Amanda Roxburgh, Louisa Degenhardt, Briony Larance and Jan Copeland

Mental health, drug use and risk among female street-based sex workers in greater Sydney

NDARC Technical Report No. 237

Amanda Roxburgh, Louisa Degenhardt, Briony Larance and Jan Copeland

MENTAL HEALTH, DRUG USE AND RISK AMONG FEMALE STREET-BASED SEX WORKERS IN GREATER SYDNEY

NDARC Technical Report Number 237

ISBN: 0 7334 2308 6

TABLE OF CONTENTS

LIST OF TABLES

ACKNOWLEDGEMENTS

The Australian Government Department of Health and Ageing provided funding for this project.

We would like to acknowledge the team at the Sex Workers Outreach Project (SWOP). They generously provided their time as well as insightful input into the development of the questionnaire, and assisted greatly with recruitment of the women that took part in this study. In particular we'd like to thank Jo Holden whose enthusiasm at the outset helped to facilitate the conduct of this research outside of the inner city areas. She also provided invaluable assistance with recruitment. We would also like to thank Rachel Wotton who had a great deal of input into the development of the questionnaire, and generously provided time to assist with recruitment, as did Wendy Parsons. Jules Cassidy also provided invaluable insight and assistance along the way. Sheryl Wiffen from Darcy House in Port Kembla, and Feona Cowlin from the AIDS Council of NSW (ACON) in the Illawarra region also generously gave their time to assist with recruitment. Without the collaborative efforts of SWOP, ACON and Darcy House, the data collection would not have been as extensive.

The Kirketon Road Centre (KRC), K2, the Medically Supervised Injecting Centre (MSIC) and the Women and Girls Emergency Centre (WAGEC) also provided invaluable assistance with recruitment of women in the inner city areas.

Finally, and most importantly, we are indebted to the 72 women interviewed for this project who generously gave their time and spoke openly about their involvement in the sex industry.

ABBREVIATIONS

A&TSI	Aboriginal and/or Torres Strait Islander
BBVI	Blood-borne viral infection
BDI	Beck Depression Inventory
BPD	Borderline Personality Disorder
CIDI	Composite International Diagnostic Interview
DOCS	Department of Community Services
HCV	hepatitis C virus
IDRS	Illicit Drug Reporting System
IDU	injecting drug users
KRC	Kirketon Road Centre
MSIC	Medically Supervised Injecting Centre
NSP	Needle and Syringe Programme
NSW	New South Wales
PTSD	Posttraumatic stress disorder
STI	sexually transmitted infections
SWOP	Sex Worker Outreach Project
WAGEC	Women and Girls Emergency Centre

EXECUTIVE SUMMARY

Demographic characteristics

The mean age of the sample was 34 years and approximately one-quarter of the sample identified as being of Aboriginal and/or Torres Strait Islander (A&TSI) origin. The median years of school education completed was 9. Fourteen percent reported having no fixed address, or current homelessness and nearly half the sample reported being homeless within the past 12 months. Income apart from sex work in the past month came from several sources, and the vast majority reported sex work as their main source of income in the past month. More than half of the sample reported moving out of home before age 16.

Sex work history and working conditions

The median age that participants reported starting sex work was 19, with almost one-third starting before 18. Length of involvement in the sex industry ranged from four months to 39 years, and participants had worked in various other sectors of the sex industry. The majority of participants reported starting sex work because they needed the money for drugs, and this was also the main reason for remaining in the sex industry. Just under half the sample reported the money as being the most enjoyable aspect of their work, and the biggest concern for approximately one-third of the sample was the provision of a safe work environment (such as safe houses). Three-quarters of the women reported providing services on the street, two-thirds reported providing them in cars and just over half the sample reported using a safe house (in areas where safe houses were available). Two-thirds of the sample reported that they found sex work very stressful, and half stated that clients were the reason for this stress. The overwhelming majority of women reported ever having experienced violence while working, most commonly physical assault and rape.

Drug use and drug treatment

Ninety four percent of the sample had ever injected any drug, and the median age of first injecting was 18, with approximately one-quarter of the sample reporting first injecting before the age of 16. There were relatively heavy patterns of heroin, cocaine and cannabis use reported among some of the women, while patterns of methamphetamine and alcohol use remained sporadic. The vast majority of the sample was heroin dependent according to the Severity of Dependence Scale (SDS) while approximately one-third was cocaine and cannabis dependent. Participants who were cocaine dependent were more likely to report sharing injecting equipment in the past month and less likely to use condoms when having penetrative sex with clients. Approximately two-thirds of the sample was in drug treatment at the time of interview.

Sex work and drug use

Approximately half the sample reported injecting drugs prior to commencing sex work, and one-quarter reported commencing sex work within 3 years of injecting drug use initiation. Just over one-quarter of the sample reported starting sex work prior to injecting drug use, and approximately three-quarters reported that their drug use had increased since they started sex work.

Injection-related risk behaviours

There were very few reports of borrowing used needles among the injecting drug users, while one-fifth reported lending a used needle to someone in the preceding month. Almost two-thirds of the sample reported sharing other injecting equipment in the past month. Approximately two-thirds of the sample reported testing positive for HCV. There were no reports of HIV positive results.

Unwanted sexual activity

Three-quarters of the sample reported experiencing some form of child sexual abuse before the age of 16. Almost two-thirds of the sample reported that someone had sexual intercourse with them after the age of 16 when they had made it clear they did not consent.

Mental health problems

Depression

Approximately half of the sample reported severe current depressive symptoms in accordance with the Beck Depression Inventory II. Depression was associated with homelessness in the past 12 months, A&TSI status, and cannabis dependence. Approximately half the sample reported ever having tried to kill themself, and approximately one-quarter had first attempted suicide by the age of 18.

Borderline Personality Disorder

Approximately half the sample screened positively for a diagnosis of Borderline Personality Disorder (BPD), which was associated with a range of adverse outcomes: earlier age of injecting drug use initiation, benzodiazepine dependence, cannabis dependence, sharing injecting equipment, current severe depressive symptoms, and adult sexual assault.

Posttraumatic stress disorder

All but one of the participants reported having experienced at least one traumatic event in their lifetime, with a large proportion reporting multiple traumas. Rape, physical assault, child sexual abuse and witnessing someone being badly injured or killed were the most commonly reported traumas. Approximately half of the sample met Diagnostic and Statistical Manual of Mental Disorders (DSM-IV (TR)) criteria for a lifetime diagnosis of posttraumatic stress disorder (PTSD), and one-third reported current PTSD symptoms.

Approximately three-quarters of those participants who developed PTSD said they had spoken to a health professional about the associated symptoms. Those reporting current PTSD were more likely to have experienced a greater number of traumas than those who did not report current symptoms.

Access to mental health services

Approximately one-quarter of the sample had ever been admitted to a psychiatric hospital, and the most common reasons for admission were depression and anxiety. Just under half of the sample reported speaking with a health professional about a mental health problem other than their drug use in the past 6 months, most commonly for depression.

Crime and police contact

Just under half of the sample reported engaging in criminal activity in the month prior to the interview, and just over half of the sample had been arrested in the preceding 12 months. Over half the sample reported ever having been in prison, and a small proportion had been in prison in the preceding 12 months. There were mixed reports regarding experiences with the police. Equal proportions of participants reported experiences of police harassment, poor treatment, and assault reports not being taken seriously, as well as police assistance, respectful treatment, and police assistance after assaults. Despite the large majority of women reporting experiences of violence at work, very low proportions had reported these incidents to police.

Access to information and emotional support

Participants generally had good access to information on safe sex and drug use, blood-borne virus information and legal support. Access was particularly good to information on the sex industry in general. A substantial minority of the group reported having no emotional support.

1 INTRODUCTION

There is a long history of women engaging in the sex industry, both in developed and developing countries, and a large body of literature exists on the risks these women face in the course of their work (Vanwesenbeeck, 2001). Previous research has documented the risks of blood-borne viral infection (BBVI) transmission and sexually transmitted infections among certain sectors of sex workers due to unprotected sex with clients (Gossop et al., 1995b), the relatively high rates of HIV among sex workers in some countries, and the potential risks posed to the broader community via BBVI transmission through clients to the general population (Tuan et al., 2004). Sex workers are a diverse group. Different groups have very different profiles and needs, and the focus of this report is predominantly on street-based sex workers, as the literature suggests that they are disadvantaged across a number of domains (Harcourt et al., 2001, Minichiello et al., 2001, Travis, 1986, Perkins and Bennet, 1985, Perkins, 1991), which will be reviewed below.

1.1 Demographic characteristics

Research has been conducted with male sex workers (Minichiello et al., 2001, Scott et al., 2005, Aggleton, 1999), but studies looking at both male and female street-based sex workers in the U.S. and Australia have documented that the majority of this group tend to be female (Roxburgh et al., 2005, Valera et al., 2000, Farley and Barkan, 1998). Consequently, there is a substantial body of literature on female street-based sex workers. Age ranges of female street-based sex workers in Western countries have generally been reported to be teenage years up to mid-50s, and the mean age is typically late 20s to early 30s (Roxburgh et al., 2005, Harcourt et al., 2001, Valera et al., 2000, Farley and Barkan, 1998, Inciardi and Surratt, 2001). The older age of street-based sex workers may indicate

a progression through different modes of sex work (such as escort, brothel and private work), with street-based work commencing once these women are well into their career. Research in the U.K. provides support for the progression from private to street-based work among female sex workers (Hunter et al., 2004).

Disadvantaged ethnic or racial minority groups also tend to be over represented among female street-based sex workers. Results of U.S. studies have found that disproportionately high numbers of street-based sex workers identify as being African American (ranging from 50 to 85%) (Inciardi and Surratt, 2001, Logan et al., 1998, Jones et al., 1998). Aboriginal and/or Torres Strait Islanders (A&TSI) are also over represented among this group in Australia. In one study of street-based sex workers in Sydney, the authors reported that 20% of the sample identified as being of A&TSI descent (Harcourt et al., 2001), while another study found that over half (59%) of the street-based sex workers identified as A&TSI (Roxburgh et al., 2005).

Low levels of education are also common among this group, with previous research documenting that the majority of women sampled have not completed secondary education (Inciardi and Surratt, 2001, Logan et al., 1998, Jones et al., 1998, Harcourt et al., 2001, Roxburgh et al., 2005).

Finally, research shows that high proportions of these women (with estimates ranging from 18 and 45%) are likely to be homeless (Inciardi and Surratt, 2001, Logan et al., 1998, Jones et al., 1998, Harcourt et al., 2001).

Low levels of education and high levels of homelessness further compound the marginalisation of these women, many of whom are from disadvantaged backgrounds.

Without solid links to the community (as afforded those with stable housing and good employment prospects), negotiating access to community resources for assistance becomes extremely difficult (Surratt et al., 2004).

1.2 Drug use

There is good evidence to suggest that, among street-based sex workers in particular, rates of drug use may be higher than in the general community. Studies have found high rates of illicit drug use (Hunter et al., 2004), injecting drug use (Gossop et al., 1995b, Logan et al., 1998, Harcourt et al., 2001, Jeal and Salisbury, 2004), and drug dependence (Gossop et al., 1995b, Gilchrist et al., 2005, Kuyper et al., 2005) in a number of countries. Studies report that between 57% and 90% of street-based sex workers report injecting drug use, and between 46% and 96% report drug dependence (Alegria et al., 1994, Gilchrist et al., 2005, Kuyper et al., 2005).

In addition to the known risks of heavy or dependent drug use, some studies have suggested higher rates of other risk behaviours such as injecting drug use and risky sex work practices (Gossop et al., 1994, Degenhardt et al., in press).

Of particular concern is the risk of BBVI transmission due to injecting drug use and needle sharing. Research investigating self-reported injecting risk behaviour has found that female street-based sex workers who are injecting drug users (IDU) are significantly more likely to share needles than female IDU who are not sex workers (Kail et al., 1995, Philpott et al., 1989, Gossop et al., 1995b, Inciardi and Surratt, 2001, Jeal and Salisbury, 2004), despite knowing the associated risks (Jeal and Salisbury, 2004). High rates of hepatitis C have also been reported among street-based sex workers (Harcourt et al., 2001).

Another issue is the association between drug use and unsafe sex (Minichiello et al., 2003, Maher, 1997, Gossop et al., 1995b). Findings in this area have been somewhat mixed. Some studies have found that drug use plays a substantial role in the way women conduct their sex work. For some, drug use may facilitate their engagement in sex work (Maher, 1997, Logan et al., 1998), and may reduce the likelihood of condom use (Gossop et al., 1994). Cocaine use in particular has been associated with significant blood borne-virus risk and sex risk behaviours among injecting drug users (Hudgins et al., 1995, Tyndall et al., 2003). Crack cocaine use has led to the lowering of the price of sex work exchanges among street-based sex workers in the U.S., engendering a more hostile environment among sex workers and more violent exchanges with clients, as well as the increased potential for high risk sexual encounters (Maher, 1997, Cohen et al., 1994), while increases in cocaine use among street-based sex workers in Sydney have been associated with reduced condom use (Degenhardt et al., in press). Other studies examining drug use and sexual risk behaviours have found no differences in condom use with clients between sex workers who are drug users or drug dependent and those who are not (Gossop et al., 1995b, Minichiello et al., 2003), indicative that condom use may be influenced by a myriad of factors, and the relationship may be more complex.

1.3 Mental health problems

There is also some evidence to suggest that rates of mental health problems are elevated among street-based sex workers. High proportions report depression (with studies showing percentages as high as 72%) (Alegria et al., 1994, Gilchrist et al., 2005) as well as high levels of psychological distress (El-Bassel et al., 1997). Posttraumatic stress disorder is also prevalent, with rates reported at around 70% (Farley and Barkan, 1998).

1.4 Comorbidity

Less work has been conducted on possible associations between drug use and mental health among sex workers. Both epidemiological and clinical studies have found that drug use problems and mental health problems are likely to co-occur.

