

Stephanie Taplin & Richard P. Mattick
Child Protection and Mothers in Substance
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CHILD PROTECTION AND MOTHERS IN SUBSTANCE ABUSE TREATMENT

Stephanie Taplin and Richard P. Mattick

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EXECUTIVE SUMMARY

This report presents the major findings from the *Child Protection and Mothers in Substance Abuse Treatment* study, a three-year study funded by NSW Community Services, Department of Family and Community Services, and the University of New South Wales.

Parental substance use has received particular attention as a child protection concern in recent years, but it is an area in which there has been little research and in which a number of research questions remain unanswered. Evidence has shown that parental substance misuse is associated with high rates of child maltreatment, but substance use by a parent does not necessarily mean that they are abusing or neglecting their children. Research from overseas has also found that families in which alcohol or other drug use is present are more likely to come to the attention of child protection services, more likely to be re-reported, more likely to have children removed from their care, and more likely to have them remain in out-of-home care (OOHC) for long periods of time, than are families with the same characteristics but no substance use. A small number of overseas studies have also found that, among substance-using mothers, factors other than the severity of substance use are associated with child protection involvement. The applicability of these overseas studies to the child protection system in Australia is, however, unknown.

This study provides an enhanced understanding of parenting issues and child protection involvement among women with a history of illicit drug use in Australia.

Methods

Women with at least one child aged under 16 years were recruited through nine public and private opioid treatment clinics across Sydney. One hundred and seventy-one women were interviewed between May 2009 and May 2010. Their drug treatment and child protection records were also used as a source of information where they consented.

Major findings

Just over one-third of the women were involved with child protection services at the time of interview, with one-third of their children (n = 99) in OOHC.

Women who were involved with child protection were compared with those who were not to determine the factors associated with child protection involvement. Logistic regression analysis revealed that those variables which significantly increased the likelihood of being involved with child protection (while controlling for the other variables) were: (1) having a greater number of children, (2) being on psychiatric medication, and (3) having less than daily contact with their own parents. Although women who had a more extensive substance use history were more likely to be involved with child protection (when no other factors were taken into account), this association was no longer significant in the logistic regression model.

Other findings

Consistent with previous research on this population, these women were highly disadvantaged, having little formal education (median 10 years), tending to be single (32.4% married or de facto), on government benefits (87.1%), experiencing financial problems (80.6%) and living in public housing (58.3%). The women had extensive substance use and drug and alcohol treatment

histories, again consistent with previous research. A significant number also had mental health problems (54.2% had been recently diagnosed with a psychiatric illness), had a history of criminal involvement (41.9% had prison history) and had some type of physical or sexual abuse as a child (64.5% reported this), with sexual abuse the most common (55.4%). Recent domestic violence was less common (18.0% had recently taken out an apprehended violence order).

Since starting on the New South Wales Opioid Treatment Program (OTP), the women reported improvements in a number of areas, again consistent with previous research. Reductions in substance use, criminal involvement, number of problem areas and time spent with illicit drug-using friends (along with improvements in parenting ability, financial situation and sources of support) were reported by the women since starting on the OTP. Heroin use reduced markedly, both in the number reporting any heroin use in the past month (from 88.3% to 21.6%) and in the number of times used (27.6 to 5.6 days per month). Despite these improvements, women involved with child protection stayed no longer on the OTP than women who were not.

Women generally chose to enter the OTP, and many did so for child-related reasons. Women who were currently involved with child protection services reported receiving more services through the program than did the women who were not involved, the services most commonly received being counselling, legal assistance and childcare. Women who were being treated through public programs were more likely to have a caseworker than women at private programs.

Most of the women were young when they had their first child, the median age being 21 years, much lower than the median age of first-time mothers across Australia (28 years). More than one-third (39%) were teenagers when they had their first child. Surprisingly, 38% of the women in the study started using opioids after they had had their first child.

The women mostly gave birth to two children. One in five of their children were reported to have major health or behavioural problems, and these children were much more likely to be in OOHC.

Many of the women were single (41.8% were not in a relationship) and most were either the only adult living in their household (46.8%) or lived alone (11.7%). They were more likely to spend time with family than with anyone else and particularly relied on their family for help with their children. Support from their parents was particularly important to these women.

Most lived in public housing (58.3%) and they appear to be less trusting of neighbours and feel less safe in their community than do other women, even those living in disadvantaged areas.

The majority of the 99 children in OOHC at the time of interview were in kinship or relative care, generally living with their grandparents. Younger children were more likely to be in care than were older children. Many of the children in care (42%) had been removed from their mother at birth and placed in OOHC, and this was even more likely among the younger children (73% of those under five years of age had been removed at birth). Children placed in foster care had less contact with their mother than those living with relatives and were more likely to have supervised contact visits.

Another 57 children were not living with their mother because of Family Court orders or informal arrangements for family to care for their children.

