% of youth AOD clients in the previous 4 weeks.
- Primary drug of concern for 5% of clients.
- Highest percentage of young people using injection as a route of administration.
- Most likely to be the primary drug of concern among the 331 clients identified as 'most at risk' at 79%.
- Users more likely to live in inner Melbourne.

## **Inhalants**

- On average the youngest users.
- Predominantly used by young people aged 15 and under cohort.
- No youth AOD clients in the 22 years and over cohort were reported as using inhalants.
- Higher levels of inhalant use in the ATSI (8%) Pacific Islander/Maori (7%) cultural groups when compared to non-CALD (2%).

## **Injecting**

- Clients who had used a drug by injection in the past 4 weeks (12%).
- History of injecting (including current) – 22%.
- Young women more likely to have a history of injecting (28% compared to young men 19%).
- Among major cultural groups ATSI clients were more likely than the average to inject and those from African and Pacific/Maori cultures were far less likely to inject.
- Rate of ever injected increases with age.



## Treatment Engagement and Involvement

### **The length of continuous involvement in treatment increased with substance use severity and level of psychosocial complexity**

The typical length of current treatment involvement for young people whose complexity qualifies as “severe” is 21.8 weeks. This compares to the typical length of current treatment involvement for young people who are identified as having no psychosocial complexity at 11.4 weeks. The same applies for clients in relation to their level of substance use severity. Those identified as having no substance use severity had 12.7 weeks of continuous treatment compared to those with the highest level of severity at 22.7.

### **Youth AOD clients in the ‘most at risk’ group (highest level of substance use severity combined with the highest level of psychosocial complexity) are considerably more likely to return to treatment**

72% of those 331 young people in the ‘most at risk’ group had been in youth AOD treatment on a previous occasion compared to the rest of the population (55% had previous youth AOD treatment involvement).

### **Youth Residential Withdrawal Programs engaged younger clients early in their current course of treatment**

The majority of clients (73%) of ‘Youth Residential Withdrawal Programs’ were in their first 4 weeks of treatment and none had been in treatment for longer than 8 weeks. They were also on average younger than those in any other service type.

### **The Outreach and the withdrawal focused service types (residential and non-residential) engage the greatest percentage of the clients from the ‘most at risk’ group (group with the highest combined level of substance use severity and psychosocial vulnerability)**

The service types most likely to engage clients from the “most at risk” group are Non-residential Withdrawal (50%), Youth Residential Withdrawal (49%) and Outreach (37%). Alternatively the lowest rates of engagement were found in the Counselling (21%) and Long Term Residential (0%) service types.

### **The majority of clients were involved with just one service type**

Of all clients participating in the youth AOD service system, 67% are engaged with only one service type.

The service types with a higher proportion of clients using more than one service type simultaneously are: supported accommodation (63%); Family Therapy (44%); Non-residential Withdrawal (43%); Parent Support (40%); Residential Withdrawal (32%).

**Clients within the residential rehabilitation service type had much lower levels of substance use severity but still high levels of psychosocial complexity.**

Clients in the residential rehabilitation service type were more likely to be in the low substance use severity/low psychosocial complexity cohort (15%). This can be either an effect of the treatment or because clients are living in well structured, stable, drug free environments.

Those in the high substance use severity/low psychosocial complexity accounted for only 3% whereas 61% of clients were in the cohort identified as having high psychosocial complexity but low substance use severity. Further, 21% were in the high substance use severity/high psychosocial complexity cohort. Interestingly, none were identified as being in the 331 'most at risk' clients which is a sub-group drawn from the high substance use severity/high psychosocial cohort.

## CONCLUSIONS

The SYNC study was conducted to inform the Victorian youth AOD service system reform. In line with previous studies of the young people engaged in the youth AOD services in Victoria and throughout Australia, extremely high levels of harmful substance use and complex psychosocial problems were observed.

Those young people with high to extreme levels of both substance use severity and psychosocial complexity constituted 69% of clients. From this group, 331 clients were identified as most at risk and extremely vulnerable. These young people clearly require a response from a youth AOD service system that simultaneously addresses substance problems and underlying psychosocial issues. There are also other groups of clients with unique needs that require a customised response. They are:

- Female clients who are overrepresented in the group of extremely vulnerable clients.
- The youngest cohort of clients (15 and under).
- Aboriginal and Torres Strait islander young people.
- Young people from backgrounds of cultural diversity, in particular those from African and Pacific cultures.