1.4.1 Co-occurring drug use problems

There is good evidence to suggest that, in the general community, persons who meet criteria for drug or alcohol use problems are more likely to report problems with a range of drugs (Degenhardt et al., 2001, Robins and Regier, 1991, Farrell et al., 2001, Kessler, Tsuang, M. T., Tohen, M. and Zahner, G. E. P., 1995, Kessler et al., 1997).

These associations are more marked among persons who receive treatment for drug use problems. In clinical samples of persons seeking treatment for problematic substance use, a substantial proportion will report the problematic use of more than one substance (Henningfield et al., 1990, Hays et al., 1998, Compton et al., 2000, Darke and Ross, 1997). A study of comorbidity among heroin injectors (half of whom were in treatment for heroin dependence) found that 49% met criteria for DSM-III-R dependence on alcohol in the past year, 40% met criteria for cannabis dependence, and 24% and 16% met criteria for amphetamine and benzodiazepine dependence respectively (Darke and Ross, 1997).

1.4.2 Co-occurring drug use and mental health problems

General population studies have also found associations between drug use and mental health problems (Degenhardt et al., 2001). Again, the rates of co-occurring mental health problems are higher among problematic drug users recruited from health services. These findings have been consistent across anxiety disorders, mood disorders and personality disorders. In particular, studies have suggested that PTSD, borderline personality

disorder and depression may be particularly high among these populations. This is of concern given the known negative associations between these disorders and clinical outcome.

In a study examining the interplay between PTSD and substance abuse, Read and colleagues (Read et al., 2004) examined inpatients being treated for substance use disorders. The authors found that unremitted PTSD (rather than lifetime PTSD) was associated with poorer outcomes for substance use disorders. In addition, they found that comorbidity of PTSD and substance use disorders was associated with a risk for psychiatric comorbidity.

Research has also shown that BPD is prevalent among substance using populations, and that the diagnosis can have poorer treatment outcomes for substance use disorders (Bowden-James et al., 2004). In an Australian sample of heroin dependent persons, it was reported that nearly half met criteria for BPD (Darke et al., 2004). The authors also found that participants who met criteria for BPD were more likely to engage in risk behaviours such as attempted suicide and needle sharing than those who did not.

Little research has been conducted among sex workers on the comorbidity of mental health problems and drug use; however, one study looking at depression among sex workers found that those who were street-based were more likely to report high depressive symptomatology, and a significantly higher proportion of sex workers who were IDU reported high levels of depression compared to those who were not. In addition, depression was associated with unprotected sex (Alegria et al., 1994).

1.5 Violence and unwanted sexual activity

In a study of male and female inpatients at a detoxification unit, Liebshcutz and colleagues (Liebschutz et al., 2002) found that trauma - particularly when experienced as a child - was significantly related to greater substance use consequences for both males and females. The authors also found that interpersonal violence and childhood abuse was associated with poorer outcomes with regards to substance dependence, as were depressive symptoms.

Much of the literature on street-based sex workers shows that experiences of child sexual abuse, adult sexual assault (Valera et al., 2000, Tyler et al., 2000), and of violence while working (Harcourt et al., 2001, Minichiello et al., 2001, Travis, 1986, Perkins and Bennet, 1985) are prevalent, and that adult sexual assault is associated with psychiatric morbidity among this group (El-Bassel et al., 1997). In a comparative study in Scotland examining differences in psychiatric morbidity between female drug users who engaged in sex work versus those who did not, Gilchrist et el (Gilchrist et al., 2005) found that sex workers were significantly more likely to report adult physical assault and child sexual abuse, to have attempted suicide and to meet criteria for current depressive ideas than non sex workers. These studies are indicative that workers are at greater risk of meeting criteria for PTSD, and one study examining the prevalence of PTSD among street-based sex workers (Farley and Barkan, 1998) reported that 68% of the sample met criteria for the diagnosis of PTSD. This was attributable to exposure to trauma in childhood and adulthood, as well as high levels of violence related to sex work. In addition to these findings, research has found that sex workers exhibit psychological distress independently of traumatic events experienced. A comparative study of female sex workers and non sex workers, recruited from the streets of Harlem (El-Bassel et al.,

1997), found that when factors such as rape, drug use, perceived AIDS risk, ethnicity and age were controlled for, sex workers exhibited significantly higher levels of psychological distress than non sex workers, indicative that the intrinsic nature of street-based sex work is such that it triggers psychological distress.

Research suggests, then, that among female street-based sex workers, drug use may be further complicated by the presence of one or more psychological disorders. Gaining an understanding of these psychological disorders is an important clinical issue for the design and implementation of intervention strategies for street-based sex workers (Valera et al., 2000). However, it is more than just a clinical issue, as psychopathology among this group may impact on the ability to negotiate safe sex practices (El-Bassel et al., 2001) in the same way that drug use has been shown in some studies to have a detrimental effect on safe sex practices (Maher, 1997, Cohen et al., 1994).

While much of the previous research on sex workers has focused on drug use patterns, drug dependence, and the transmission of BBVI through dual vectors of sharing injecting equipment and unsafe sex practices, there has been little done in Australia on the psychological health of sex workers, and what impact it may have on subsequent drug dependence. Investigating these issues may provide new insight into whether psychopathology is likely to increase the risks (such as drug dependence, risky injecting, and unsafe sex practices) among street-based sex workers, as well as inform intervention strategies tailored for this group. The rationale for examining street sex workers in the current study is empirically based, with previous studies suggesting that they are a more marginalised group than non street sex workers, being more vulnerable to adverse contact with law enforcement, subject to physical assault, rape, kidnap, and being

threatened with a weapon (Harcourt et al., 2001, Minichiello et al., 2001, Travis, 1986, Perkins and Bennet, 1985).

1.6 Street-based sex work legislation in New South Wales (NSW)

New South Wales (NSW), Australia, has a good tradition of measures designed to reduce harms related to the public health risks posed by sex work. Street-based sex work has been legally permitted in NSW since 1979, with restrictions outlined in the Summary Offences Act 1988, 19 (1) (Wotton in Dittmore, M., 2005). Sex workers may solicit along public thoroughfares as long as they are not within view of a dwelling, church, hospital or school. NSW is unique in this respect as no other state or jurisdiction in Australia permits street-based sex work (Perkins, 1991). Relatively good outreach efforts have targeted sex workers in NSW, with a strong focus on the reduction of sexual and other risk behaviours among this group.

1.7 Aims

The current report aims to examine the following:

1. To document the demographics, childhood background, drug use patterns and working conditions of female street-based sex workers;
2. To document the prevalence of disorders such as depression, drug dependence, BPD and PTSD among this group;
3. To investigate the relationship between mental health problems and drug dependence; and
4. To consider the association, if any, of these mental health problems on self-reported risk behaviours such as needle sharing and unsafe sex.

2 METHODS

2.1 Recruitment procedures

The data presented in this report were collected between April and August 2005. Participants were recruited through various agencies including the Sex Workers Outreach Project (SWOP), the Women and Girls Emergency Centre (WAGEC), the Kirketon Road Centre (KRC) and the Medically Supervised Injecting Centre (MSIC). These agencies were chosen to assist with recruitment due to ongoing contact with, and provision of outreach services to, the participant population. Recruitment cards with a contact number were distributed by these agencies to potential participants, who then called to organise an interview time. Interviews were conducted at locations convenient to the participant (such as local cafes).

2.2 Sample

Eligibility criteria were i) involvement in the sex industry within the last 3 months, ii) involvement in street-based sex work and iii) aged 17 years and over. The sample consists of 72 female street-based sex workers located in the Sydney metropolitan area, Western Sydney, and Port Kembla.

2.3 Questionnaire

Data were collected via a structured interview administered face-to-face, which took approximately one hour to complete. Participants were reimbursed $50 for their time and costs associated with taking part in the survey.

Due to the potentially distressing nature of some of the questions such as those on child sexual abuse, cards were given to the participant with a list of incidents so they simply answered yes or no to whether an event had occurred. Similar cards were provided with a list of possible perpetrators of these incidents.

A protocol for adverse events was also established to ensure that, where needed, participants were linked in with mental health professionals immediately. This is attached at Appendix A. At the end of the interview, those participants who were interested in mental health referral information were provided with cards containing services and contact details to follow up with should they wish to do so. Finally, it was specified at the beginning of the interview that some sections may be distressing, and that the participant could choose to discontinue with those sections if they felt too distressed.

Areas covered in the interview are summarised below.

2.3.1 Demographic characteristics

Age, gender, Aboriginal and/or Torres Strait Islander (A&TSI) status, level of school and tertiary education attained, sources of income, current type of accommodation, marital status, current occupation, number of pregnancies, number of children, and details of the participant's primary carer/s until the age of 16 were collected in the demographics section.

2.3.2 Drug use and drug treatment

Participants were asked about age of initiation of drug use and which drug they first used, whether they had ever injected any drug and which drugs injected, age of initiation of

injecting drug use and which drug they first injected, drugs used in the last 12 months, and injecting drug use patterns in the last month across different drug types.

The Severity of Dependence Scale (SDS) was used to assess substance dependence for heroin, methamphetamines, cocaine, benzodiazepines, alcohol and cannabis. The SDS is a five-item 15-point scale that measures psychological dependence on various illicit drugs (Gossop et al., 1995a). Research has established that the SDS is a valid and reliable measure of cocaine, heroin, amphetamine, cannabis, benzodiazepine and cannabis use (Kaye and Darke, 2002, Copeland et al., in preparation, Topp and Mattick, 1997, Swift et al., 1998), and work has recently been completed to validate the cut off for dependence on alcohol using the SDS (Lawrinson et al., in press).

Data on age first sought treatment for drug use, current treatment, completion of treatment and reasons for non-completion, as well as how treatment services could change to encourage completion was collected.

2.3.3 Injection-related risk behaviour

The injecting sub-scale of the HIV Risk Taking Behaviour Scale, a component of the Opiate Treatment Index (OTI), was used to measure current injection-related risk behaviour (Darke et al., 1992).

2.3.4 Mental health and access to treatment services

A number of different measures were used to assess various domains of psychopathology.

Depression

The Beck Depression Inventory–II (BDI-II) (Beck et al., 1996) was administered to determine the presence and severity of current depressive symptoms. The BDI-II is a 21 item self-reported measure, designed to represent the criteria for a major depressive episode as presented in the Diagnostic and Statistical Manual of Mental Disorders Text Revision (DSM-IV TR) (American Psychiatric Association, 2000). Previous research has established that the BDI-II has good psychometric properties and that these hold across a variety of different samples (Beck et al., 1996, Whisman et al., 2000, Grothe et al., 2005).

Suicidal Ideation

Participants were asked about suicidal ideation, whether they had ever attempted suicide, and age at first and last suicide attempt. Data was also collected on methods of attempted suicide.

Borderline Personality Disorder

Participants were screened for potential ICD-10 emotionally unstable personality disorder (borderline type) (herein referred to as Borderline Personality Disorder – BPD) using the National Survey of Mental Health and Wellbeing (NSMHWB) version of the Composite International Diagnostic Interview (CIDI) (Andrews et al., 1999).

Posttraumatic stress disorder (PTSD)

DSM-IV diagnoses of Posttraumatic stress disorder (PTSD) were obtained using the NSMHWB version of the CIDI (Andrews et al., 1999).

Access to mental health services

Data were collected on psychiatric histories including treatment sought in the preceding 6 months, and for what problems, as well as whether participants were currently taking any psychiatric medication.

2.3.5 Sex work history & working environment

Data on age of initiation into sex work, reasons for entry and reasons for continued involvement in the sex industry, history of non street-based sex work, services provided, locations of service provision, and violence experienced while working were collected.

2.3.6 Blood-borne viral and sexually transmitted infections

Information regarding HCV, HIV and sexually transmitted infections (STIs) testing, HCV and HIV status, and STIs contracted in the past 12 months was collected.

The sexual behaviour sub-scale (assessing condom use in the working and personal environment) of the HIV Risk-Taking Behaviour Scale, taken from the OTI, was administered. An additional component assessing condom use in oral sex was also administered.

2.3.7 Sexual abuse

Data on child sexual abuse and adult sexual assault was collected, utilising a structured instrument from a child development study conducted in Christchurch, New Zealand (Fergusson et al., 1989).

2.3.8 Crime and contact with the police

The criminality scale of the OTI (Darke et al., 1992) was used to determine how often participants had committed property crime, drug offences, fraud and violent crimes in the preceding month. Prison and juvenile detention histories were also collected, and participants were asked about arrests within the preceding 12 months. Participants were also asked what their best and worst experiences have been with the police.

2.3.9 Accessing information

Participants were asked how they learnt about various issues such as safe sex and drug use, blood-borne viral infections, where they went to obtain information on legal advice and the sex industry in general, and who they used for emotional support.

2.4 Statistical analyses

Descriptive statistics were used to record the prevalence of PTSD, BPD, depressive symptoms and drug dependence. Medians were reported rather than means for variables where the data were not evenly distributed. Odds ratios and chi square analyses were conducted to determine the relationship between depressive symptoms and other variables, BPD and other variables, PTSD and other variables, and the relationship between depression and drug dependence, BPD and drug dependence, and PTSD and drug dependence. Independent sample T tests were used to look at differences in median age of first sexual assault and median number of traumas experienced. Multiple logistic regression, with the backwards elimination method using log likelihood ratios, was employed to model associations between current PTSD and other variables at a multivariate level. All analyses were conducted using SPSS for Windows, version 12.0 (SPSS Inc, 2003).

3 RESULTS

3.1 Demographic characteristics

Demographic characteristics of the sample are presented in Table 1. The mean age of the sample was 34 (SD 8.8, range 18 to 58). Approximately one-quarter (23%) of the sample identified as being of Aboriginal and/or Torres Strait Islander (A&TSI) origin. The median years of school education was 9 (SD 3, range 3 to 12), with 18% of the sample completing a high school education. More than half of the sample (57%) reported that they had not completed any further courses after school. Fourteen percent reported having no fixed address, or current homelessness and nearly half (45%) the sample reported being homeless within the past 12 months.