Around one-third of the women (31.7%) reported having undertaken a parenting course, with those involved with child protection (most of whom had children in care) significantly more

likely to have done so. Although half the women acknowledged that their parenting was adversely affected by their substance use, many also reported that they went to great lengths to keep their children unaware of their substance use and/or their being in pharmacological treatment.

Half the women (52.1%) said that their substance use had affected their ability to parent their children, while slightly less than half (45.5%) said that it had not. Where substance use had not affected their parenting, women reported that they had always prioritised their children's needs and only used substances when the children were being cared for by family.

Discussion

The results of this study are important for the child protection field. They show that, rather than severity of substance use being associated with mothers' involvement with the child protection system, other factors are of greater importance. Of particular interest was the finding that having greater social support, particularly from parents, significantly reduced the likelihood of being involved with the child protection system. Women made great improvements while on their treatment program, particularly in relation to reduced substance use.

In terms of policy and practice implications, this study supports the call by overseas researchers to intervene earlier with girls who have been abused themselves prior to the escalation of problems associated with abuse, such as mental health problems and substance misuse, and prior to them becoming mothers. The provision of targeted women-only services is essential for girls in such circumstances, and for most women in opioid pharmacological treatment, in order to help them deal with their mental health problems and to enhance parenting, coping skills and social supports. It is important that such services are provided if we are to reduce the high rates of intergenerational abuse, trauma and disadvantage among these women and their children.

1. INTRODUCTION

This report presents results from the study entitled *Child Protection and Mothers in Substance Abuse Treatment*. This was a three-year study that was funded under a collaborative research scheme between NSW Community Services, Department of Family and Community Services, and the University of New South Wales.

1.1 Background

In recent years, increased focus has been placed on the impact of parental substance use on the child protection system, both in Australia and elsewhere. High rates of parental substance use have been reported, and its detrimental impacts on children have been described, but the extent of the contribution of parental substance use to child abuse and neglect is unknown. Furthermore, little research has been undertaken examining the parenting practices of substance-using mothers and their relationship with child protection services.

A large body of research has found that parental substance misuse is associated with high rates of child maltreatment (e.g. Smith & Testa, 2002; Fuller & Wells, 2003; Walsh, MacMillan & Jamieson, 2003; Scannapieco & Connell-Carrick, 2007). Yet research has also found that substance use by a parent does not necessarily mean that they are abusing or neglecting their children. That is, substance use or even dependence is not, alone, sufficient reason for child protection involvement. Those substance-using parents who come to the attention of child protection services are more likely to have co-occurring problems such as social isolation, poverty, mental health issues and housing problems (Scannapieco & Connell-Carrick, 2007; Dawe et al. 2007; Tunnard, 2002; Grella, Hser & Huang, 2006).

Estimates of the prevalence of parental substance use among those who have contact with the child protection system mainly come from international research. These estimates mostly rely on retrospective case file reviews of court or child protection records and have produced figures of parental substance use that are highly variable, ranging from as low as 11% to as high as 79% (Grella, Hser & Huang 2006; Young, Boles & Otero, 2007). Conversely, three Australian studies have reported relatively similar rates of parental substance in a child protection population of around 50% (Llewellyn, McConnell & Ferronato, 2003; Delfabbro et al., 2009; Zhou & Chilvers, 2010).

Research from overseas has also found that families in which alcohol or other drug use is present are more likely to come to the attention of child protection services, more likely to be re-reported, more likely to have children removed, and more likely to have them remain in out-of-home care (OOHC) for long periods of time (Barth, Gibbons & Guo, 2006; Gregoire & Shultz, 2001; Smith, 2003; Ryan et al., 2006; Jeffreys et al., 2008).

Very few studies have examined the involvement of substance-using mothers with the child protection system. The studies that have examined the factors associated with child protection involvement amongst substance-using mothers have all found that factors other than substance use were of greater importance, predominantly mental health problems and other disadvantages (Nair et al., 1997; Grella, Hser & Huang, 2006; Gilchrist & Taylor, 2009). The applicability of these overseas studies to the child protection system in Australia is, however, unknown.

This study is the first to examine the involvement of illicit drug-using mothers with the child protection system in Australia, and to ask them about their parenting issues. We compared

mothers who were involved with the child protection system with those who were not, and discuss the clinical implications of these differences. We also provide detailed information about their interactions with both the drug treatment and child protection service sectors, their children, parenting practices and parenting issues, and the characteristics of the women themselves.

The major study hypotheses were:

- That mothers in drug treatment services who were involved with child protection services were different in terms of parenting and other characteristics associated with child maltreatment to those who were not involved.
- That entry into the Opioid Treatment Program (OTP) improves outcomes for women with children.
- That mothers in the OTP who were involved with Community Services were more likely to be retained in the OTP than those not involved.
- That the greater the number of services/supports provided to the mother, the less likely she will be involved with child protection services.