It was surprising that structured withdrawal programs, both residential and non-residential, had on average the youngest clientele and those most early in their current course of treatment (average 3.6 weeks). This suggests that participation in structured withdrawal programs might act as a gateway into services and facilitate early treatment engagement.

Those in youngest age cohort (15 years of age and under) used mainly alcohol and cannabis and had not progressed to multiple substance use or injecting but had almost equally high levels of psychosocial complexity as older clients. The SYNC study indicates that this population could benefit from better targeted early intervention.

Finally, the areas of unmet need for youth AOD clients in the SYNC study suggests that the youth AOD service system include or be linked with options for providing young people assistance with family relationships, finding employment, engagement in education and addressing mental health issues, particularly in rural areas.

## REFERENCES

- Aarons, G. A., Brown, S. A., Hough, R. L., Garland, A. F., & Wood, P. A. (2001). Prevalence of adolescent substance use disorders across five sectors of care. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*(4), 419-426.
- Adler, Patricia, A., & Adler, Peter. 2011. *The Tender Cut: Inside the Hidden World of Self-Injury*. NYU Press: United States
- AIHW (2011a). 2010 National Drug Strategy Household Survey Report. Drug statistics series no. 25. Cat. no. PHE 145. Canberra: Australian Institute of Health and Welfare.
- AIHW (2011b). *Alcohol and other drug treatment services in Victoria 2009-10: findings from the National Minimum Data Set*. Canberra: Australian Institute of Health and Welfare.
- AIHW (2011c). Juvenile justice in Australia 2009–10: an overview. Bulletin no. 93. Canberra: Australian Institute of Health and Welfare.
- AIHW (2013a). Alcohol and other drug treatment service in Australia 2011-12. Drug treatment series 21. Cat. No. HSE139. Canberra: Australian Institute of Health and Welfare.
- AIHW (2013b). Alcohol and Other Drug Treatment Services National Minimum Data Set (AODTS-NMDS). [Data cubes: AODTS-NMDS]. Retrieved from <http://www.aihw.gov.au/alcohol-and-other-drug-treatment-services-data-cubes/>
- AIHW. (2013c). Child Protection Australia: 2011-12. Child Welfare series no. 55. Cat. no. CWS 43. Canberra: Australian Institute of Health and Welfare.
- Armstrong, T. D., & Costello, E. J. (2002). Community studies on adolescent substance use, abuse, or dependence and psychiatric comorbidity. [Review]. *Journal of Consulting and Clinical Psychology, 70*(6), 1224-1239.
- Australian Bureau of Statistics. 2013. *Causes of Death, Australia, 2011*. Cat. No. 3303.0. Accessed at <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/3303.0Main+Features12011?OpenDocument>, 25<sup>th</sup> November 2013
- Bates, M. E., & Labouvie, E. W. (1997). Adolescent risk factors and the prediction of persistent alcohol and drug use into adulthood. *Alcohol Clin Exp Res, 21*(5), 944-950.
- Best, D., Wilson, A., Reed, M., Harney, A., Pahoki, S., Kutin, J., et al. (2012). *Youth Cohort Study: Young people's pathways through AOD treatment services*. Melbourne: Turning Point Alcohol and Drug Centre.
- Biswas, B., & Vaughn, M. G. (2011). Really troubled girls: gender differences in risky sexual behavior and its correlates in a sample of juvenile offenders. *Children and Youth Services Review, 33*, 2386-2391.
- Bond, L., Butler, H., Thomas, L., Carlin, J., Glover, S., Bowes, G., & Patton, G. (2007). Social and school connectedness in early secondary school as predictors of late teenage substance use, mental health, and academic outcomes. *Journal of Adolescent Health, 40*(4), e9-357.e318.
- Bradshaw, C. P., Schaeffer, C. M., Petras, H., & Jalongo, N. (2010). Predicting negative life outcomes from early aggressive-disruptive behavior trajectories: gender differences in maladaptation across life domains. *Journal of Youth and Adolescence, 39*(8), 953-966.
- Brook, J. S., Lee, J. Y., Finch, S. J., Koppel, J., & Brook, D. W. (2011). Psychosocial factors related to cannabis use disorders. *Substance Abuse, 32*(4), 242-251.
- Bruun, A. (2008). Effective Practice for Young People Experiencing Alcohol and Other Drug-Related Harm. In D. Moore & P. Dietze (Eds.), *Drugs and Public Health: Australian Perspectives on Policy and Practice*. Melbourne: Oxford University Press.
- Busen, N. H., & Engebretson, J. C. (2008). Facilitating risk reduction among homeless and street-involved youth. *Journal of the American Academy of Nurse Practitioners, 20*, 567-575.
- Casswell, M., French, P., & Rogers, A. (2012). Distress, defiance or adaptation? A review paper of at-risk mental health states in young offenders. *Early Intervention in Psychiatry, 6*(3), 219-228.
- Chamberlain, C., & MacKenzie, D. (2008). Counting the Homeless Australian 2006. Australian Census Analytic Program. Cat. No. 2050.0. Canberra: Australian Bureau of Statistics. Accessed on 16th December 2013 at: [http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/57393A13387C425DCA2574B900162DF0/\\$File/20500-2008Reissue.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/57393A13387C425DCA2574B900162DF0/$File/20500-2008Reissue.pdf)
- Chassin, L. (2008). Juvenile Justice and Substance Use. *Future of Children, 18*(2), 165-183.