Income apart from sex work in the past month came from several sources (Table 1); however, very few (6%) reported receiving income from a wage or salary from other paid work and the vast majority (89%) cited the government pension as a source of income. Likewise, the vast majority (93%) reported sex work as their main source of income in the past month.

Only 21% of the sample reported that they were raised by both parents until age 16. More than half of the sample (61%) reported moving out of home before age 16. The mean age of living independently was 15.

Table 1: Demographic characteristics of the sample

Characteristic	N=72
Mean age in years	34
% Current Accommodation	
Own house/flat	53
Parent's/family house	4
Boarding house/hostel	12
Shelter/refuge	4
No fixed address/homeless	14
Other (including hotel/club/friend's house)	13
% Homeless in past 12 months	45
% Aboriginal and/or Torres Strait Islander	23
Median years of school education	9
% Completed secondary education	18
% Tertiary education	
None	57
Trade/technical	38
University	5
% Marital status	
Married/de facto	14
Widowed	6
Separated/divorced	9
Single	71
% Current main occupation	
Sex work	78
Home duties	5
Unemployed	17
% Source of income in past month (apart from sex work)*	
Wage or salary	6
Government pension	89
Criminal activity	17
Child support	6
% Sex work as main source of income in past month	93

*Percentages do not add to 100 as more than one response was possible.

Eighty five percent of the sample said they had ever been pregnant, and 65% said they had children. Eight percent of the sample (13% of women who reported having children) reported that all of their children lived with them. The most common reason for the children not living with their mother was that they were living with other family members (36% of the sample; 56% of women who had children). Other reasons for the child not being with their mother included being removed by the Department of Community Services (DOCS) (11% of the sample; 17% of women who had children), children had passed away (7% of the sample; 10% of women who had children), children living elsewhere due to mother's drug use, mental health issues or involvement in sex work (7% of the sample; 10% of women who had children) and children being adopted out (4% of the sample; 6% of women who had children).

Table 2: Family background & parental status

Variable	N=72
% Ever pregnant	85
% Who had children	65
% All children living with them	8
% Children not living with them	56
% Reasons children not living with them	
Living with other family	36
DOCS mentioned	11
Passed away	7
Living elsewhere due to drugs use/mental health issues	7
Adopted out	4
% Raised by biological parents until age 16	21
% Reasons for separation from parents	
Parents divorced	21
Left home early to live on own	18
Placed in foster care	8
Lived with relatives	7
Separated from mother	7
Separated from father	6
Other reason	12

3.2 Working environment

3.2.1 Sex work history

The median age that participants reported starting sex work was 19 (SD 8, range 12 to 55 years) (Table 3), with nearly one-third of the sample (31%) starting before the age of 18. Length of involvement in the sex industry ranged from four months to 39 years (SD 7.32). Participants had worked in various other sectors of the sex industry (Table 3).

Table 3: Sex work history

Variable	N=72
Median age (years) started sex work	19
% Commenced before age 18	31
Mean number of years involved in sex work	12
Other sex industry sectors ever worked in*	
% Brothels	63
% Private	42
% Massage parlour	38
% Escort	24
% House	17
% Street-based only	14

*Percentages add to more than 100 as more than one response was possible.

The majority of participants reported starting sex work because they needed the money for drugs (61%), while just over a third (36%) reported needing money to live (Table 4). Reasons for remaining involved in the sex industry were similar to those for commencing sex work (Table 4). Again, money for drugs was nominated by the largest proportion of participants (64%), and almost half the sample (43%) said they needed the money to live.

Table 4: Reasons for commencing and continuing sex work

Reason	% commencing (N=72)*	% continuing (N=72)*
Needed money for drugs	61	64
Needed money to live	36	43
Acquaintances involved	8	
Had a particular goal in mind	4	3
Partner put me to work	4	
Preferable to committing crime	4	
Good money/flexible hours	4	13
Purely for survival	3	4
Drifted into it	3	
Can't get another job		7

* Percentages do not add to 100 as more than one response was possible.

3.2.2 Work practices

Half of the sample reported having penetrative sex with more than 30 people in the past month (Table 5).

Three-quarters of the women (75%) reported providing services on the street, 67% reported providing them in cars and just over half the sample (57%) reported using a safe house (it should be noted that not all participants were working in areas where safe houses were available) (Table 5).

The majority of participants provided oral sex (96%), vaginal sex (94%) and hand relief (92%) (Table 5). Forty six percent of participants reported that they had stopped providing services they once provided. The largest proportion (13%) reported no longer providing B&D and S& M services, followed by anal sex (11%).

Table 5: Current work practices

Variable	N=72
% Number of clients had sex with in past month	
None	3
10 people or less	25
11-20 people	18
21-30 people	4
More than 30 people	50
Location where services provided	
% Street	75
% Cars	67
% Safe house	56
% Own home	16
% Motel room	11
% Client's home	7
Services provided	
% Oral	96
% Vaginal sex	94
% Hand relief	92
% Erotic massage	31
% Role-play fantasies	31
% Anal sex	19
% Kissing	18
% B&D/S&M	18
% Fisting	7
Services no longer provided	
% B&D/S&M	13
% Anal sex	11
% Kissing	8
% Erotic massage	8
% Role-play fantasies	8
% Vaginal sex	4
% Oral	3
% Fisting	1

Half of the participants who had stopped B&D/S&M cited safety reasons and fear of losing control, and the other half cited the degrading and demeaning nature of this service. Reasons provided for discontinuing anal sex were divided between physical discomfort, and not needing the money as much as previously. Among those who had stopped kissing clients, they reported doing so because they felt it was too intimate. Massage services were stopped for a variety of reasons including no longer having the

enthusiasm for it, not getting many requests for massage, and a change of work environment from parlour to street-based work. The main reasons for role play fantasy services no longer being provided were that it made participants uneasy, and they felt it was demeaning.

3.2.3 Enjoyable aspects of sex work

When participants were asked what they enjoyed about their work, the most common response was the money (46%), followed by meeting people (35%). Approximately one-fifth (21%) reported that there was nothing enjoyable about their work (Table 6).

Table 6: Enjoyable aspects of sex work

Variable	N=72
% Money	46
% Meeting people	35
% Nothing	21
% Drugs associated with working	7
% Flexibility	6
% Dominant role/being in control	6
% Sex	4
% Providing pleasure for clients	3

3.2.4 Work-related stress and violence

Two-thirds of the sample reported that they found sex work very stressful, and half of the sample stated that clients were the reason for this stress (Table 7).

The overwhelming majority of women (85%) reported ever having experienced violence while working (Table 7). The most common incidents reported were physical assault (65%), and rape with a weapon (40%) and without a weapon (33%). Weapons included

knives, iron bars and guns, and a few of the participants also reported being tortured. Nearly two-thirds (65%) of the sample reported that the perpetrators of these incidents were clients.

Table 7: Work-related stress and violence

Variable	N=72
% Find sex work stressful	
Very stressful	66
Not at all	17
A little stressful	17
% Aspect that is stressful	
Clients	50
Violence	11
Lack of work	11
Self esteem issues	11
Long hours	10
Lack of police assistance	3
Fear of arrest	3
Issues with other sex workers	3
% Ever experienced violence while working	85
% Ever reported these incidents to police	35
% Types of violence	
Physical assault	65
Rape at gun/knife point	40
Rape without a weapon	33
Robbery	29
Attempted rape	21
Threatened/attacked with a weapon	17
Abduction	13
Stalking	6
Objects thrown from cars	6
% Perpetrators of violence	
Client	65
Potential client	18
Another worker	6
Police	6

Despite 85% of women reporting that they had experienced violence at work, only 35% had reported any of these incidents to the police. One-quarter of the sample had not reported these incidents due to a perception that the police were not concerned or would not take the women seriously, 7% had not reported for fear of retribution for their

involvement in sex work, 6% feared retribution from the offender and 4% had not reported incidents due to a lack of evidence.

3.2.5 Condom use and penetrative sex

The majority (83%) of participants reported using condoms every time they have penetrative sex with their clients (Table 8). Just over half (60%) of the participants reported either not having sex with their regular partner or not having a regular partner, while one-third reported never using condoms with their regular partner.

Table 8: Condom use for penetrative sex in past month

Variable	N=72
% Frequency of condom use with clients	
Don't have penetrative sex	3
Every time	83
Often	13
Never	1
% Frequency of condom use with regular partner	
N/a or don't have a regular partner	60
Every time	6
Never	33
% Frequency of condom use with casual partner	
N/a or don't have a casual partner	89
Every time	6
Never	3

The vast majority (82%) of participants reported that clients offered them extra money for sex without a condom, and over half (58%) of the sample reported refusing to see clients when they were offered more money for sex without a condom. Just under one-fifth (14%) reported accepting the money and providing sex without a condom, and reasons provided included "depends on whether I am hanging out", "depends on how

desperate I am for the money", "depends if they're a regular" and "sometimes after looking at them" (meaning inspecting the client's penis).

3.2.6 Condom use and oral sex

Five percent of the sample had not engaged in oral sex in the month preceding interview, while 57% reported using a condom every time they engaged in oral sex with clients (Table 9). Over half (60%) of participants reported not having a regular partner or not engaging in oral sex with their regular partner, while 32% reported never using condoms when engaging in oral sex with their partner.

Table 9: Condom use for oral sex in past month

Variable	N=72
% Frequency of condom use with clients	
Don't have oral sex	5
Every time	57
Often	23
Sometimes	6
Rarely	3
Never	6
% Frequency of condom use with regular partner	
Haven't engaged in oral sex	6
N/a or don't have a regular partner	60
Every time	0
Often	0
Sometimes	0
Rarely	1
Never	32
% Frequency of condom use with casual partner	
Haven't engaged in oral sex	6
N/a or don't have a casual partner	86
Every time	4
Often	0
Sometimes	0
Rarely	0
Never	4

Approximately three-quarters (73%) of participants reported that clients offered them extra money for oral sex without a condom, and just under half (43%) of the sample reported refusing to see clients under these circumstances. Approximately one-third

(31%) accepted the money and did the job, and reasons provided generally revolved around whether the client was a 'regular', or visual checks to see if their penis was free from visible signs of infection.

3.2.7 Sexually transmitted infections

Over half of the sample (63%) reported being screened for STIs every two to six months, and 13% reported having had an STI in the preceding 12 months. Chlamydia was the most commonly reported STI (6%) (Table 10).

Table 10: Sexually transmitted infections

Variable	N=72
% frequency of screening for STIs	
Never	3
Monthly	7
Every six months or less (but less frequent than monthly)	63
Annually or less (but less frequent than six monthly)	21
Less frequent than annually	4
% Had a sexually transmitted infection in past 12 months	13
% Chlamydia	6

3.2.8 General issues of concern for street-based sex workers

When asked what improvements could be made to benefit sex workers, almost one-third of the sample (30%) reported the provision of a safe working environment, such as safe houses, as an important initiative. Some participants also thought improving the operation of existing safe houses was important, with suggestions of cleaner rooms, reduced prices and increased operating hours. Fifteen percent of the sample reported the need for increased welfare support in the form of housing assistance and basic needs such as clothing and food for sex workers, while smaller proportions mentioned greater understanding among health professionals and the broader community about sex

workers and their needs (11%), and improved relationships with the police (10%) as important areas of concern. Some of the women also wanted to see the nature of outreach services extended to include counselling support and referral information.

3.3 Drug use

3.3.1 Drug use history and injecting drug use

All participants reported having ever used drugs (including alcohol), and 15 was the mean age of first drug use (SD 5.5, range 6 to 38) (Table 11). Cannabis was reported as the first drug used by the largest proportion of the sample (33%), followed by alcohol (29%), and heroin (21%).

The majority (94%) of the sample had ever injected any drug, and the median age of first injecting was 18 (SD 6.6, range 10 to 40). Approximately one-quarter (23%) of the sample reported first injecting before the age of 16.

Table 11: Drug use history

Variable	N=72
% First drug used	
Cannabis	33
Alcohol	29
Heroin	21
Methamphetamine powder (speed)	12
Benzodiazepines	3
Cocaine	2
Mean age in years of first drug use	15
% Ever injected any drug	94
Median age in years first injecting drug use	18
% Ever injected*	
Heroin	94
Methamphetamine powder (speed)	83
Cocaine	75
Methadone	47
Base methamphetamine	46
Crystal methamphetamine (ice)	44
Morphine	28
Benzodiazepines	21
Ecstasy	8
Other opiates (including pethidine/codeine)	6
LSD	3

*More than one response possible.

3.3.2 Current drug use and injecting patterns

Ninety two percent of the sample reported using heroin in the preceding 12 months, and 83% had injected heroin in the past month on a median of 30 days (Table 12). Just under half of the sample (43%) reported daily heroin injection in the preceding month.

Three-quarters (75%) of the sample reported using methadone in the preceding 12 months. Just over half (58%) of the sample reported using benzodiazepines in the preceding 12 months. There were no reports of recent benzodiazepine injection.

Approximately half (53%) of the sample reported using cocaine in the preceding 12 months, and 42% had injected cocaine in the past month on a median of 17.5 days. Thirteen percent of the sample reported daily cocaine injection in the past month.

Half (50%) of the sample reported methamphetamine powder (speed) use in the preceding 12 months, and 39% had injected speed in the past month on a median of 6.5 days. Three percent of the sample reported daily speed injection in the past month.

Just under half (40%) of the sample reported using ice in the preceding 12 months, and 22% had injected ice in the past month on a median of 3.5 days. One participant reported daily ice injection in the past month.

Approximately one-third (32%) of the sample reported using base in the preceding 12 months, and one-quarter (25%) reported injecting base in the past month on a median of 4 days. One participant reported daily base injection in the past month.