2. METHODS

2.1 Ethics approvals

Because of the sensitive nature of this research, great care was taken in planning and preparing for the ethical issues that may have arisen during the course of the study, particularly in relation to child protection reports, informed consent and confidentiality. Furthermore, because the study sample was recruited from the population of women on the NSW OTP in both the public health and private health systems, two different ethics processes were required.

Approval was obtained in September 2008 from the University of NSW Human Research Ethics Committee (HREC) to commence the study in the private health sector, various non-government organisations and the government sector. Ethics approval to undertake the study in the public health system was obtained from the Sydney South West Area Health Service (SSWAHS) HREC, one of the lead HRECs accredited under the National Ethics Application process to assess multisite applications of this nature, in December 2008. Site specific assessment (SSA) approvals for each site were obtained over subsequent months, the final approvals being obtained in February 2010.

2.2 Study design rationale

A study by Grella, Hser and Huang (2006) was used as the starting point for the design of this study. Grella, Hser and Huang (2006) used administrative data collected at admission to the California Treatment Outcome Project (CalTOP), including information on the child welfare involvement of women who had children under 18 years of age, and compared the characteristics of those currently involved with those not currently involved.

The design for this study was to recruit 200 women who were on the NSW OTP and had children under the age of 16 years. Women only were recruited into the study as they are much more likely to be caring for their children than are male substance-users (e.g. Stewart, Gossop & Trakada, 2007). Women were recruited who were mothers of at least one child under the age of 16 years. Children aged up to 16 years were chosen, as an examination of the information available on this population indicated that insufficient numbers would be available from which to recruit a sample if the age group was restricted to only younger children, and very few young people over 16 years of age are involved in the NSW child protection system (NSW Community Services, 2010).

The decision to recruit women through the NSW OTP (which includes both methadone and buprenorphine treatment), was made for a number of reasons, the major ones being as follows:

- Heroin is one of the major substances presenting among pregnant substance-users (Burns, Mattick & Cooke, 2006). It has been suggested that heroin use is associated with child neglect, although there are difficulties in isolating the effects of specific drugs types due to high rates of polydrug use (Dawe et al., 2007).
- It is estimated that around half of the NSW heroin-dependent population is in pharmacological treatment (Degenhardt & Day, 2004; Hall et al., 2000).

- Pharmacological treatment is one of the most effective treatments for heroin-dependent users (Ward, Mattick & Hall, 1998; Mattick et al., 2001; Ritter & Chalmers, 2009; Mattick et al., 2008; Mattick et al., 2009)
- Pharmacological treatment is provided in the community, allowing parents to continue to care for their children; this allowed issues related to their parenting to be examined in this study and for women who were not involved with the child protection system to be recruited.
- The requirements of pharmacological treatment programs are that participants attend most days of the week for dosing, thereby facilitating recruitment into the study.

It was decided to recruit women who were already in treatment rather than those entering the program, because there were insufficient numbers of women entering pharmacological treatment within a 12-month period from which to recruit a sufficient sample within the parameters of the study.

For logistical reasons it was decided to recruit study participants who were being dosed through public and private opioid treatment programs only, clientele at these clinics accounting for 39.2% of the NSW pharmacotherapy population in 2008 (AIHW, 2009). There were 49 of these clinics listed in 2008 (AIHW, 2009). Access to clients in clinics was more feasible than recruiting through 558 community pharmacies across NSW (AIHW, 2009) because there were greater numbers attending each clinic, because clients being dosed through clinics are required to attend within restricted dosing hours and are therefore easier to approach concerning the study, and because clinics were better able to provide support to the study by providing information and flyers to potential participants and allocating a private interviewing room onsite. In NSW, clients generally started on opioid treatment at a clinic before moving to a community pharmacy once stabilised. Recruiting through clinics allowed those generally considered less stable to be the focus of the study.

In addition, because of the cost of travelling and accommodation to areas outside of Sydney, clinics used as recruitment sites were restricted to those within the Sydney metropolitan area. The cost of interpreters was not covered within the funding for the study, so non-English-speaking mothers were also excluded.

2.3 Estimated proportion of mothers on the OTP

Estimates of the size of the eligible population were based on the available data and literature.

Of the 17,168 people in pharmacotherapy treatment (methadone and buprenorphine) in NSW as at June 2008, 5,965 (around one-third) were women (AIHW, 2009).

The proportion of women in pharmacological treatment who have children was estimated from the research undertaken in this area, most of which is from overseas. The proportion of mothers with dependent children in all drug treatment service types ranges from 47% in a UK study (Meier, Donmall & McElduff, 2004) to 69% in the USA (Grella, Hser & Huang, 2006), but in pharmacological treatments the proportion appears to be higher. McMahon, Winkel, Luthar and Rounsaville (2005) reported that, of 162 women seeking methadone maintenance treatment during a 12-month period, 81% were biological parents, while Lundgren et al. (2003) found that of more than 3,000 women who entered methadone maintenance treatment over a four-year period, 82% were parents of children under 18 years. It was therefore assumed for this study that

one-third of the clients at each clinic would be women and, conservatively, that 64.5% (the midpoint between 47% and 82%) of these women would be mothers of children under 16 years of age.