- Cheng, T. C., & Lo, C. C. (2011). A longitudinal analysis of some risk and protective factors in marijuana use by adolescents receiving child welfare services. *Children and Youth Services Review, 33*, 1667-1672.
- Christie, G., Merry, S., & Robinson, E. (2010). Do young people attending addiction services differ from those attending youth mental health services? *Drug and Alcohol Review, 29*(4), 406-412.
- Clark, C. B., Perkins, A., McCullumsmith, C. B., Islam, M. A., Hanover, E. E., & Cropsey, K. L. (2012). Characteristics of victims of sexual abuse by gender and race in a community corrections population. *Journal of Interpersonal Violence, 27*(9), 1844-1861.
- Courtney, M. E., & Dworsky, A. (2006). Early outcomes for young adults transitioning from out-of-home care in the USA. *Child & Family Social Work, 11*(3), 209-219.
- Daley, K. (Forthcoming). *'To Stop Feeling': Understanding Young People's Problematic Substance Use*. PhD Thesis: RMIT University.
- Daniels, H., Cole, T., Sellman, E., Sutton, J., Visser, J., & Bedward, J. (2003). Study of young people permanently excluded from school. Birmingham: Department for Education and Skills.
- De Leo, Diego., & Heller, Travis, S. 2004. Who are the kids who self-harm? An Australian self-report school survey. *Medical Journal of Australia, 181*, 140-144.
- Dean, A. J., McBride, M., MacDonald, E. M., Connolly, Y., & McDermott, B. M. (2010). Gender differences in adolescents attending a drug and alcohol withdrawal service. *Drug and Alcohol Review, 29*(3), 278-285.
- DEECD: Department of Education and Early Childhood Development. 2013. Summary Statistics for Victorian Schools, July 2013. State Government of Victoria. Accessed online 13/12/2013 at: <http://www.education.vic.gov.au/Documents/about/department/statsvicschbrochure.pdf>
- Department of Health. (2013). *Victorian secondary school students' use of licit and illicit substances in 2011: Results from the 2011 Australian Secondary Students' Alcohol and Drug (ASSAD) Survey*. Melbourne: State Government of Victoria.
- Diaz, R., Goti, J., Garcia, M., Gual, A., Serrano, L., Gonzalez, L., et al. (2011). Patterns of substance use in adolescents attending a mental health department. *European Child & Adolescent Psychiatry, 20*(6), 279-289.
- Dworsky, A., & Courtney, M. (2009). Addressing the mental health service needs of foster youth during the transition to adulthood: How big is the problem and what can states do? *Journal of Adolescent Health, 44*, 1-2.
- Edokpolo, O., James, P., Kearns, C., Campbell, A., & Smyth, B. P. (2010). Gender differences in psychiatric symptomatology in adolescents attending a community drug and alcohol treatment program. *Journal of Psychoactive Drugs, 42*(1), 31-36.
- Ennett, S., Bauman, K., Hussong, A., Faris, R., Foshee, V., Cai, L., & DuRant, R. (2006). The peer context of adolescent substance use: Findings from social network analysis. *Journal of Research on Adolescence, 16*, 159-186.
- Enoch, M. A. (2011). The role of early life stress as a predictor for alcohol and drug dependence. *Psychopharmacology, 214*(1), 17-31.
- Essau, C. A. (2011). Comorbidity of substance use disorders among community-based and high-risk adolescents. *Psychiatry Research, 185*(1-2), 176-184.
- Ewing, S. W. F., Venner, K. L., Mead, H. K., & Bryan, A. D. (2011). Exploring racial/ethnic differences in substance use: a preliminary theory-based investigation with juvenile justice-involved youth. *BMC Pediatrics, 11*.
- Ferguson, K. M., & Xie, B. (2012). Adult Support and Substance Use Among Homeless Youths Who Attend High School. *Child & Youth Care Forum, 41*(5), 427-445.
- Henry, K. L. (2008). Low prosocial attachment, involvement with drug-using peers, and adolescent drug use: A longitudinal examination of mediational mechanisms. *Psychology of Addictive Behaviors, 22*(2), 302-308.
- Henry, K. L. (2010). Academic achievement and adolescent drug use: an examination of reciprocal effects and correlated growth trajectories. *Journal of School Health, 80*(1), 38-43.
- Henry, K. L., Knight, K. E., & Thornberry, T. P. (2012). School disengagement as a predictor of dropout, delinquency, and problem substance use during adolescence and early adulthood. *Journal of Youth and Adolescence, 41*(2), 156-166.