Approximately one-fifth (21%) of the sample reported morphine use in the past 12 months, and 14% reported morphine injection in the past month on a median of 3 days. There were no reports of daily morphine injection in the past month.

Fourteen percent of the sample reported other opiate use (including pethidine and codeine) in the preceding 12 months.

Nearly two-thirds (64%) of the sample reported alcohol use in the preceding 12 months, and 56% reported alcohol use in the past month on a median of 4 days. Six percent of the sample reported daily alcohol use in the past month.

Just over two-thirds (69%) of the sample reported cannabis use in the preceding 12 months, and 63% reported cannabis use in the past month on a median of 20 days. Approximately one-quarter (26%) of the sample reported daily cannabis use in the past month.

Heroin was the most popular drug of choice (57%) followed by cocaine (21%), cannabis (8%), methamphetamine powder (speed) (6%), and base methamphetamine (3%). Crystal methamphetamine (ice), alcohol, methadone and morphine were each nominated by 1% of the sample as their drug of choice (data not shown).

Table 12: Recent drug use patterns

Drug type	% Used in past 12 months (N=72)	% Injected in last month (N=72)	Median days injected last month	% Injected in last week (N=72)	Median days injected last week	% Daily injection in last month (N=72)
Heroin	92	83	30	74	7	43
Methadone	75	**DNC***	**DNC**	**DNC**	**DNC**	**DNC**
Benzodiazepines	58	0	0	0	0	0
Cocaine	53	42	17.5	36	6	13
Speed	50	39	6.5	33	2	3
Ice	40	22	3.5	17	1	1
Base	32	25	4	18	1	1
Morphine	21	14	3	8	2.5	0
Other opiates	14	**DNC**	**DNC**	**DNC**	**DNC**	**DNC**
		% Used in last month	**Median days use in last month**	**% Used in last week**	**Median days use in last week**	**% Daily use in last month**
Alcohol	64	56	4	42	2	6
Cannabis	69	63	20	53	7	26

***Data not collected**

3.3.3 Substance dependence

The vast majority of the sample was heroin dependent according to the Severity of Dependence Scale (SDS) (Table 13), and approximately one-third were cocaine (36%) and cannabis (32%) dependent. Smaller proportions reported dependence on other drugs (Table 13).

Table 13: Substance dependence according to the Severity of Dependence Scale

Drug type	% of sample dependent	% Conditional prevalence of dependence *
Heroin	82	89
Cocaine	36	68
Cannabis	32	46
Benzodiazepines	26	45
Methamphetamine	21	39
Alcohol	13	20

*Conditional prevalence refers to the percentage of those who reported using the drug in the preceding 12 months who meet criteria for dependence.

Cocaine dependence has been shown to influence injecting risk behaviours and sexual behaviours (Tyndall et al., 2003, Hudgins et al., 1995), and Table 14 compares those who are cocaine dependent and those who are not on a range of related variables. Those who were cocaine dependent were 4.6 times more likely to have shared injecting equipment in the past month (CI 95% 1.6 to 13.7) than those who were not. They were also less likely to use condoms when having penetrative sex with clients (OR .20, CI 95% .04 to .81). There were no differences between those who were cocaine dependent and those who weren't in age of initiation of injecting drug use or proportions reporting condom use when engaging in oral sex with clients.

Table 14: Correlates of cocaine dependence

Variable	Cocaine dependent (N=26)	Not cocaine dependent (N=46)
Injecting drug use & risk behaviours		
Median age in years first injecting drug use	16	19
Shared injecting equipment in the past month	56**	21
Sex risk behaviours		
% Always use condoms when have sex with clients	72*	93
% Always use condoms during oral sex with clients	58	62

* p < .05 **p < .01

3.3.4 Drug treatment

The majority (87%) of the sample had ever sought treatment for drug use, 76% had been in some form of treatment in the past six months, and 61% were in drug treatment at the time of interview (Table 15). Methadone was the main type of current treatment (50%). The median age at first treatment was 23 years (range 12 to 57 years), with 59% of this group reporting they were under 25 when they first sought drug treatment. Just under half (40%) of the sample (44% of those who had ever sought treatment for drug use) reported completing a course of drug treatment.

When asked how drug treatment services could change to encourage attendance or treatment completion, 12% thought they - rather than the services - needed to change, while smaller proportions wanted more support through counselling and caseworkers (8%), detoxification programs that are medicated (8%), increased flexibility regarding the rules of treatment (6%), and easier access to treatment places rather than having to wait (5%).

Table 15: Drug treatment history and current treatment status

	N=72
% Ever sought drug treatment	87
% Treatment in last 6 months	76
% Currently in drug treatment	61
Main treatment type	
% Methadone	50
% Buprenorphine	10
Treatment types in last 6 months*	
% Methadone	63
% Drug counselling	19
% Detoxification	14
% No treatment	11
Median age (years) first sought treatment	23
% Completed treatment	40
% Reasons for non-completion of treatment	
Too difficult to maintain	19
Started using again	14
Not ready to stop	4
Barred from treatment centre	4
Kicked off	3

*Percentages add to more than 100 as more than one response is possible.

3.4 Sex work and drug use

Just over one-quarter (26%) of the sample reported starting sex work prior to injecting drug use (with reports ranging from 1 to 20 years of sex work preceding injecting drug use), 17% commenced both injecting drug use and sex work within the same year and 53% reported first injecting drugs before commencing sex work (ranging from 1 to 33 years of injecting drug use preceding sex work). One-quarter (25%) of the sample reported commencing sex work within 3 years of injecting drug use initiation. The

majority (71%) of the sample reported that their drug use had increased since they started sex work.

When asked about the relationship between drug use and their involvement in the sex industry, just over half (53%) of the women reported that they used drugs to facilitate their sex work. The mechanism of facilitation was generally described as 'numbing' so that the women 'did not have to think' about what they were doing, and they didn't 'have to feel' while working. Just over half (52%) of the women reported engaging in sex work to pay for drugs, with 7% reporting that drugs were the reason they work. Eighteen percent of the sample reported the relationship as being reciprocal (i.e. they used drugs to facilitate sex work and worked to facilitate drug use). As one participant explained:

> *"It's a partnership. First you work to use, then you end up using to work. One feeds the other. It's the ever devouring beast".*

3.5 Injection-related risk behaviour

3.5.1 Needle risk behaviour

Among those participants who were injecting drug users (n=66), 7% reported having used a needle after someone else had used it in the past month (Table 16). Approximately one-fifth (22%) of those who were injecting drug users reported lending their needle to others after they had used it. Approximately two-thirds (65%) of the injecting drug users in the sample reported sharing other injecting equipment in the past month.

Table 16: Self reported needle risk behaviour in the past month among sex workers who were injecting drug users

Variable	N=66 (IDU)
% Borrowed needles in past month	7
% Reporting one person had used the needle before them	7
% Lent needles to others in past month	22
% Shared other injecting equipment*	65
Spoons	29
Water	24
Filters	19
Tourniquet	9

*Percentages add to more than 100 as more than one response was possible.

3.5.2 Blood-borne viral infections

The majority (97%) of the sample reported ever having been tested for HCV, and almost two thirds (61%) said they had tested positive for HCV (Table 17). Ninety seven percent also reported ever being tested for HIV; there were no reports of HIV positive results.

Table 17: Prevalence of Hep C and HIV

Variable	N=72
% Tested for hepatitis C	97
Within the last year	78
More than a year ago	19
% Result of Hepatitis C test	
Tested positive for Hep C	61
Tested negative for Hep C	35
Never tested	3
Don't know	1
% Tested for HIV	97
Within the last year	85
More than a year ago	12
% Result of HIV test	
Tested positive for HIV	0
Tested negative for HIV	96
Never tested	3
Don't know	1

3.6 Unwanted sexual activity

3.6.1 Child sexual abuse

Three-quarters (75%) of the sample reported experiencing some form of sexual abuse before the age of 16, and the median age of first occurrence was 7 years (range 1 to 15 years) (Table 18). Approximately one-quarter (26%) of the sample reported that the first incident occurred before the age of 6.

Table 18: Child sexual abuse before the age of 16

Variable	N=72
% Ever experienced child sexual abuse	75
Median age in years of first experience	7
% Reporting first incident occurring before age 6	26
Mean age in years when most stressful event occurred	10
% Reporting most stressful incident occurring by age 10	35

Nearly two-thirds (63%) reported that someone had attempted to have vaginal sex with them, and 51% reported that someone *did* have vaginal sex with them before age 16 (Table 19). Twenty two percent reported someone attempting to have anal sex with them, and 13% reported that someone did have anal sex with them before the age of 16.

Participants were asked which event they found most stressful, with the largest proportion (17%) reporting someone having vaginal sex with them before age 16 as the most stressful event (Table 19). Among this group (N=12), the median age of first occurrence of someone having vaginal sex with them was 8.5 years (range 4 to 15 years) (data not shown). Some participants found it difficult to ascribe "the most stressful" status to these events. The mean age of the most stressful event was 10 years (SD 3.4, range 3 to 16), and just over one-third (35%) of the sample reported that the most stressful event occurred by the age of 10 years (Table 18).

Table 19: Incidents of child sexual abuse reported and incidents reported as most stressful

Unwanted sexual activity	% Reporting the incident N=72	% Reporting the incident as most stressful N=72
Touch or fondle your body or make you do that to them	72	15
Try to have vaginal sex with you	63	10
Rub their genitals against your body	61	1
Sexually arouse you	56	1
Masturbate in front of you	51	4
Had vaginal sex with you	51	17
Touch your genitals with their mouth or make you do that to them	40	7
Try to have anal sex with you	22	3
Had anal sex with you	13	0

Approximately one-third (31%) of the sample reported that a relative other than a sibling or a parent (such as grandfather and uncle) had been the perpetrator of unwanted sexual experiences, while one-quarter reported the perpetrator was a family friend (Table 20).

Table 20: Perpetrators of unwanted sexual activity before the age of 16

Perpetrator of unwanted sexual activity	% (N=72)*
Relative other than sibling or parent	31
Family friend	25
Stranger	19
Personal acquaintance	18
Boyfriend	14
Step parent	11
Natural sibling	11
Natural parent	10
Step sibling	6
Teacher	6
Priest/minister/rabbi or other clergy person	4

*Percentages do not add to 100 as more than one response was possible.

3.6.2 Unwanted sexual activity after age 16 outside of work

More than half the sample reported that someone had attempted to have sexual intercourse with them after the age of 16 by threatening physical violence (58%) and by using physical violence (58%) (Table 21). Almost two-thirds of the sample (61%) reported that someone had sexual intercourse with them after the age of 16 when they had made it clear they did not consent.

Table 21: Unwanted sexual activity after age 16 outside of work

Unwanted sexual activity	(N=72)
% Attempted sexual intercourse by the use of physical violence	58
% Attempted sexual intercourse by threatening physical violence	58
% Attempted sexual intercourse by threatening blackmail	22
% Attempted sexual intercourse by threatening to break up with you	25
Median age of first occurrence of attempted sexual intercourse	18
% Someone had sexual intercourse with you when you did not want to	61

The largest proportion (29%) of participants reported that a partner had been the perpetrator of unwanted sexual attempts/activity, followed by a stranger (28%) (Table 22).

Table 22: Perpetrators of unwanted sexual activity after age 16

Perpetrator of unwanted sexual activity	% (N=72)
Partner/spouse	29
Stranger	28
Someone you went out with	17
Someone you met at a party, club etc.	17
Friend or acquaintance	14
Family member	10
Other	7
Teacher	3
Priest/minister/rabbi or other clergy person	1

3.7 Mental health

3.7.1 Depression and suicidal ideation

Fifty four percent of the sample reported severe current depressive symptoms in accordance with the Beck Depression Inventory II. Table 23 compares those who reported current severe depressive symptoms with those who did not on a range of variables.

Those with current severe depression were 3.72 times (95% CI 1.3 to 10.3) more likely to have been homeless in the past 12 months and 4 times (95% CI 1.1 to 16.3) more likely to identify as being of A&TSI descent.

No differences were found between the groups for injecting risk behaviours or injecting drug use initiation. Those who reported current severe depression were 5.7 times (95% CI 1.7 to 19.7) more likely to be dependent on cannabis than those who did not.

Sex work history and work practices were similar among both groups.

There were no differences in proportions reporting ever having experienced violence at work; however there were three associations that were close to significance: severe depression and i) experience of child sexual abuse ii) experience of adult sexual abuse and iii) ever attempted suicide.

Table 23: Correlates of current severe depressive symptoms

Variable	Severe depressive symptoms (N=39)	No severe depressive symptoms (N=31)
Demographics		
Mean age in years	34	34
% Homeless in the past 12 months	56*	26
Median years of school education	9	10
% A&TSI	31*	10
Drug use dependence & injecting risk behaviours		
Median age in years first injecting drug use	18	18
% Drug dependent		
Heroin dependent	84	82
Cocaine dependent	43	29
Methamphetamine dependent	28	10
Benzodiazepine dependent	31	23
Alcohol dependent	15	10
Cannabis dependent	46**	13
Shared injecting equipment in the past month	38	29
Sex work & sex risk behaviours		
Median age started sex work	19	19
% Always use condoms when have sex with clients	87	86
% Always use condoms during oral sex with clients	66	53
Mental health & trauma		
% Attempted suicide	54	29
% Ever experienced violence while working	93	77
% Ever experienced child sexual abuse	85	64
% Ever experienced adult sexual abuse	72	48

*Sig at p< .05 **sig at p< .01

Ten percent of the sample scored highly on the suicidal thoughts item (item number 9) of the BDI-II and 14% endorsed high levels of hopelessness (item number 2), both of which are strong indicators of current suicidal ideation (Beck et al 1996).