2.4 Recruitment of Opioid Treatment Program clinics

The following procedure was used for selecting the pharmacological treatment clinics to be used as recruitment sites.

From a list of all public and private OTP clinics within NSW, the larger clinics within the greater Sydney metropolitan area (those with more than 150 clients) were selected in order to facilitate recruitment and reduce travelling time and costs. The 19 clinics which fit these criteria were assigned a number and a random sequence generator was used to generate an ordered list.

The first 10 clinics in the list were chosen as potential sites. Equal numbers of public and private clinics were included in these 10 clinics and they were spread across all areas of Sydney. These 10 clinics managed a total of 2,310 clients. On the assumption that 34% of these would be women (AIHW, 2009), and that 64.5% would be mothers of children under 16 years of age, a recruitment rate of 50% would mean that a sample size of 200 should easily be achieved by visiting these 10 clinics.

In practice, because ethics approval had been first obtained for the private sector, four private clinics were approached first, all of which agreed to participate in the study. The fourth clinic generated sufficient clients between it and its partner clinic that the original fifth private clinic on the list was not approached. Three of the five public clinics approached agreed to participate and a fourth, who refused, was replaced by another eligible clinic from the list. Approvals to recruit through the fifth public clinic could not be obtained in the study timeframe. The final result was that five private and four public clinics participated as recruitment sites.

2.5 Recruitment of individual participants

Each clinic was visited consecutively, allowing interview appointments to be made within a short time of the initial contact so as to minimise loss of the sample. Staff at each clinic were provided with information about the study and the recruitment process before the researcher started recruitment. Flyers were displayed on noticeboards in the clinics, and dosing staff assisted in identifying potential eligible participants. All women who appeared to be eligible – that is, they were known by clinic staff to have children under 16 years of age or their parenting status was unknown – were approached by the researcher, who determined whether they in fact satisfied the eligibility criteria. Those who were eligible had the study briefly explained to them, and if they agreed to participate an appointment was made with them generally within the following three days. Those who refused or missed three or more scheduled appointments were not approached again and were excluded from the study. Records were maintained by the researcher during the course of recruitment as to the numbers of eligible women at each clinic, as well as acceptance and refusal rates.

Recruitment of participants took place between May 2009 and May 2010.

2.6 Consent process

When participants arrived for their appointment, they were immediately taken through the informed consent process. They were given the Participant Information Statement to read and were asked to provide written consent to Stage 1 of the study (the interview). No identifying information was collected at this stage.

At the completion of the interview, participants were then taken through the informed consent process to Stage 2, where they were asked to consent to provide the researchers with access to their child protection records (those held by NSW Community Services) and/or their drug treatment records. Only participants who had volunteered in the interview that they have received interventions through Community Services within the previous 12 months were asked to consent to these files (relating only to their children aged under 16 years) being examined and information being extracted up to 12 months after the interview. Agreement to this component required the collection of identifying information and the completion of a separate signed consent.

With the agreement of the participating OTP clinics, a \$50.00 cash payment was provided to each participant in recognition of their time and the inconvenience of participating in the study. At one clinic, this payment was reduced to \$30.00 at the request of the Area Health Service.

All interviews except one were conducted in a private clinical room within the OTP. The one exception was an interview conducted in a fenced park, to accommodate a toddler who was accompanying his mother.

2.7 Sample size and response rate

One hundred and seventy-one mothers constituted the sample for the study; 175 women had been interviewed but four were excluded after the interview as their children were older than 16 years or were not their natural children.

Clinics had been asked during the recruitment period to estimate the number of clients being dosed at their clinic overall, the number of women within this group, and the number of women who had children under the age of 16 years. The accuracy of the information on the number of women with children was variable as clinics did not always have information about the children. The number of women with children under 16 years of age interviewed as a proportion of the eligible population is given in Table 1.

Table 1: Response rate by clinic type

Clinic type	No. women with children <16 years	No. of participants	Response rate
Private (5)	184	111	60%
Public (4)	109	64	59%
Total	293	175	59%

As can be seen in this table, a slightly higher than expected response rate was achieved – an estimated rate of 59% compared to the 50% expected.

At the clinics where recruitment took place, the proportion of women among their clientele was lower than the state overall, an estimated 29.1% compared to the 34.0% expected. A lower proportion of women on the OTP than expected had children aged under 16 years, calculated at 49.0%, compared with the 64.5% estimated prior to commencing recruitment. Given the higher than expected response rate, however, a sufficient sample size ($n = 171$) was still obtained for the purpose of the analyses.

No information was collected from the eligible women who did not participate in the study, so the extent to which they differed from those who were recruited is unknown. Comparisons with the results obtained in other recent Australian studies of women in opioid pharmacological treatment have been presented throughout the results sections in this report wherever possible. The results show strong similarities between this and previous studies.