- Keller, T. E., Blakeslee, J. E., Lemon, S. C., & Courtney, M. E. (2010). Subpopulations of older foster youths with differential risk of diagnosis for alcohol abuse or dependence. *Journal of Studies on Alcohol and Drugs, 71*(6), 819-830.
- King, D. C., Abram, K. M., Romero, E. G., Washburn, J. J., Welty, L. J., & Teplin, L. A. (2011). Childhood maltreatment and psychiatric disorders among detained youths. *Psychiatric Services, 62*(12), 1430-1438.
- Kliwer, W., & Murrelle, L. (2007). Risk and protective factors for adolescent substance use: Findings from a study in selected Central American countries. *Journal of Adolescent Health, 40*(5), 448-455.
- Kosterman, R., Hawkins, J., Guo, J., Catalano, R., & Abbott, R. (2000). The dynamics of alcohol and marijuana initiation: Patterns and predictors of first use in adolescence. *American Journal of Public Health, 90*(3), 36-366.
- Kuperman, S., Schlosser, S., Kramer, J., Bucholz, K., Hesselbrock, V., Reich, T., & Reich, W. (2001). Risk domains associated with an adolescent alcohol dependence diagnosis. *Addiction, 96*(4), 629-636.
- Lansford, J. E., Dodge, K. A., Pettit, G. S., & Bates, J. E. (2010). Does physical abuse in early childhood predict substance use in adolescence and early adulthood? *Child Maltreatment, 15*(2), 190-194.
- Leslie, L. K., James, S., Monn, A., Kauten, M. C., Zhang, J., & Aarons, G. A. (2010). Health-risk behaviors in young adolescents in the child welfare system. *Journal of Adolescent Health, 47*(1), 26-34.
- Liu, J., Chen, X., & Lewis, G. (2011). Childhood internalizing behaviour: analysis and implications. *Journal of Psychiatric and Mental Health Nursing, 18*(10), 884-894.
- MacDonald, S. (2010). Journeys of exclusion: the experiences of young people with an intellectual disability leaving care. *Parity, 23*(5).
- MacLean, S., Kutin, J., Best, D., Bruun, A., & Green, R. (2013). Risk profiles for early adolescents who regularly use drugs compared to older youth. *Vulnerable Children and Youth Studies: An International Interdisciplinary Journal for Research, Policy and Care, DOI:10.1080/17450128.2012.750025*.
- MacLean, S., Bruun, A., Mallett, S., & Green, R. (2009). Social contexts of substance use for vulnerable 13-15 year olds in Melbourne: Youth Drug Reporting System. Melbourne: Turningpoint Alcohol and Drug Centre, Youth Substance Abuse Service (YSAS), Keys Centre for Women's Health.
- Maynard, B. R., McCrear, K. T., Pigott, T. D., & Kelly, M. S. (2012). Indicated truancy interventions: Effects on school attendance among chronic truant students. *Campbell Systematic Reviews, 10*. doi:10.4073/csr.2012:10
- McClelland, G. M., Elkington, K. S., Teplin, L. A., & Abram, K. M. (2004). Multiple substance use disorders in juvenile detainees. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*(10), 1215-1224.
- McDowall, J. J. (2009). *CREATE Report Card 2009 - Transitioning from care: Tracking progress*. Sydney: CREATE Foundation.
- McGee, E., Valentine, C., Schulte, M. T., & Brown, S. A. (2011). Peer Victimization and Alcohol Involvement among Adolescents Self-Selecting into a School-Based Alcohol Intervention. *Journal of Child & Adolescent Substance Abuse, 20*(3), 253-269. doi: 10.1080/1067828x.2011.581904
- McMillan, J., & Marks, G. (2003). School leavers in Australia : profiles and pathways: Australian Council for Educational Research ACEReSearch.
- Meade, M. A., & Slesnick, N. (2002). Ethical considerations for research and treatment with runaway and homeless adolescents. *The Journal of Psychology, 136*(4), 449-463.
- Merikangas, K. R., & McClair, V. L. (2012). Epidemiology of substance use disorders. *Human Genetics, 131*(6), 779-789.
- Mitchell, P., Kutin, J., Ennis, D., & Bruun, A. (In Review). Utility of a practitioner-completed census for describing the client population of youth drug and alcohol services. *Journal of Child and Adolescent Substance Abuse*.
- Mueser, K. T., & Taub, J. (2008). Trauma and PTSD among adolescents with severe emotional disorders involved in multiple service systems. *Psychiatric Services, 59*(6), 627-634.
- Oshri, A., Tubman, J. G., & Jaccard, J. (2011). Psychiatric symptom typology in a sample of youth receiving substance abuse treatment services: associations with self-reported child maltreatment and sexual risk behaviors. *Aids and Behavior, 15*(8), 1844-1856.
- Robinson, L., Lamb, S., & Walstad, A. (2010). How young people are faring '10: National report on the learning and work situation of young Australians. Melbourne: Foundation for Young Australians.