Approximately three-quarters (74%) of the sample reported having ever thought about suicide, and just over one-quarter (28%) had these thoughts within the last 2 months (Table 24). Of this group (n=20), 40% (n=8) reported that these thoughts persisted for 7 days in a row, 30% (n=6) had thought of a plan on how to kill themselves, and 20% (n=4) reported having access to the means to carry out this plan, all of which are indicative of current suicidal risk (data not shown). Interviewers sought further information from these participants about current suicidal ideation at the end of the interview, and they were either directly put in touch with a mental health professional, or were already seeing one.

Just under half (42%) of the sample reported ever having tried to kill themself, and the median number of attempts was 3 (range 1 to 12). The median age at which participants reported first trying to commit suicide was 16 (range 6 to 28), and almost one-quarter (24%) of the sample (70% of those who had ever attempted suicide) had attempted suicide by the age of 18. Just under half (46%) of the sample reported overdosing on heroin, benzodiazepines, other opiates, alcohol or other drugs (Table 24).

Table 24: Suicide attempts, methods used and circumstances surrounding these attempts

Variable	N=72
% Had thoughts about suicide	74
% Had thoughts within the past 2 months	28
% Ever attempted suicide	42
Median age in years of first attempt	16
Median number of suicide attempts	3
% Attempted suicide by age 18	24
% Methods used	
Overdose on benzodiazepines/heroin/alcohol/other opiates	46
Slashed wrists	22
Hanging	11
Running in front of a car	6
Jumping	3
Gassing	1
"When you were trying to kill yourself did you . . . . ."	
% Want to die	28
% Want to stop pain frustration and anger	14
% Want to stop pain, & didn't care if I died	4
% Didn't know what else to do	4
Likelihood of death due to most serious attempt	
% Not at all	4
% Somewhat likely	1
% Likely	10
% Very likely	26
Suicide attempt while:	
% Feeling depressed	40
% After alcohol	14
% After drug use	21

3.7.2 Borderline Personality Disorder

Nearly half the sample screened positively for a diagnosis of Borderline Personality Disorder (BPD), and 50% screened positively for Impulsive Personality Disorder. Table 25 compares those who screened positively for BPD with those who did not on a range of variables. There were no demographic differences between those who screened positively for BPD and those who did not.

Those who screened positively for BPD were more likely to have initiated injecting drug use at an earlier age, 3.5 times (95% CI 1.2 to 10.9) more likely to be dependent on benzodiazepines and 4.3 times (95% CI 1.5 to 12.5) more likely to be dependent on cannabis. They were also 2.9 times (95% CI 1.1 to 8.5) more likely to have shared injecting equipment in the past month than those who did not screen positively for BPD.

There were no differences between those who screened positively for BPD and those who did not in age of sex work initiation, or proportions reporting condom use at all times during penetrative sex with their clients. Differences in proportions reporting condom use at all times during oral sex with clients were close to significance, with a smaller proportion of those screening positively for BPD reporting condom use at all times.

Those who screened positively for BPD were 8 times (95% CI 2.7 to 25.3) more likely to report severe depressive symptoms than those who did not, and 3 times (95% CI 1.1 to 8.6) more likely to have experienced adult sexual assault. Close to significance was the proportion of those screening positively for BPD who had ever attempted suicide (55%) compared with those who did not (33%) ($p = .07$).

Table 25: Correlates of screening positively for Borderline Personality Disorder

Variable	Borderline (N=33)	Not borderline (N=39)
Demographics		
Mean age in years	32	35
% Homeless in the past 12 months	54	36
Median years of school education	9	9
A&TSI status	18	26
Drug use dependence & injecting risk behaviours		
Median age in years first injecting drug use	17*	20
% Drug dependent		
Heroin dependent	88	77
Cocaine dependent	42	31
Methamphetamine dependent	21	21
Benzodiazepine dependent	39*	15
Alcohol dependent	18	7
Cannabis dependent	49*	18
Shared injecting equipment in the past month	47*	23
Sex work & sex risk behaviours		
Median age started sex work	18	21
% Always use condoms when have sex with clients	85	86
% Always use condoms during oral sex with clients	48	70
Mental health & trauma		
% Severe depressive symptoms	81**	34
% Attempted suicide	55	33
% Ever experienced violence while working	88	82
% Ever experienced child sexual abuse	85	67
% Ever experienced adult sexual assault	76*	50

*p< .05 **P < .01

3.7.3 Posttraumatic stress disorder

All but one of the participants (99% of the sample) reported having experienced at least one traumatic event in their lifetime, with a large proportion (93%) reporting multiple traumas. Participants reported experiencing a median of 6 traumatic events (range 1 to 9) in their lifetime, with more than half (53%) the sample reporting that they had experienced 6 or more traumatic events. The youngest reported median age of first occurrence of any traumatic life event was reported for child neglect (5 years of age), followed by child physical abuse (6 years of age) and child sexual abuse (7 years of age) (Table 26).

The majority of the sample reported ever having been raped (81%) and physically assaulted (81%), while three-quarters (75%) of the sample reported ever experiencing child sexual abuse, or had witnessed someone being badly injured or killed (71%). Just over two-thirds (68%) reported being threatened with a weapon or held captive, and approximately half reported child physical abuse (54%) and being involved in a life threatening accident (51%). The largest proportions reported rape (19%) and being threatened with a weapon or being held captive (19%) as the most stressful of the traumatic events they had ever experienced (Table 26).

Table 26: Prevalence of exposure to traumatic events and age of onset

Trauma	% (N=72)	Median age (yrs) at 1st occurrence	% Most stressful event*
Rape	81	14	19
Physical assault	81	16.5	12
Child sexual abuse	75	7	13
Witness serious injury or death	71	17	15
Threatened with a weapon/held captive	68	19	19
Child physical abuse	54	6	12
Life threatening accident	51	16	4
Child neglect	38	5	4
Natural disaster	26	14	1

* Among those who had experienced a stressful event

Just under half (47%) of the sample met DSM-IV (TR) criteria for a lifetime diagnosis of posttraumatic stress disorder (PTSD).

For the majority of those participants who developed PTSD (79%), their symptoms began immediately after the traumatic event or within days of the event occurring. Only 6% of those with PTSD had delayed onset (i.e. symptoms developed 6 months post-trauma). The median age of onset of the most stressful traumatic event was 14 years (range 3 to 56) (Table 27).

For 91% of those with PTSD, their symptoms were chronic in duration (i.e. they lasted for 3 months or longer), while 82% reported that their symptoms lasted for one year or more. The median duration of PTSD symptomatology was 2 years (range 1.5 months to 33 years). Among those with PTSD, a median of 17 years (range 1 to 52) had passed since the most stressful traumatic event occurred. Despite this, 62% had experienced symptoms related to that event within the past 12 months (Table 27).

Approximately three-quarters (74%) of those participants who developed PTSD said they had spoken to a health professional about the associated symptoms (Table 27).

Table 27: Onset, duration and recency of symptomatology among those with PTSD

Variable	N=34
% Onset of symptoms	
Immediately after traumatic event	23
Within days of traumatic event	56
Weeks after traumatic event	9
Months after traumatic event	6
Years after traumatic event	6
Median age in years at time of most stressful event	14
% Duration of symptoms	
Less than 3 months	6
3 months or more but less than 1 year	9
1 year or more	82
Median duration of symptoms (in years)	2
Median years passed since most stressful event	17
% Experienced symptoms in past 12 months	62
% Spoken to a health professional	74

Approximately one-third (31%) of the sample reported experiencing current PTSD symptoms (i.e. within the preceding 12 months). Table 28 sets out a comparison of those women who reported current PTSD symptoms with those who did not on a range of variables. Those reporting current PTSD were nearly 4 times (OR 3.98, 95% CI 1.2 to 13.5) more likely to have ever experienced adult sexual assault than those who did not report current symptoms (82% vs. 53% respectively), and they had also experienced a significantly greater number of traumas (median of 7 traumas) than those without current PTSD (median of 5 traumas) ($t=2.859$, $df=70$, $p < 0.01$). In addition, women reporting current PTSD were nearly 4 times more likely to report being seriously neglected as a

child (59%) than women without current PTSD (28%) (OR 3.7, 95% CI 1.2-10.6). (Table 28). There were no differences in proportions reporting child sexual abuse (82% among those with current PTSD and 72% among those without current PTSD), or physical assault at work (77% each). Likewise, there was no difference between the groups in median age of first sexual assault (13 for those with current PTSD, and 14 for those without current PTSD). The association between current PTSD and severe depressive symptoms was close to significance, with women reporting current PTSD more likely to report being depressed at the time of interview (p=.05). Variables that were significant at the bivariate level were then entered into a multiple logistic regression model. The only variable that remained significant was the number of traumas experienced (OR 1.49, CI 95% 1.11 to 2.00). Women reporting current PTSD were more likely to have experienced a greater number of traumas than those without current PTSD.

Table 28: Correlates of current PTSD symptoms

Variable	Current PTSD (N=22)	No current PTSD (N=50)
Demographics		
Mean age in years	34	33
% Homeless in the past 12 months	50	42
Median years of school education	9	9
A&TSI status	27	20
Drug use dependence & injecting risk behaviours		
Median age in years first injecting drug use	17	18
% Drug dependent		
Heroin dependent	73	86
Cocaine dependent	32	38
Cannabis dependent	36	30
Shared injecting equipment in the past month	20	40
Sex work & sex risk behaviours		
Median age started sex work	20	18
% Always use condoms when have sex with clients	91	83
% Always use condoms during oral sex with clients	62	60
Mental health & trauma		
Median number of traumas experienced	7**	5
% Severe depressive symptoms	73+	48
% Attempted suicide	50	40
% Experienced physical assault while working	77	77
% Ever experienced child sexual abuse	82	72
% Ever experienced child neglect	59*	28
% Ever experienced adult sexual assault	82*	53
Median age of first sexual assault	13	14

** $p < .01$ * $p < .05$ +close to significance $p=.05$

3.8 Access to mental health services

Approximately one-quarter (26%) of the sample had ever been admitted to a psychiatric hospital. Among those who had been admitted, the most common reason for admission was depression (57%) followed by anxiety (21%). Approximately one-fifth (19%) of the sample reported currently taking psychiatric medication, and just under half (40%) of the sample reported speaking with a health professional about a mental health problem other than their drug use in the past 6 months. Among those who had consulted a mental health professional, depression (79%) was the most common reason for this consultation (Table 29).

Table 29: Mental health treatment access

Variable	N=72
% Ever admitted to psychiatric hospital	26
% Reason admitted for mental health problem*	
Depression	57
Anxiety	21
Schizophrenia	16
Drug-induced psychosis	16
Suicide attempt	10
Personality disorder (not antisocial)	10
PTSD	10
% Currently on psychiatric medication	19
% Spoken to health professional about mental health problem in past 6 months	40
% Health professionals consulted*	
Counsellor	41
General practitioner	31
Psychologist	31
Psychiatrist	21
% Mental health problem consulted health professional about*	
Depression	79
Anxiety	31

* Among those who had been admitted or had consulted a mental health professional

When asked how mental health services could change to encourage attendance, 16% felt that they didn't know enough about the services available to comment, and 14% felt they didn't need to change anything. Smaller proportions reported issues with trust and disclosing personal details to a therapist (11%), the need for increased accessibility to services (7%), that therapists did not understand them (5%) and the stigma attached with attending mental health services (4%).

3.9 Crime and contact with the police

3.9.1 Criminal activity, prison and juvenile detention history

Just under half (49%) of the sample reported engaging in criminal activity in the month prior to the interview. The most commonly reported offence types were dealing (31%) and property crime (31%). Just over half (53%) of the sample had been arrested in the preceding 12 months, and the most common grounds for arrest were property crime (18%), possession and/or use of drugs (17%), and soliciting in a residential area (11%) (Table 30).

Over half the sample (56%) reported ever having been in prison, and 14% had been in prison in the preceding 12 months. Just over one-quarter (28%) of the women reported being placed in a juvenile detention centre for the first time at a median age of 14 years of age (range 11 to 17) (Table 30).

Table 30: Self-reported criminal activity, prison and juvenile detention history

Variable	N=72
% Criminal activity in past month:	
Dealing	31
Property crime	31
Fraud	4
Violent crime	1
Any crime	49
% Arrested in past 12 months	53
% Offence arrested for in past 12 months	
Property crime	18
Possession and/or use of drugs	17
Soliciting in a residential area	11
Driving offence	8
Violent crime	4
Dealing	3
Driving under the influence of alcohol	1
% Ever in prison	56
% In prison in past 12 months	14
% Ever placed in juvenile detention	28
Median age first placed in juvenile detention	14

3.9.2 Experiences with the police

When asked what their worst experience had been with the police, 17% responded that they had not had a bad experience, with one participant stating, *"They have been really good to us."* Thirteen percent reported that they had been harassed by police (including excessive numbers of searches in one night) and 13% reported that the police had treated them poorly. Incidents included verbal abuse, and being asked to remove clothing for a strip search in the middle of the street:

> *"When I had drugs on me, they asked me to strip on the street. I was embarrassed & scared."*

"They were harassing me, they pulled me over, went through all my stuff, and the questions they asked me made me feel unworthy."

Thirteen percent reported being made to feel as if they deserved the sexual assaults they were reporting and that the police did not take them seriously:

"Their attitude is that we put ourselves at risk so we deserve what happens & they won't listen to us."

"They think because you're a sex worker it's OK that you get raped."

"They're not interested. Because I'm a sex worker they don't take me seriously."

Thirteen percent reported being physically assaulted by police in the process of being arrested, and smaller proportions reported being sexually assaulted by police (10%) and that the police do not assist them when they are in need (8%):

"Someone came at me with a knife. The police just came down & told me I'd handled it well. They do nothing."

"They don't come when you need them. By the time they get there it's all over & done with."

When asked about their *best* experience with police, 42% of participants said they had not had one, and this included police 'leaving us alone'. Fifteen percent of the women reported that the police had assisted them on occasion:

"They've helped me out when I've needed them."