2.8 Methods of data collection

Two methods of data collection were used in the study, the major source being an interview schedule completed face to face with the participant. Face-to-face interviews rather than self-completion questionnaires were used due to the expected low levels of literacy among the target population. The other source of data was records extracted from administrative records held by the drug treatment and child protection services with which the participants were involved.

By conducting interviews with study participants, detailed information could be collected on the specific areas of interest to the researchers; this was the first time that such information had been collected from an Australian population. Use of this method of data collection was the main difference between this study and that of Grella, Hser and Huang (2006).

2.9 Interview schedule

Piloting with a small number of mothers in pharmacological treatment was undertaken prior to commencing the study, after which some minor revisions to the interview schedule were made. The interviews with the women in pharmacological treatment generally took one hour, and the women's responses were recorded on the questionnaire by the researcher. It should be noted that self-reported data have been found to be sufficiently reliable and valid to provide descriptions of current substance use and drug related problems if the confidentiality and independence of the research are assured (see Darke, 1998).

Information collected included areas that have been found previously to be risk factors for child maltreatment. Where possible, valid and reliable scales were used, along with questions that have been used in similar studies, to allow for comparisons. Open-ended questions were used in some instances to allow for more detailed responses, especially in areas that had not previously been examined.

The interview included data on the following broad areas:

- Mother's demographic information, drug use history and current use, abuse and care history, and physical and mental health problems
- Information about birth children (demographics, maltreatment and care history)
- Parenting and/or child protection interventions/services received recently.
- Opioid pharmacological treatment program information.

The Brief Child Abuse Potential Inventory (BCAP) was self-completed by study participants, except in a couple of cases where the items were read out by the researcher because of the participants' low literacy levels. The BCAP consists of 34 items which have good reliability and validity with the full Child Abuse Potential Inventory (CAPI) (Ondersma et al., 2005). The 160-item CAPI has been found to be a good predictor of physical child abuse (Milner et al., 1984; Milner, 1986) but was considered too time-consuming for this study. Copies of the CAPI were purchased for use in the study, but only the BCAP was completed.

The Kessler Psychological Distress Scale (K10) was used to measure psychological distress in the previous four weeks. The K10 was developed by Kessler and colleagues (Kessler et al., 2002) and is a 10-item self-report measure designed to screen for clinically significant psychological distress in general population samples. It has been widely used in Australia and elsewhere and has established reliability and validity across diverse settings, including with injecting drug users (Hides et al., 2007).

2.10 Administrative data

In addition to the information obtained via interview, research participants were asked to consent to both their drug treatment files and their Community Services files being examined and data being extracted. Permissions were given for access to these records for up to 12 months after the interview.

Drug treatment records data was extracted from either the agency's computerised records or paper files for each client who consented at the conclusion of interviewing at each agency. Of the study participants, 87.4% agreed to their drug treatment agency records being accessed. Information extracted from drug treatment records covered the current type of pharmacological treatment, dosage level, compliance with treatment data based on attendance and detection of illicit drug use, numbers of take-away doses, and whether there was any mention of child protection system involvement in the clinic records.

Community Services' records were accessed by the researcher, who had received permission to access the administrative database at its central office. Two-thirds (66.9%; n = 79) of participants who had ever had any contact with Community Services consented to their Community Services records being accessed. Information extracted from the administrative records included information on any child protection reports, those substantiated, the reasons (including whether substance use was a reason), whether substance use was reported, and interventions (including services and removals). These records were extracted as soon as possible after the interviews were completed.

2.11 Data entry and descriptive analyses

A number of descriptive analyses were undertaken predominantly using the data collected via interviews with the 171 study participants. Chi-square analyses were conducted on categorical variables to determine differences between groups. T-tests were used for continuous variables. Where data were skewed, medians were reported and Mann-Whitney tests performed. Spearman's rank order correlation was used for correlating skewed data. All analyses were conducted using SPSS Version 19 for Windows. The multivariate analysis methods used are described in the following chapter.

2.12 Presentation of results

The results are presented in five sections. Chapter 3 presents the results from the multivariate analyses on the factors associated with child protection involvement in these families. This section identifies the important study outcomes and signposts for child protection involvement, which are the major new findings arising from this work. Chapter 4 provides more detailed information on the characteristics of the study participants that were significant in the multivariate analyses, with the remaining descriptors of the study participants in Chapter 5. Chapter 6 describes the participants, their children, their parenting and their involvement in child protection, and Chapter 7 describes issues related to their opioid treatment program. All sections include policy-relevant findings which are highlighted at the end of each chapter.