- Rosenkranz, S. E., Muller, R. T., & Henderson, J. L. (2012). Psychological maltreatment in relation to substance use problem severity among youth. *Child Abuse & Neglect*, 36(5), 438-448.
- Rossiter, B., Mallett, S., Myers, P., & Rosenthal, D. (2003). *Living well? Homeless young people in Melbourne*. Melbourne: Australian Research Centre in Sex, Health and Society, La Trobe University.
- Rounds-Bryant, J. L., Kristiansen, P. L., Fairbank, J. A., & Hubbard, R. L. (1998). Substance use, mental disorders, abuse and crime: gender comparisons among a national sample of adolescent drug treatment clients. *Journal of Child & Adolescent Substance Abuse*, 7(4), 19-34.
- Rush, B., J. Tremblay, et al. (2012). Development of a Needs-Based Planning Model for Substance Use Services and Supports in Canada: Interim Report DRAFT, Health Systems and Health Equity Research Group, Centre for Addiction and Mental Health.
- Shin, S. H., Hong, H. G., & Hazen, A. L. (2010). Childhood sexual abuse and adolescent substance use: A latent class analysis. *Drug and Alcohol Dependence*, 109(1-3), 226-235.
- Slade, T., Johnston, A., Teesson, M., Whiteford, H., Burgess, P., Pirkis, J., et al. (2009). *The Mental Health of Australians 2: Report on the 2007 National Survey of Mental Health and Wellbeing*. Canberra: Department of Health and Ageing.
- Tanaka, M., Wekerle, C., Schmuck, M. L., Paglia-Boak, A., & Team, M. A. P. R. (2011). The linkages among childhood maltreatment, adolescent mental health, and self-compassion in child welfare adolescents. *Child Abuse & Neglect*, 35(10), 887-898.
- Toumbourou, J. W., Stockwell, T., Neighbours, C., Marlatt, G. A., Sturge, J., & Rehm, J. (2007). Interventions to reduce harm associated with adolescent substance use. *The Lancet*, 369(9570), 1391-1401.
- Traube, D. E., James, S., Zhang, J. J., & Landsverk, J. (2012). A national study of risk and protective factors for substance use among youth in the child welfare system. *Addictive Behaviors*, 37(5), 641-650.
- Tucker, J. S., Edelen, M. O., Ellickson, P. L., & Klein, D. J. (2011). Running away from home: a longitudinal study of adolescent risk factors and young adult outcomes. *Journal of Youth and Adolescence*, 40(5), 507-518.
- Vaughn, M. G., Wexler, J., Beaver, K. M., Perron, B. E., Roberts, G., & Fu, Q. (2011). Psychiatric correlates of behavioral indicators of school disengagement in the United States. *Psychiatric Quarterly*, 82(3), 191-206.
- Vincent, G. M., Grisso, T., Terry, A., & Banks, S. (2008). Sex and race differences in mental health symptoms in juvenile justice: The MAYSI-2 national meta-analysis. *Journal of the American Academy of Child and Adolescent Psychiatry*, 47(3), 282-290.
- Wu, L. T., Gersing, K., Burchett, B., Woody, G. E., & Blazer, D. G. (2011). Substance use disorders and comorbid Axis I and II psychiatric disorders among young psychiatric patients: Findings from a large electronic health records database. *Journal of Psychiatric Research*, 45(11), 1453-1462.
- Wu, N., Lu, Y., Sterling, S., & Weisner, C. (2004). Family environment factors and substance abuse severity in an HMO adolescent treatment population. *Clinical Pediatrics*, 43(4), 323-333.
- Youth Support + Advocacy Service (2012). *YSAS Snapshot: Findings from the YSAS Client Census October 2012*. Melbourne: Youth Support + Advocacy Service.
- Zerger, S., Strehlow, A. J., & Gundlapalli, A. V. (2008). Homeless young adults and behavioral health - An overview. *American Behavioral Scientist*, 51(6), 824-841.