"One time when I was sick they drove me to the hospital."

Fifteen reported that the police had treated them decently and respectfully. Thirteen percent reported that the police had been helpful after the women had been assaulted, and smaller proportions reported that the police had dropped charges against them when they could have gone to jail (4%), that police provided them with safety warnings (4%), and that police were genuinely concerned for their welfare (3%):

"They've come and told me 'this car is driving around, be careful'."

"They seem to be more concerned about our welfare. They do the best that they can and always take time to say hello and see if we're alright."

" (suburb name) police are fantastic. They go out of their way for us and they'll respond quickly if needed."

Table 31: Reports of best and worst experiences with the police

Variable	N=72
% Worst experience with the police:	
None	17
Police harassment	13
Poor treatment	13
Assault reports not taken seriously	13
Physically assaulted during arrest	13
Sexual assault	10
Lack of police assistance	8
% Best experience with the police:	
None	42
Police assistance	15
Respectful treatment	15
Helpful after assault	13
Charges dropped	4
Concerned for welfare	4
Safety warnings	3

3.10 Access to information

Participants most commonly learnt about safe sex and drug use from friends (21%), followed by the Kirketon Road Centre (KRC) (17%) and the Sex Workers Outreach Project (SWOP) (17%). Blood-borne virus (e.g. HCV and HIV) information was most often sourced from KRC and their outreach services (19%), followed by SWOP (15%), general medical practice (15%), and friends (15%). Just under half (46%) of the sample sourced information on legal advice or support from legal aid or other free legal services,

17% sourced this information from SWOP, and 15% from KRC. Information about the sex industry was most commonly sourced from SWOP (46%) followed by KRC (28%), and other NSP's (11%) (Table 32).

Table 32: Sources of information

Variable	N=72
% Access information on safe sex & drug use from:	
Outreach/NSP	45
Friends	21
School	14
Family	8
Reading material	8
Media	6
% Access information on blood-borne viral infections from:	
Outreach/NSP	41
Medical practice/doctor	15
Friends	15
Media	7
Reading material	7
Jail	4
% Access information on legal advice and support from:	
Legal aid or other free legal service	46
Outreach/NSP	32
Don't access information	8
Own solicitor	3
Friends	3
% Access information on the sex industry from:	
Outreach/NSP	85
Don't access information	4
Friends	4
Sexual health clinic	4
Other workers/on the street	4
Doctor	3

When participants were asked who they used for emotional support, the largest proportion (29%) reported that they did not have anyone to provide emotional support (Table 33).

Table 33: Source of emotional support

% Source	N=72
Nobody	29
Friends	26
Family	24
Partner	17
Counselling service	14
Outreach/NSP	14

4 DISCUSSION

This study examined the demographic characteristics, childhood experiences, drug use patterns and working conditions among a group of female street-based sex workers. It also documented the prevalence of a range of mental health problems and considered the comorbidity between these problems. Finally, it examined whether there was an association between depression, BPD, and PTSD and self-reported risk behaviours, and drug dependence and these risk behaviours.

4.1 Demographic characteristics

There was a high proportion of women identifying as being of A&TSI descent, and this is consistent with previous research showing that women from socially and economically disadvantaged minorities are over represented among sex workers (Roxburgh et al., 2005, Harcourt et al., 2001, Inciardi and Surratt, 2001, Jones et al., 1998). This has important implications. Agencies providing health services for sex workers may need to consider tailoring programs to the needs of individuals who identify as A&TSI, which could involve A&TSI liaison personnel as part of outreach teams and services provided on site.

Also consistent with previous research is the finding that only a small minority of women reported completing a high school education, and a high proportion reported being homeless in the past 12 months. Low levels of education may limit the potential for alternative employment opportunities among this group, and providing skills-based training for women who wish to exit the sex industry should remain a priority for agencies working with street-based sex workers. High levels of homelessness make it difficult for this group to access community resources, as well as complicating agency service provision. Therefore, the continuation of outreach services to street-based sex workers remains critical.

Only a minority of the women lived with both parents until age 16 years, with almost two-thirds leaving home before this age. Research has shown that lack of parental supervision, lack of parental interest and single parent status are potential risk factors for early drug use initiation (Gottfredson and Hirschi, 1990, Baker, 1998).

4.2 Unwanted sexual activity

The majority of the women had experienced child sexual abuse before the age of 16, and in most cases the perpetrator was someone they knew. The vast majority had also experienced sexual assault outside of work after the age of 16; however, a larger proportion of these perpetrators were strangers. These findings are consistent with previous research, with many of the studies indicating that unwanted sexual activity is associated with greater psychiatric morbidity for sex workers (El-Bassel et al., 1997) (Farley and Barkan, 1998). Previous literature has also documented an association between child sexual abuse and earlier age of injecting drug use initiation (Ompad et al., 2005).

4.3 Sex work history and working practices

Approximately one-third of the women reported initiating sex work before they were 18, and the majority reported commencing sex work to pay for drugs. The majority also reported remaining in the sex industry to pay for drugs. Just over half the women reported commencing injecting drug use before sex work, and length of involvement in the sex industry ranged from four months to 39 years. Other studies have also found that drug use precedes commencement in the sex industry for many street-based sex workers (Harcourt et al., 2001).

The majority of women had worked in various other sectors of the sex industry, and the mean age of the sample (34 years) may indicate that they have progressed from private to street-based sex work. This progression has received empirical support in the literature (Hunter et al., 2004).

Three-quarters of the women reported providing their services on the street, and approximately half reported using safe houses, which only operate in the Kings Cross area. A high proportion of women in the current sample reported providing their services in cars, which may increase the risk of work-related violence. The overwhelming majority of women reported experiencing work-related violence, most notably physical assault and rape.

These findings have implications for service provision as well as further research. There needs to be continued liaison between the police and outreach workers in the negotiation of legal and safe places for these women to work. The Kings Cross area has seen a reduction in these spaces, as the local police have targeted curb-crawling on William St. This has resulted in the women being pushed into back streets and unsafe situations as well as into residential areas to provide their services.

The issue of safe houses also needs to be addressed. Women in the current sample continued to provide services in cars, despite safe houses being available in the Kings Cross area. Further research is needed to investigate the reasons safe houses are not being utilised, as well as what changes might be required to encourage greater use of existing safe houses. This research may provide vital information for the establishment of additional safe houses outside the inner city area, as many of the women operating in these areas stated they would utilise these services if they were available.

4.4 Mental health

4.4.1 Depression and suicidal ideation

Over half of the women reported severe levels of current depressive symptoms, and this group was significantly more likely to have been homeless in the past 12 months, to identify as being of A&TSI descent, and to be cannabis dependent than those who did not report current severe depressive symptoms. This last finding is consistent with previous research that shows comorbidity of substance use and mental health disorders is common (Degenhardt and Hall, 2001, Read et al., 2004). Given the high proportion of A&TSI sex workers reporting severe depression, mental health workers who are dealing with street-based sex workers may need to design culturally appropriate programs that specifically target the mental health needs of this group. Strategies to encourage this group to access treatment are also required, as 75% of those A&TSI participants reporting severe depression in the current study had *not* spoken to a mental health professional in the past 6 months. Employing A&TSI mental health professionals in key areas would assist with these objectives.

The vast majority of the women reported having had thoughts about suicide, with just over one-quarter reporting current (within the past 2 months) suicidal ideation. Just under half had ever attempted suicide, and approximately one-quarter had attempted suicide by the age of 18. Some of the women reported attempting suicide as young as 6 years of age. This has clear implications for health professionals who have contact with "at-risk" youth, and early intervention is crucial. A thorough suicide assessment should be conducted with all young clients who present to mental health professionals with depression, and welfare and refuge workers should remain vigilant for any signs of depression and social withdrawal among these clients. Any communication of suicidal

thoughts should be treated seriously and referred to the appropriate services. Likewise, health professionals who work with street-based sex workers should also be vigilant for these risks as they are clearly an issue for this population.

4.4.2 Borderline Personality Disorder

Just under half of the sample screened positively for BPD. Those women screening positively for a diagnosis of BPD initiated injecting drug use at an earlier age, were more likely to share injecting equipment and were more likely to be benzodiazepine dependent, and cannabis dependent. They were also more likely to report severe depressive symptoms, and more likely to have ever experienced adult sexual assault than those who did not. These findings are consistent with previous research showing that the BPD diagnosis has poorer outcomes for drug dependence and risk behaviours such as sharing injecting equipment and attempted suicide. Early initiation of injecting drug use has also been associated with these outcomes.

4.4.3 Posttraumatic stress disorder

The overwhelming majority of the women had experienced multiple traumas in their lifetime, and almost one-third reported current PTSD symptoms. Those women meeting criteria for current PTSD were more likely to report a greater number of traumas, serious neglect during childhood, and adult sexual assault. This last point is particularly important, as these women continue to be exposed to the risk of sexual assault through their work, the very factor that is associated with their current PTSD symptoms. Whilst these women remain in the street-based sex industry their PTSD symptoms are unlikely to recede.

More research is required on the nature of psychological interventions for PTSD among this group that would be most effective. Much of the research on successful PTSD

intervention recommends removing clients from the potential of exposure to further trauma (Foa and Rothbaum, 1998) and establishing a safe environment before commencing therapy (Benedek et al., in Sadock, B. J. and Sadock, V. A., 2005). Given that current PTSD among these women is related to adult sexual assault (which was reported as the most prevalent and most stressful trauma), establishing a safe environment and minimising their ongoing exposure to trauma would entail leaving the sex industry, where occupationally they are at risk of sexual assault on a daily basis. This is an option that is not always practical, and may be particularly difficult for this group given that many of them reported low levels of education. Sex work was the main source of income for the vast majority of these women, suggesting that they have limited employment alternatives.

Conventional PTSD interventions may not be effective for these women, and alternative strategies may need to be employed. These might include harm reduction strategies such as teaching the women how to recognise the signs of distress, and how to minimise them. There is some evidence to suggest that simple relaxation techniques may be successful in minimising trauma-related distress among sexual assault victims (Napoli et al., 2001). Increased awareness of and access to crisis telephone lines and mental health services may also be useful. Agencies providing outreach services to this group could promote and provide mental health and referral contacts to those women wishing to seek assistance. At a more basic level, safety measures such as the provision of personal distress alarms may minimise the risk of repeated exposure to trauma.

4.5 Drug use

The median age of first injecting was 18 years, and approximately one-quarter of the women reported initiating injecting drug use before the age of 16. In a comparative study of injecting drug users who engaged in sex work and those who did not (Roxburgh et al., 2005), the authors found that the sex workers initiated drug use at a significantly younger age than the non sex workers (18 and 20 years respectively). Also consistent with previous research e.g. (Gossop et al., 1995b) is the finding of high levels of drug dependence. A large proportion of the current sample reported dependence on heroin, and substantial minorities were cocaine and cannabis dependent. Earlier age of initiation has been associated with a range of adverse outcomes later in life, with evidence suggesting that those initiating drug use at an earlier age are more likely to develop problematic substance use, engage in risky sexual behaviour, become involved in criminal activity, and complete fewer years of education. Earlier initiates to substance use are also more likely to become dependent, use for a longer time and have more drug-related problems (Grant and Dawson, 1997, Brook et al., 1999, Fergusson and Horwood, 1997). All of these associations are clearly evident in the current study.

Early initiation of injecting drug use among this group indicates the need for greater emphasis on early intervention, in order to reduce the likelihood of young people developing problematic drug use. To increase efficacy, interventions should target several groups at different stages. Considerable research and public interest has been focused upon ways in which substance use among young people may be reduced, and to encourage those who have begun at an early age to cease or moderate their use. Interventions have involved primary interventions (for example drug education in schools or general population campaigns); secondary interventions (such as targeted

programs aimed at "at-risk" children); and tertiary interventions (most often involving treatment for young persons who have developed problematic drug use, or interventions designed to reduce the initiation of injecting). Given that many of the women in this study left home before the age of 16, the continued involvement of youth services, refuges and drop-in centres in the provision of programs targeted at preventing the uptake of injecting drug use among young people - as well as education campaigns to minimise injection-related harms, and facilitation of access to drug treatment services among this group - remains a priority. Further research into the circumstances of initiation into injecting drug use among marginalised groups such as street-based sex workers and high-risk youth is also warranted, to ensure these programs remain relevant.

Cocaine use among the street-based sex workers for this study was more frequent than among the regular injecting drug users interviewed for the Illicit Drug Reporting System (IDRS). Sixty percent of IDRS respondents reported using cocaine, on average, on two days per month in the past 6 months (Black et al., in press). Heavier patterns of cocaine use among sex workers have been documented in other studies (Degenhardt et al., in press, Inciardi and Surratt, 2001), with some reporting that sex workers use cocaine (and 'crack' cocaine) to facilitate their sex work (Maher, 1997, Inciardi and Surratt, 2001, Degenhardt et al., in press). Research in Australia has also found that during a sustained shortage in the heroin supply, more IDU engaged in sex work as a consequence of substituting heroin with other, more expensive, drugs such as cocaine (Degenhardt et al., in press).

4.6 Self-reported risk behaviours

4.6.1 Injection-related risk behaviour

Very few women reported borrowing used needles, while approximately one-quarter reported lending a used needle to someone else in the past month, and approximately two-thirds reported sharing other injecting equipment. Consistent with previous research that has shown high levels of drug use as central to the decision to engage in risky injecting practices (Roxburgh et al., 2005, Gossop et al., 1995b, Australian National Council on Drugs, 2003), greater proportions of daily cocaine users (44%) in the current sample reported lending used needles to others in the past month compared to those who were not daily cocaine users (15%) (small numbers precluded significance testing). Also consistent with previous research (Hudgins et al., 1995, Tyndall et al., 2003), the women who were cocaine dependent were more likely to share injecting equipment than those who were not, and education strategies need to be targeted specifically at these higher-risk injectors.