3. RESULTS OF MULTIVARIATE ANALYSES – IDENTIFYING IMPORTANT OUTCOMES

***Research question:** Are mothers in drug treatment services who are involved with child protection services different in terms of parenting and other characteristics associated with child maltreatment to those who are not involved?*

3.1 Background

The multivariate analyses described and discussed in this section are based on the methods from the study by Grella, Hser and Huang (2006). They used administrative data collected as part of the California Treatment Outcome Project (CalTOP), a large multisite and multicounty prospective treatment outcome study, to compare mothers entering drug treatment services who had children under the age of 18 years ($n = 4,156$) and who were involved with child protection services, with mothers who were not. They hypothesised that the two groups would differ with regard to their background characteristics and levels of severity across several domains of functioning that may affect both their treatment needs and outcomes, that is, addiction severity, psychiatric severity, criminal severity and economic stability. They also hypothesised that child-protection-involved mothers may access treatment through different channels and at different stages in their 'addiction careers'.

Variables in the analyses undertaken by Grella, Hser and Huang (2006) and in this study were chosen to assess the level of problem severity across several domains that may be potentially related to the outcomes of participation in substance abuse treatment or child protection.

3.2 Bivariate comparisons

3.2.1 Methods

In order to compare women who had had recent child protection service involvement with those who had not, variables that had been found previously to be associated with child protection involvement or predictors of child abuse and neglect were analysed by group. Participants were categorised as having recent child protection system involvement if they satisfied any of the following conditions:

1. Whether the respondent reported having at least one child living elsewhere because of a child protection court order
2. Whether the respondent had lost parental rights to at least one child.
3. Whether the respondent reported that she had received child welfare services within the previous six months (including child protective services, family maintenance or family reunification services, as well as other child-welfare-related services).

These categories are the same as those used by Grella, Hser and Huang (2006) and therefore allow for comparisons to be made between the two studies.

In this study, chi square analyses were used with categorical variables. Where variables were continuous, their distributions were first tested for normality using the Kolmogorov-Smirnov tests (a significance level of less than 0.05 signifies that the distribution is not normal). As none of the variables tested were normally distributed, a non-parametric test – the Mann-Whitney U test for independent samples – was performed. The significance levels from the chi square and Mann-Whitney U tests for the variables examined are presented in Table 2. Because of the large number of bivariate tests conducted, only those results that were statistically significant at $p < 0.01$ are discussed for the purposes of reporting. Proportions and medians are provided for each group as applicable.

3.2.2 Results: Bivariate comparisons based on child protection involvement

Table 2 shows the number of women who reported current child protection system involvement as defined above.

Table 2: Categorisation of study sample by current child protection system involvement

Child protection system involvement of respondents	Number (n = 171)	Percentage	Grella, Hser & Huang (2006) (%)
Current child protection involvement, i.e. at least one child in OOHC &/or recent investigation or service within last 6 months	66	38.6	46.7
No current child protection involvement	105	61.4	53.3

The table shows that just over one-third (38.6%) of the women had current involvement with child protection, defined as at least one child in OOHC (n = 56) at the time of interview, or an investigation or service provision within the past six months (n = 10). The remainder (61.4%) did not fit the definition of having had recent child protection system involvement, although some (25.1%) had child protection involvement greater than six months ago. The current level of child protection system involvement in this sample was lower than the 46.7% identified in the sample reported by their Grella, Hser and Huang (2006). In the Grella study there were 34.2% of children living elsewhere because of a child protection order, similar to this study. It appears, however, that a higher proportion of the Grella study sample had recently been provided with services or interventions (23.8%) than is apparent in this study (5.8%; n = 10).

The categories described in Table 2 have been used to group the study sample for the purpose of these analyses. The findings from the bivariate analyses, based on whether the women reported that they had recently been involved with child protection (CP) services, are shown in the Table 3.

Table 3: Bivariate analysis results

Variable	Not involved with CP (n = 105) Percentage or median	Current CP involvement (n = 66) Percentage or median	Total (n = 171) Percentage or median	Significance (p value)
Current age	37 yrs	36 yrs	37 yrs	0.083
Aboriginal	21.0	24.2	22.2	0.614
Main source of income				
Own employment	12.4	3.0	8.8	0.073
Government benefits	84.8	90.9	87.1	
Other	2.9	6.1	4.1	
Highest school level completed				
Less than Year 10	28.6	43.9	34.5	0.001**
Year 10 or 11	38.1	47.0	41.5	
Year 12	33.3	9.1	24.0	
Relationship status				
Not in relationship	46.7	33.8	41.8	0.241
De facto/married	30.5	35.4	32.4	
In relationship not living together	22.9	30.8	25.9	
Recent psychiatric illness	50.5	60.3	54.2	0.217
On psychiatric medications	32.4	48.4	38.5	0.037*
Kessler 10 (K10) scale				
Low (score 10-15)	39.4	28.3	35.4	0.364
Moderate (score 16-21)	26.6	28.3	27.2	
High (score 22-29)	26.6	28.3	27.2	
Very high (score 30-50)	7.4	15.1	10.2	
No driver's licence	60.2	86.4	70.4	0.000**
Any recent financial problems	79.8	81.8	80.6	0.747
Current AVOs	13.5	25.4	18.0	0.051