## APPENDIX 1.

Please email [reception@ysas.org.au](mailto:reception@ysas.org.au) for a pdf copy of the survey.



## APPENDIX 2.

**Table 2. Methodological features of four studies based in youth AOD settings (published 2009 to 2013)**

Methodological features	YSAS Census	Best et al	MacLean et al	Dean et al
Method of data collection	Practitioner-completed census	Youth self-report survey	Youth self-report survey	Administrative data (retrospective review of admissions)
Location	Victoria, Australia	Victoria, Australia	Victoria, Australia	Queensland, Australia
Service types included	7% residential 93% outpatient	52% residential 48% outpatient	100% outpatient	100% residential
Sample size	N = 371	N = 150	N = 163	N = 262
Age range	12 to 22 years	16 to 21 years	13 to 24 years	13 to 18 years
Gender	Males = 64%	Males = 60%	Males = 56%	Males = 53%
Sampling method	Complete population of current clients on the census day	Convenience sample	Convenience sample	Complete population
Dates / duration of data collection	2 week period following census day 10 Sept 2012	11 month period from June 2009 to April 2010	6 month period from Oct 2006 to March 2007	March 2000-Sept 2004
Mental health screening or diagnostic tool	None	K10	K10	None
Substance use scales	None	Severity of Dependence Scale	Severity of Dependence Scale	None

## APPENDIX 3

**Table 3. Severity of substance use: comparison across six studies based in youth AOD settings (published 2009 to 2013)**