4.6.2 Sexual risk behaviour

Fourteen percent of the women reported not always using condoms with their clients during penetrative sex, while just over one-third reported not always using condoms during oral sex with clients. Consistent with previous research (Degenhardt et al., in press), those who were cocaine dependent were less likely to use condoms during penetrative sex with clients than those who were not, and education on safe sex strategies needs to target these groups who are at increased risk of engaging in unsafe sex.

4.6.3 Summary of risk behaviours

Given the heavy patterns of cocaine use among this group and the increased potential for injection-related and sexual risk behaviours, further research is required on if, and how,

sex workers use drugs to facilitate their work, and what impact, if any, this has on the nature of the encounter (e.g. Does it limit their ability to negotiate safe sex? Does it increase their vulnerability to violence?).

4.7 Service utilisation

4.7.1 Drug Treatment

Almost two-thirds of the women reported being in drug treatment at the time of interview, indicative that drug treatment services are fairly accessible for this group. What remains an issue, however, is the need for more relevant programs for street-based sex workers, as many of the women in the current study continued heavy patterns of illicit drug use despite being engaged in treatment. The stigmatised nature of street-based sex work can serve as a barrier to drug treatment in traditional delivery models (Clements, 1996), with research reporting that sex workers are reluctant to approach treatment services for fear of being judged (Weiner, 1996). These concerns were voiced among the women interviewed in the current study, who worried about health professionals misunderstanding them and their involvement in the sex industry. Further research, identifying potential barriers for this group, is warranted in order to develop relevant programs that would encourage attendance and sustained engagement. Likewise, continued evaluative research needs to be conducted to ensure programs remain relevant for the broader IDU population. The role of outreach workers also remains crucial in promoting and providing referral information on available drug treatment programs. In a study investigating one model of outreach in New York, America, results showed that providing comprehensive drug treatment referrals as well as brief on-site counselling had a marked impact on treatment uptake and sustained retention (Nuttbrock et al., 2004). The authors found that factors affecting motivation for drug treatment among street-based sex workers were complex, and that street-based outreach services were a highly effective modality to engage this group in treatment.

Finally, drug treatment agencies and outreach workers should ensure that clients are connected with a variety of agencies (such as housing and welfare assistance) to enhance treatment retention among this group, given that many of them reported unstable living situations.

4.7.2 Mental health

While the majority of women who met criteria for a lifetime diagnosis for PTSD reported having consulted a professional about issues associated with their trauma, a substantial minority continued to experience PTSD symptoms. Likewise, despite almost half the women reporting consulting a mental health professional in the past 6 months, high proportions reported severe current depression. It is important to consider, then, whether traditional mental health care services are appropriate for this group, who have complex histories and high levels of psychiatric morbidity. Mental health professionals need to be aware of the issues that are central for this group, particularly with respect to child sexual abuse and ongoing sexual assault, which often engenders a lack of trust and difficulty with disclosure. There are also issues of stigma surrounding sex work that may prevent these women from engaging in therapy, and these may need to be addressed.

Psychological interventions for this group need to be specifically tailored and they need to be flexible, as many of these women have little stability in their lives. Public mental health services also need to be expanded, as there are few available for clients without money. Agencies providing outreach services to this group could also promote and provide mental health referral contacts to those women wishing to seek assistance. Provision of mental health services via outreach would also be a useful adjunct to existing services. Research in the U.S. (Yahne et al., 2002), trialling a brief psychological intervention for female street-based sex workers utilising motivational interviewing - a

method designed to evoke intrinsic motivation for change in health risk behaviours by resolving ambivalence (Miller and Rollnick, 2002) - found that after the intervention was conducted via outreach, the women reported large reductions in the frequency of their drug use. These techniques may be useful for targeting other mental health problems among this group, thereby reducing the associated risks.

4.7.3 Physical health

There was a high prevalence of HCV among these women with almost two-thirds reporting they had tested positive for the virus. There is a continuing need to ensure that these women have access to primary health care, and that there are no barriers to such care. Primary care should also be extended to agencies outside the inner city that provide services to street-based sex workers, which could involve the provision of general practitioner services one day per week on site. The high prevalence of HCV indicates that HCV education for this group remains a priority.

4.7.4 Access to information and emotional support

These women generally had good access to information on safe sex and drug use, blood-borne viral infections and legal support. Access was particularly good to information on the sex industry in general, highlighting the ongoing need for agencies to continue providing industry specific services. A substantial minority of the group reported having no emotional support, again highlighting the need for enhanced availability of specific mental health services as well as encouragement to attend.

4.7.5 Summary

Mental health problems are highly prevalent among this group, and the psychiatric comorbidity of depression and current PTSD is of clinical significance, as it may have an adverse impact on drug treatment outcomes. Drug treatment is unlikely to be effective if mental health issues are not addressed, which highlights the need for integrated service

provision among drug treatment and mental health agencies. The high levels of comorbidity of substance dependence and mental health problems in, and of, itself, highlights the need for integrated service provision. Physical health is also at issue for these women and the provision of primary care within services that they currently access is also crucial. Finally, assistance with welfare and access to housing should remain a priority for agencies that serve as a first point of contact for this group, as, without such stability, drug treatment programs and psychological interventions are unlikely to be effective.

4.8 Crime and contact with the police

Approximately half the women reported engaging in criminal activity in the past month, half had been arrested in the past 12 months, and just over half had ever been in prison. Arrests generally related to drug use and soliciting in a residential area. There were mixed reports regarding experiences with the police. Equal proportions reported experiences of police harassment, poor treatment, and assault reports not being taken seriously, as well as police assistance, respectful treatment, and police assistance after assaults. Despite the large majority of women reporting experiences of violence at work, very low proportions had reported these incidents to police. Reasons for not reporting were largely due to the perception that they would not be taken seriously. Continued liaison between outreach agencies and local police is crucial, to ensure that the issues that arise from encounters between police and street-based sex workers are addressed. Likewise, training of police in the relevant geographical areas, to enhance their understanding of the issues for these women, would be useful, and SWOP has already undertaken these initiatives in some areas. Finally, in order to encourage more women to report work-related violence to the police, there should be an ongoing police commitment to the provision of sex work liaison officers in the local areas where street sex work is conducted. Many of the women

reported positive experiences with liaison officers when reporting assaults, and any encouragement for these women to engage with the police is important, as it may reduce the risks they face on a regular basis.

4.9 Limitations

The findings of this study refer to street-based sex workers, who differ from sex workers employed in other sectors of the industry across several domains (Alegria et al., 1994, Minichiello et al., 2001, Harcourt et al., 2001). The work and trauma experiences these women reported are likely to be quite different than for non street-based sex workers, and this should be considered when interpreting results. Street-based sex workers in other Australian jurisdictions are also likely to differ from the current sample due to different legislation. While this limits the generalisability of findings to other sex workers in other jurisdictions, sampling street-based sex workers in the Sydney area highlights the complexities of their needs, and hopefully provides important information on strategies to enhance engagement of these women in basic treatment services.

4.10 Conclusions

Many of the female street-based sex workers interviewed for this study reported complex histories of trauma, and the majority reported experiencing work-related violence. Many of their basic needs, such as housing, were not being met and safe work practices were difficult for many to employ. Mental health problems of depression and PTSD were prevalent, and there were reports of heavy heroin and cocaine use among some of the women. Drug dependence (cocaine in particular) was associated with increasingly risky injecting and sexual behaviours, and HCV was prevalent. These findings raise several issues. Firstly, outreach services to street-based sex workers remain crucial, in order to provide links with health and welfare services. Second, that so many of the women continue to experience mental health problems, despite access to health services, suggests that current models of service provision are not sufficient to address the problems among this group. More targeted intervention programs need to be developed. Despite the legality of street-based sex work in NSW, it is an occupation surrounded by stigma, which impacts on these women reporting work-related violence. Every effort should be made to encourage them to report these incidents to the police in an effort to minimise the ongoing risks they face at work. Finally, education that targets safe sex and injecting practices among sex workers should remain a priority, given the high rate of problems encountered among this group, and the risks they face due to contact with multiple sex partners.

5 SUMMARY OF RECOMMENDATIONS

- Agencies providing health services for sex workers may need to consider tailoring programs to the needs of individuals who identify as A&TSI, which could involve A&TSI liaison personnel as part of outreach teams and mental health and drug treatment services provided on site.
- Agencies should be vigilant to the mental health issues among street-based sex workers, particularly suicide risk. They should also be aware of the potential existence of trauma histories among street-based sex workers, especially child sexual abuse.
- Expansion of available public mental health services, particularly for women who have experienced child sexual abuse.
- Further research is required on the sorts of psychological interventions for depression as well as PTSD that are likely to be effective for street-based sex workers, given their highly complex histories, psychiatric comorbidity and unstable living conditions.
- Further research into the circumstances of initiation into injecting drug use among groups such as street-based sex workers and 'at-risk' youth is needed for education about injecting drug use to remain relevant.
- Further research is required on if, and how, sex workers use drugs to facilitate their work, and what impact, if any, this has on the nature of the encounter – Does it limit their ability to negotiate safe sex? Does it increase their vulnerability to violence?
- Education strategies on minimising the risks of injecting drug use should specifically target higher-risk injectors.

- Greater integration of mental health and drug treatment service provision is required, as targeting one without the other is unlikely to succeed.
- Primary health care provision should also be located within existing services that the women currently access.
- Primary health care should be extended to agencies outside the inner city area, and could involve a general practitioner being on site one day per week.
- Ongoing outreach to street-based sex workers remains crucial in minimising the harms among this group.
- Services that are the first point of contact for street-based sex workers should ensure clients are connected with a variety of agencies (such as welfare and housing assistance). Assistance with basic needs is central for drug treatment and psychological interventions to be effective.
- Outreach agencies could provide sex workers with referral details for relevant mental health, drug treatment, and crisis services in the local area.
- Outreach services could extend current services to include mental health service via outreach, which may encourage service utilisation.
- Provision of personal distress alarms via outreach services may increase personal safety and minimise risk of repeated trauma.
- Further research, investigating reasons existing safe houses are not being utilised, may inform improvements for managing existing safe houses as well as the establishment of additional houses outside the inner city area.
- Continued liaison between agencies who work with street-based sex workers and police to promote increased awareness of issues the women are faced with, and to negotiate safe and legal spaces for the women to work.

- Continued police commitment to the provision of sex worker liaison officers in relevant areas to encourage reporting of violent incidents.
- Continued focus on education strategies targeting safe sex practices among street-based sex workers.

6 REFERENCES

Aggleton, P. (1999) *Men who sell sex,* UCL Press, London.

Alegria, M., Vera, M., Freeman, D. H., Robles, R., del C. Santos, M. and Rivera, C. L. (1994) HIV infection, risk behaviours, and depressive symptoms among Puerto Rican sex-workers, *American Journal of Public Health,* 84, 2000-2002.

American Psychiatric Association (2000) *Diagnostic and Statistical Manual of Mental Disorders Fourth Edition Text Revision,* American Psychiatric Association, Washington D.C.

Andrews, G., Hall, W., Teesson, M. and Henderson, S. (1999) *The mental health of Australians: National Survey of Mental Health and Wellbeing.* Canberra: Commonwealth Department of Health and Aged Care.

Australian National Council on Drugs (2003) *Dealing with risk: a multidisciplinary study of injecting drug use, hepatitis C and other blood-borne viruses in Australia.* ANCD research paper no. 7. Canberra: Australian National Council on Drugs.

Baker, J. (1998) *Juveniles in crime - Part 1: Participation rates and risk factors.* Sydney: NSW Bureau of Crime Statistics and Research.

Beck, A. T., Steer, R. A. and Brown, G. K. (1996) *Beck Depression Inventory Manual, 2nd Edition,* The Psychological Corporation; Harcourt Brace and Company, San Antonio.

Benedek, D. M., Ursano, R. J. and Holloway, H. C. (2005) Military and Disaster Psychiatry. In Sadock, B. J. and Sadock, V. A. (Eds) *Kaplan & Sadock's Comprehensive Textbook of Psychiatry*, Vol. II New York: Lipincott Williams & Williams, 2426-2435.

Black, E., Degenhardt L. and Stafford J. (in press) *New South Wales Drug Trends 2005: Findings from the Illicit Drug Reporting System (IDRS).* Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Bowden-James, O., Iqbal, M., Tyrer, P., Seivewright, N., Cooper, S., Judd, A. and Weaver, T. (2004) Prevalence of personality disorder in alcohol and drug services and associated comorbidity, *Addiction,* 99, 1306-1314.

Brook, J., Balka, E. B. and Whiteman, M. (1999) The risks for late adolsecence of early adolescent marijuana use, *American Journal of Public Health,* 89, 1549-1554.

Clements, T. M. (1996) Prostitution and the American Health care system: Denying access to a group of women in need, *Berkeley Women's Law Journal,* 11, 50-98.

Cohen, E., Navaline, H. and Metzger, D. (1994) High-risk behaviours for HIV: a comparison between crack-abusing and opioid-abusing African-American women, *Journal of Psychoactive Drugs,* 26, (3)**,** 233-241.

Compton, W. M., III, Cottler, L. B., Abdallah, A. B., Phelps, D. L., Spitznagel, E. L. and Horton, J. C. (2000) Substance dependence and other psychiatric disorders among drug dependent subjects: Race and gender correlates, *American Journal on Addictions,* 9, (2)**,** 113-125.

Copeland, J., Lawrinson, P., Gerber, S. and Gates, P. (in preparation) Determining a cut-off score for heroin dependence using the Severity of Dependence Scale: an ROC analysis, *Addictive Behaviors*.

Darke, S., Hall, W., Wodak, A., Heather, N. and Ward, J. (1992) Development and validation of a multi-dimensional instrument for assessing outcomes of treatment among opiate users: The Opiate Treatment Index., *British Journal of Addiction,* 87, 733-742.