Variable	Not involved with CP (n = 105) Percentage or median	Current CP involvement (n = 66) Percentage or median	Total (n = 171) Percentage or median	Significance (p value)
In trouble with police in last six months	9.6	26.6	16.1	0.004**
Ever spent time in gaol	31.7	58.7	41.9	0.001**
Well cared for as a child?				
No	23.1	37.3	28.7	0.060
Yes	76.9	62.7	71.3	
Physically abused as a child	38.5	45.3	41.2	0.38
Unwanted sexual experience as a child	49.5	64.1	55.0	0.150
Forced/persuaded into sexual intercourse as a child	35.2	57.8	43.8	0.014*
Upsetting sexual experience with related adult or someone in authority as a child	33.7	40.6	36.3	0.503
Lived away from parents as a child	53.4	61.5	52.4	0.059
Number of children	2	3	2	0.000**
Age when first child was born	21 yrs	20 yrs	21yrs	0.042*
BCAP score	Low risk	Low risk	Low risk	0.206
How often see parents?				
No contact/rarely	24.8	39.7	30.4	0.008**
Monthly/weekly	29.5	38.1	32.7	
Daily	45.7	22.2	36.9	
How often see friends?				
No contact/rarely	22.1	30.0	25.0	0.062
Monthly/weekly	63.5	45.0	56.7	
Daily	14.4	25.0	18.3	
How often can't get help when need it?				
Very often	5.0	12.9	8.0	0.004**
Often	12.9	11.3	12.3	
Sometimes	43.6	61.3	50.3	
Never	38.6	14.5	29.4	

Variable	Not involved with CP (n = 105) Percentage or median	Current CP involvement (n = 66) Percentage or median	Total (n = 171) Percentage or median	Significance (p value)
How long lived in current location	3 yrs	2 yrs	2.5 yrs	0.031*
Time on OTP	4 yrs	3 yrs	4 yrs	0.890
Age first AOD treatment	24 yrs	21 yrs	23 yrs	0.000**
Age first used heroin	19 yrs	17.5 yrs	19 yrs	0.001**
Number days used heroin last 30	0	0	0	0.060
Number days drank alcohol last 30	0	0	0	0.428
Alcohol problem?				
No	68.8	69.2	68.9	0.819
Recent	10.4	7.7	9.3	
>12 months	20.8	23.1	21.7	
Number days used cannabis last 30	0	0	0	0.175
Number days used amphetamines last 30	0	0	0	0.852
Number days used cocaine last 30	0	0	0	0.817
Number days used tranquillisers/sleeping pills last 30	0	0	0	0.227

* $p < 0.05$; ** $p < 0.01$

As can be seen in Table 3 above, there were a number of areas of difference between the mothers who were involved with child protection services at the time of interview and those who were not. These characteristics are discussed below.

Demographics: There were no significant differences between those currently involved with child protection and those who were not in terms of Aboriginality, current age, main source of income and relationship status. The highest school level completed was significantly different between the two groups, with those women who had completed Year 12 significantly less likely to be currently involved with child protection.

Current psychiatric diagnoses or treatment and Kessler 10 score: Having recently been diagnosed with or treated for a psychiatric illness was not significant in the bivariate analyses, nor was being on a psychiatric-type medication ($p < 0.01$). The K10 results also showed no difference between those who were involved with child protection services and those who were not.

Financial: Having recent financial problems was not associated with child protection involvement. Interestingly, women who had no current driver's licence were significantly more likely to be involved with child protection than were those with a driver's licence.

Domestic violence and crime: Current domestic violence problems (as indicated by a current apprehended violence order (AVO), usually in relation to a current or ex-partner), was not associated with child protection involvement. Women who had been in trouble with the police in the previous six months and women who had ever spent any time in gaol were both significantly more likely to be involved with child protection currently.

Women's carer and abuse history: There were no significant differences between groups on whether the women reported being well cared for as a child, being physically abused, being forced or persuaded to have sexual intercourse or having unwanted sexual experiences as a child, having upsetting sexual experiences with a related adult or someone in authority, or whether they lived away from home as a child. Being forced or persuaded to have sexual intercourse as a child was almost significant ($p = 0.014$).

Children: There were some differences between the two groups in relation to children. Women involved with child protection had significantly more children than those who were not ($p < 0.0001$). More of the children of the women involved with child protection services were under 16 years of age (median = 2) than of the women who were not involved (median = 1). Women involved with child protection were also somewhat younger when their first child was born, but this difference was not significant ($p = 0.042$).

Child abuse potential: There was no difference in BCAP scores for respondents with current child protection involvement compared to those not currently involved with child protection.