Substance use	YSAS Census	Best et al	MacLean et al	Dean et al
Daily / almost daily use of any substance other than tobacco	89% (past 4 weeks)	88% (past 3 months)	100% (a primary drug of concern in the past 6 months)	Not reported
Heroin or other opiates (daily/almost daily)	4% (past 4 weeks)	20% (past 3 months)	7% (past 6 months)	26.0% of females & 10.8% of males (primary drug of concern at intake)
Poly-drug use (daily or almost daily)	1.5 (average number of substances used)	1.9 (main drugs of concern)	Only 3 out of 163 did not have a second drug of concern	Not reported
Injected	9% (past 4 weeks)	22% (past 3 months) 37% (ever)	36% (past 6 months) 46% (ever)	64.2% of females & 51.8% of males (currently)
Assessed as dependent	62%	99% (Severity of Dependence Scale)	73% (Severity of Dependence Scale)	Not reported
Overdosed	Not reported	15% (past 6 months) 34% (ever)	12% (past 6 months) 34% (ever)	Not reported

## APPENDIX 4

**Table 4. Prevalence of co-occurring issues: comparison across four studies based in youth AOD settings (published 2009 to 2013)**

Co-occurring issues	YSAS Census	Best et al	MacLean et al	Dean et al
Diagnosis of mental disorders (current)	34%	62% (affective disorder only, K10 cut-off = 27)	<i>Not collected</i>	<i>Not reported</i>
Diagnosis of mental disorder (lifetime)	45%	55%	38%	<i>Not reported</i>
Psychological distress	63% (past 4 weeks)	77% (K10, past 4 weeks)	49% (K10, past 4 weeks)	73% of females & 47% of males <sup>3</sup>
Any mental health issue or problem	<i>Not asked</i>	29% (past 6 months)	66% (had felt depressed or anxious for no reason)	88% (recorded at intake)
Suicide attempts	28% (lifetime)	13% (past 6 months)	29% (past 6 months)	<i>Not reported</i>
Deliberate self harm	43% (lifetime)	29% (past 6 months)	33% (past 6 months)	19% of females and 9% of males <sup>5</sup>
Criminal activity other than drug use	29% (past 4 weeks)	66% (past month)	54% (past month)	71% of females & 76% of males <sup>2</sup>
Justice system involvement	71% (ever, non-specific)	44% (ever incarcerated) 21% (contact with youth justice worker in past 6 months)	39% (ever incarcerated) 60% (charged with a crime in past 6 months)	<i>Not reported</i>
Child protection involvement	45% (ever)	36% (ever)	31% (13-15 year olds currently living in foster or residential care)	<i>Not reported</i>
Not involved in meaningful activities	60% (past 4 weeks)	77% (past 6 months)	57% (at time of interview)	88% not attending school 63% unemployed
Conflict with family	57% (past 4 weeks)	36% (frequent conflict over past 6 months)	<i>Not collected</i>	<i>Not reported</i>
Insecure housing or homeless	26% (past 4 weeks)	20% (homeless or in short term crisis accom in past 6 months)	8% homeless and 7% in temporary or crisis accom at time of interview	11% homeless 17.5% of females & 5.5% of males homeless

# APPENDIX 5

## Methodological notes

Little research has directly studied the population of young people who are involved in alcohol and other drug (AOD) treatment. Fifteen years ago, Rounds-Bryant, Kristiansen, Fairbank and Hubbard (1998) observed that “information about adolescents in contemporary drug treatment is scarce in the literature” (p. 20). This observation remains accurate today.

The SYNC research aimed at a gaining a comprehensive understanding of the young people attending specialist youth AOD services in Victoria by examining both their AOD use and their level of psychosocial complexity. A census was conducted in which data were recorded by practitioners, using a structured survey instrument designed by researchers. By collecting data about all clients registered in current caseloads on a particular day this method aimed to maximize sample size and minimize sampling bias. By using an instrument designed by researchers and drawing from the case notes and practice-based knowledge of service providers, this method aimed to collect data on a reasonably comprehensive set of fields and achieve high rates of field completion while minimising costs of data collection and making no imposition on clients. Additionally, clinicians are engaged in the research process, it does not interfere with the worker-client therapeutic relationship, and as mentioned, it is rapid, cost-effective and efficient.

Mitchell et al., (2013) examined this novel data collection method in comparison with the two main sources of data in previous studies with a similar aim:

- Data routinely collected by service systems for administrative purposes;
- Special purpose surveys of clients attending services in one particular sector.