Darke, S. and Ross, J. (1997) Polydrug dependence and psychiatric comorbidity among heroin injectors, *Drug & Alcohol Dependence,* 48, (2)**,** 135-41.

Darke, S., Williamson, A., Ross, J., Teesson, M. and Lynskey, M. (2004) Borderline personality disorder, antisocial personality disorder and risk-taking among heroin users: Findings from the Australian Treatment Outcome Study (ATOS), *Drug & Alcohol Dependence,* 74, 77-83.

Degenhardt, L., Day, C., Conroy, E. and Gilmour, S. (in press) Examining links between injecting cocaine use and street-based sex work in NSW, Australia, *Journal of Sex Research.*

Degenhardt, L. and Hall, W. (2001) The relationship between tobacco use, substance use disorders and mental disorders: Results from the National Survey of Mental Health and Well-Being, *Nicotine and Tobacco Research,* 3, (3)**,** 225-234.

Degenhardt, L., Hall, W. and Lynskey, M. (2001) Alcohol, tobacco and cannabis use among Australians: A comparison of their associations with other drug use and use disorders, affective and anxiety disorders, and psychosis, *Addiction,* 96, (11)**,** 1603-1614.

El-Bassel, D. S. W., Schilling, R., Irwin, K. L., Faruque, S., Gilbert, L., Von Bargen, J., Serrano, Y. and Edlin, B. R. (1997) Sex Trading and Psychological Distress among Women Recruited from the Streets of Harlem, *American Journal of Public Health,* 87, 66-70.

El-Bassel, D. S. W., Witte, S. S., Wada, T., Gilbert, L. and Wallace, J. (2001) Correlates of Partner Violence Among Female Street-Based Sex Workers: Substance Abuse, History of Childhood Abuse, and HIV Risks, *AIDS Patient Care and STDs,* 15, (1)**,** 41-51.

Farley, M. and Barkan, H. (1998) Prostitution, violence and posttraumatic stress disorder, *Women and Health,* 27, (3)**,** 37-49.

Farrell, M., Howes, S., Bebbington, P., Brugha, T., Jenkins, R., Lewis, G., Marsden, J., Taylor, C. and Meltzer, H. (2001) Nicotine, alcohol and drug dependence and psychiatric comorbidity. Results of a national household survey, *British Journal of Psychiatry,* 179, 432-7.

Fergusson, D. M. and Horwood, L. J. (1997) Early onset cannabis use and psychosocial adjustment in young adults, *Addiction,* 92, 279-296.

Fergusson, D. M., Horwood, L. J., Shannon, F. T. and Lawton, J. M. (1989) Christchurch child development study, *Pediatric and perinatal.,* 3, 302-325.

Foa, E. and Rothbaum, B. (1998) *Treating the Trauma of Rape; Cognitive-Behavioural Therapy for PTSD,* The Guildford Press, New York.

Gilchrist, G., Gruer, L. and Atkinson, J. (2005) Comparison of drug use and psychiatric morbidity between prostitute and non-prostitute female drug users in Glasgow, Scotland, *Addictive Behaviors,* 30, 1019-1023.

Gossop, M., Darke, S., Griffiths, P., Hando, J., Powis, B., Hall, W. and Strang, J. (1995a) The Severity of Dependence Scale (SDS): psychometric properties of the SDS in English and Australian samples of heroin, cocaine and amphetamine users, *Addiction,* 90, 607-614.

Gossop, M., Griffiths, P. and Strang, J. (1994) Sex differences in patterns of drug taking behaviour. A study at a London community drug team, *The British Journal of Psychiatry,* 164, 101-104.

Gossop, M., Powis, B., Griffiths, P. and Strang, J. (1995b) Female prostitutes in South London: use of heroin, cocaine and alcohol and their relationship to health risk behaviours, *Aids Care,* 7, (3)**,** 253-260.

Gottfredson, M. and Hirschi, T. (1990) *A general theory of crime,* Stanford University Press, California.

Grant, B. F. and Dawson, D. A. (1997) Age at onset of alcohol use and its association with DSMIV alcohol abuse and dependence: results from the National Longitudinal Alcohol Epidemiologic Survey, *Journal of Substance Abuse,* 9, 103-110.

Grothe, K. B., Dutton, G. R., Bodenlos, J., Ancona, M., Jones, G. N. and Brantley, P. J. (2005) Validation of the Beck Depression Inventory -II in a Low-Income African-American Sample of Medical Outpatients, *Psychological Assessment,* 17, (1)**,** 110-114.

Harcourt, C., van Beek, I., Heslop, J., McMahon, M. and Donovan, B. (2001) The health and welfare needs of female and transgender street sex workers in New South Wales, *Australian & New Zealand Journal of Public Health,* 25, (1)**,** 84-89.

Hays, L. R., Farabee, D. and Miller, W. (1998) Caffeine and nicotine use in an addicted population, *Journal of Addictive Diseases,* 17, (1)**,** 47-54.

Henningfield, J., Clayton, R. and Pollin, W. (1990) Involvement of tobacco in alcoholism and illicit drug use, *British Journal of Addiction,* 85, 279-292.

Hudgins, R., McCusker, J. and Stoddard, A. (1995) Cocaine use and risky injection and sexual behaviours, *Drug and Alcohol Dependence,* 37, 7-14.

Hunter, G., May, T. and the Drug Strategy Directorate (2004) *Solutions and Strategies: drug problems and street sex markets. Guidance for partnerships and providers.* London: Home Office Drug Strategy Directorate.

Inciardi, J. and Surratt, H. (2001) Drug Use, Street Crime, and Sex-Trading Among Cocaine-Dependent Women: Implications for Public Health and Criminal Justice Policy, *Journal of Psychoactive Drugs,* 33, (4)**,** 379-389.

Jeal, N. and Salisbury, C. (2004) A health needs assessment of street-based prostitutes: cross-sectional survey, *Journal of Public Health,* 26, (2)**,** 147-151.

Jones, D. L., Irwin, K. L., Inciardi, J., Bowser, B., Schilling, R., Word, C., Evans, P., Faruque, S., McCoy, H. and Brian, R. (1998) The High-Risk Sexual Practices of Crack-

Smoking Sex Workers Recruited from the Streets of Three American Cities, *Sexually Transmitted Diseases,* 25, (4)**,** 187-193.

Kail, B. L., Watson, D. D. and Ray, S. (1995) Needle-using practices within the sex industry, *American Journal of Drug & Alcohol Abuse,* 21, (2).

Kaye, S. and Darke, S. (2002) Determining a diagnostic cut-off on the Severity of Dependence Scale (SDS) for cocaine dependence, *Addiction,* 97, 727-731.

Kessler, R. C. (1995) Epidemiology of psychiatric comorbidity. In Tsuang, M. T., Tohen, M. and Zahner, G. E. P. (Eds) *Textbook in Psychiatric Epidemiology*, New York: Wiley and Sons, 179-197.

Kessler, R. C., Crum, R. M., Warner, L. A., Nelson, C. B., Schulenberg, J. and Anthony, J. C. (1997) Lifetime co-occurrence of DSM-III-R alcohol abuse and dependence with other psychiatric disorders in the National Comorbidity Survey, *Archives of General Psychiatry,* 54, (4)**,** 313-21.

Kuyper, L. M., Palepu, A., Kerr, T., Li, K., Miller, C. L., Spittal, P., Hogg, R. S., Montaner, J. S. G. and Wood, E. (2005) Factors associated with sex-trade involvement among female injection drug users in a Canadian setting, *Addiction Research & Theory,* 13, (2)**,** 193-199.

Lawrinson, P., Copeland, J., Gerber, S. and Gilmour, S. (in press) Determining a cut-off on the Severity of Dependence Scale (SDS) for alcohol dependence, *Alcohol and Alcoholism.*

Liebschutz, J., Savetsky, J. B., Saitz, R., Horton, N. J., Lloyd-Travaglini, C. and Samet, J. H. (2002) The relationship between sexual and physical abuse and substance abuse consequences, *Journal of Substance Abuse and Treatment,* 22, 121-128.

Logan, T. K., Leukefeld, C. and Farabee, D. (1998) Sexual and drug use behaviours among women crack users: Implications for prevention, *AIDS Education and Prevention,* 10, (4)**,** 327-340.

Maher, L. (1997) *Sexed Work: Gender Race and Resistance in a Brooklyn Drug Market,* Oxford University Press Inc., New York.

Miller, W. R. and Rollnick, S. (2002) *Motivational interviewing: preparing people for change,* The Guildford Press, New York.

Minichiello, V., Marino, R., Browne, J., Jamieson, M., Peterson, K., Reuter, B. and Robinson, K. (2001) Male Sex Workers in Three Australian Cities: Socio-Demographic and Sex Work Characteristics, *Journal of Homosexuality,* 42, (1)**,** 29-51.

Minichiello, V., Marino, R., Khan, M. and Browne, J. (2003) Alcohol and drug use in Australian male sex workers: its relationship to the safety outcome of the sex encounter, *AIDS Care,* 15, (4)**,** 549-561.

Napoli, M., Gerdes, K. and De-Souza-Rowlands, S. (2001) Treatment of Prostitution Using Integrative Therapy Techniques: A Case Study, *Journal of Contemporary Psychotherapy,* 31, (2)**,** 71-87.

Nuttbrock, L. A., Rosenblum, A., Magura, S., Vilano, C. and Wallace, J. (2004) Linking female sex workers with substance abuse treatment, *Journal of Substance Abuse Treatment,* 27, 233-239.

Ompad, D. C., Ikeda, R. M., Shah, N., Fuller, C. M., Bailey, S., Morse, E., Kerndt, P., Maslow, C., Wu, Y., Vlahov, D., Garfein, R. and Strathdee, S. A. (2005) Childhood Sexual Abuse and Age at Initiation of Injection Drug Use, *American Journal of Public Health,* 95, (4)**,** 703-709.

Perkins, R. (1991) *Working Girls: Prostitutes, their life and social control.* Canberra: Australian Institute of Criminology.

Perkins, R. and Bennet, G. (1985) *Being a prostitute.* Sydney: Allen & Unwin.

Philpott, C. R., Harcourt, C. L. and Edwards, J. M. (1989) Drug Use by Prostitutes in Sydney, *British Journal of Addiction,* 84, 499-505.

Read, J. P., Brown, P. J. and Kahler, C. W. (2004) Substance use and posttraumatic stress disorders: Symptom interplay and effects on outcome, *Addictive Behaviors,* 29, 1665-1672.

Robins, L. N. and Regier, D. A. (Eds.) (1991) *Psychiatric disorders in America: The Epidemiological Catchment Area study,* The Free Press, New York.

Roxburgh, A., Degenhardt, L. and Breen, C. (2005) Drug use and risk behaviours among injecting drug users: a comparison between sex workers and non-sex workers in Sydney, Australia, *Harm Reduction Journal,* 2, (7).

Scott, J., Minichiello, V., Marino, R., Harvey, G. P. and Jamieson, M. (2005) Understanding the new context of the male sex work industry, *Journal of Interpersonal Violence,* 20, (3)**,** 320-342.

Surratt, H., Inciardi, J., Kurtz, S. P. and Kiley, M. (2004) Sex work and drug use in a subculture of violence, *Crime and Delinquency,* 50, (1)**,** 43-59.

Swift, W., Copeland, J. and Hall, W. (1998) Choosing a diagnostic cut-off for cannabis dependence, *Addiction,* 93, (11)**,** 1681-1692.

Topp, L. and Mattick, R. (1997) Choosing a cut-off on the Severity of Dependence Scale (SDS) for amphetamine users, *Addiction,* 92, (7)**,** 839-845.

Travis, G. (1986) *Soliciting in Darlinghurst: Female, transsexual and male street prostitutes talk about their work.* Sydney: NSW Bureau of Crime Statistics and Research.

Tuan, N. A., Hien, N. T., Chi, P. K., Giang, L. T., Thang, B. D., Long, H. T., Saidel, T. and Roger, M. (2004) Intravenous Drug Use Among Street-Based Sex workers: A High-Risk Behaviour for HIV Transmission, *Sexually Transmitted Diseases,* 31, (1)**,** 15-19.

Tyler, K. A., Hoyt, D. R. and Whitbeck, L. B. (2000) The effects of early sexual abuse on later sexual victimisation among female homeless and runaway adolescents, *Journal of Interpersonal Violence,* 15, (3)**,** 235-250.

Tyndall, M. W., Currie, S., Spittal, P., Li, K., Wood, E., O'Shaughnessy, M. V. and Schecter, M. T. (2003) Intensive injection cocaine use as the primary risk factor in the Vancouver HIV-1 epidemic, *AIDS,* 17, (6)**,** 887-893.

Valera, R. J., Sawyer, R. G. and Schiraldi, G. R. (2000) Violence and posttraumatic stress disorder in a sample of inner-city street prostitutes, *American Journal of Health Studies,* 16, (3)**,** 149-155.

Vanwesenbeeck, I. (2001) Another Decade of Social Scientific Work on Sex Work: A Review of Research 1990-2000, *Annual Review of Sex Research,* 12, 242-289.

Weiner, A. (1996) Understanding the social needs of streetwalking prostitutes, *Social Work,* 41, 97-105.

Whisman, M. A., Perez, J. E. and Ramel, W. (2000) Factor structure of the Beck Depression Inventory - Second Edition (BDI-II) in a student sample, *Journal of Clinical Psychology,* 56, 545-551.

Wotton, R. (2005) Big Sister is watching you: violence against sex workers is a crime. In Dittmore, M. (Eds) *Research for Sex Work*, Network of Sex Work Projects, 11-13.

Yahne, C. E., Miller, W. R., Irvin-Vitela, L. and Tonigan, S. (2002) Magdalena Pilot Project: motivational outreach to substance abusing women street sex workers, *Journal of Substance Abuse Treatment,* 23, 49-53.