Administrative data is relatively inexpensive to use in research because it has already been collected, and its use in research does not involve further imposition upon clients or service providers. Administrative data sets also include very large numbers of clients and can often capture whole populations of interest to health and social services researchers. On the down side, administrative data almost universally suffers from problems with quality in terms of research requirements. The data sets collected and recorded routinely by service providers tend to have high levels of missing data within the fields that are included and are often insufficiently comprehensive to answer complex research questions.

Surveys that collect data directly from clients for the specific purpose of research have advantages and disadvantages virtually converse to those of administrative data. Careful questionnaire design that is informed by previous research can ensure a range of fields comprehensive enough, and framing of items nuanced enough to answer complex questions. Collection of data by dedicated researchers with a direct interest in the results yields relatively high levels of field completion. A disadvantage of purpose built client surveys is that they are highly time consuming and expensive to conduct. High costs tend to limit the sample size that can be captured and can reduce the power of statistical analyses to detect subtle patterns in the data, and significantly reduce the generalizability of the results to the population as a whole. Quantitative surveys that collect a comprehensive range of data fields can involve a considerable burden of time for clients with little direct benefit flowing back. High burden surveys can yield low response rates and sampling biases.

## Limitations of the current study

There are several limitations with the current study. The first is that the young people for whom surveys were completed were at differing points in their current continuous course of treatment. This makes it difficult to make an accurate comparison with other studies in the target group with similar

aims. Treatment involvement therefore becomes a confounding variable and it is not possible to say whether the substance use severity and psychosocial complexity of clients has worsened or improved, particular on the measures that are sensitive to change. This is of little concern as the SYNC was conducted with the aim of better understanding the needs and characteristics of clients accessing youth AOD treatment not measuring treatment effectiveness.

Second, the practitioner completed census method also creates questions about the reliability of the data. The researchers expected the practitioners to examine their case notes and be familiar with their clients circumstances. The reliability of the data from the YSAS pilot census was examined and researchers found that the results were quite commensurate with three similar studies using more traditional methods such as convenience sampling (Mitchell et al., 2013)

The third limitation relates to the validity of the SYNC survey and the 'youth AOD needs identification and intervention planning matrix'. Neither have been through a process of validation. While a number of questions in the SYNC survey were drawn from instruments with psychometric properties that have been tested for their validity, other questions were developed by researchers in the absence of appropriate questions from other studies or instruments that had been validated. The 6 indicators of substance use severity and the 10 indicators of psychosocial complexity that have been used to populate the 'youth AOD needs identification and intervention planning matrix' have also not been validated but were developed further from work done by Turning Point and YSAS on the Youth Cohort Study (Best, Wilson, Reed, Harney et al. 2012).

There are also two further issues with 'youth AOD needs identification and intervention planning matrix' indicators. The indicators of psychosocial complexity are both static, in that they are capturing experiences like abuse and neglect that has ever happened to a young person and they are also changeable like engagement in offending behaviour in the previous 4 weeks. The researchers believe that a combination of indicators that are both static and sensitive to change are essential for a comprehensive and well-rounded snapshot of clients needs and characteristics to be drawn. Particularly given that these clients are in a developmental transition and as such engagement in certain behaviours and the experience of particular psychosocial issues is more likely to fluctuate and be more context dependant (Bruun, 2008) This might have the effect of psychosocial complexity being underreported. On the indicators of substance use severity, researchers have not included a question in the survey on continuous use of one or more substances for more than a 24 hour period. The researchers believe that this harmful binge style pattern of use should be included in the future as an indicator of substance use severity and it is possible that the severity of clients whose primary drug of concern is alcohol or amphetamines has been underreported.

Finally, the researchers believe that in future a method of factoring in the developmental vulnerability of clients is required when determining indicators or both substance use severity and psychosocial complexity. For example, daily or almost daily use of a drug is an indicator of substance use severity. When comparing a 13 year and a 22 year old, both using alcohol daily, it seems logical that the degree of harm associated with the 13 year old's behaviour should result in a higher severity rating. At present, the same value is assigned to both when that indicator is present.