Social supports: Women who had daily contact with their parents, usually their mother, were much less likely to be currently involved with child protection services than those who saw their parents less than daily. Women who were always able get help when they needed it were also less likely to be involved with child protection than were those who sometimes, often or very often were unable to get help. Women with less stable accommodation were somewhat more likely to be involved with child protection than those who had more stable accommodation, whereas the frequency with which they saw friends was not significant.

Substance use treatment: Comparisons of the length of time spent on the OTP on this occasion show that there was no significant difference between the two groups. However, the number of times the women had been in treatment previously and the age at which they had first received any drug and alcohol treatment was significantly different: the greater the number of previous treatments a woman had had, and the younger the age the first treatment was received, the more likely it was that she would have child protection involvement.

Referral for OTP entry: Women were also asked whether this treatment admission had been prompted or suggested by someone. It was found that most were self-referred and there was no difference between the two groups.

Substance use history: The age at which the women first used heroin was significant: the younger the age at which heroin was first used, the more likely the women would be involved with child protection. Recent usage of any of the other major substances was not associated with child protection involvement, nor was an alcohol problem.

In summary, these bivariate analyses show that the following variables were associated with increased odds of being involved with child protection services ($p < 0.01$): not completing Year 12, having no driver's licence, having had recent 'trouble with the police', having a prison history, having a greater number of children, not seeing parents daily, being unable to get help when needed, having a greater number of drug or alcohol treatments, being younger at first drug or alcohol treatment, and being younger at first heroin use.

3.3. Logistic regression analyses

3.3.1 Methods

Fourteen variables that were significant ($p < 0.05$) in the bivariate comparisons, as shown in Table 3, were entered into a stepwise logistic regression model so the effects of each variable on child protection system involvement could be determined while controlling for the other variables. Based on the current literature, the mother's own abuse history (four variables), current domestic violence (indicated by having taken out any AVOs in the past six months), recent heroin use, and the woman's current age (which was significant in the Grella, Hser & Huang, 2006 study) were also included in the model in order that they be controlled for.

Several variables that had been statistically significant in the bivariate analyses were no longer significant in the multivariate model, including not completing Year 12, having no driver's licence, being in trouble with the police within the last six months, having a greater number of drug or alcohol treatments, being younger at first drug or alcohol treatment, and being younger at first heroin use.

Seven of the 21 variables entered into the model showed significant associations with child protection involvement in the logistic regression model. Some of these variables, however, had wide confidence intervals, indicating the possibility that there was multicollinearity present in the model. In order to test for multicollinearity, dummy variables were created for the categorical variables in the model and the multicollinearity diagnostics examined within the linear regression option in SPSS. This procedure indicated that there were multicollinearity problems with the variable 'current age'.

A strategy commonly suggested to overcome multicollinearity problems is to delete from the equation the variable that is causing the problem (Berry & Feldman, 1985). The variable 'current age' was therefore removed from the model and a new logistic regression model run using the 'enter' method with only those records which had been included in the original logistic regression model. This produced the final model, in which the age at which the woman's first child was born, whether the woman had ever spent any time in gaol, and the frequency with which the woman was able to get help when she needed it – all of which were significant in the original logistic regression model – were no longer significant in the new model. Having current domestic violence issues was almost significant in the model ($p = 0.05$), the presence of which increased the likelihood of being involved with child protection.

3.3.2 Results: Logistic regression analyses

The remaining variables that were significantly associated with child protection involvement when the other variables in the model were controlled for are shown in Table 4. Results are presented as odds ratios with 95% confidence intervals (CI).

Table 4: Significant variables in the regression model

Variable	Odds ratio	95% CI
On psychiatric medication	2.962*	1.226, 7.157
Number of children	1.431*	1.004, 2.039
Seeing parents	**	
No contact/rarely (ref)		
Monthly/weekly	1.234	0.465, 3.275
Daily	0.220**	0.071, 0.676

* $p < 0.05$; ** $p < 0.01$

As can be seen from Table 4, the following variables were significantly associated with child protection involvement when the other variables in the model are controlled for. Mental health problems, as indicated by being on a currently prescribed psychiatric medication, usually for depression or an anxiety disorder, increased the odds by three times of being involved with child protection compared with someone not on psychiatric medication. The number of children the woman had also increased the odds of child protection involvement: for each additional child the odds increased by 1.4 compared with woman with no additional children. Contact with parents was a significant predictor of child protection involvement: seeing their parents every day, usually their mother, reduced the odds of being involved with child protection services by 78% in comparison to women who had no contact with or rarely saw their parents.

3.4 Discussion

The results of the multivariate analyses show that those mothers who are in opioid pharmacological treatment in NSW who are involved with the child protection system, mostly through having children in OOHC, differ in a number of significant areas from those who are not involved. Rather than the severity of substance use being associated with child protection system involvement, other factors are of greater importance.

The severity of substance use (as indicated by the number of drug or alcohol treatments, the age of first drug or alcohol treatment, and the age of first heroin use) were all significant in the bivariate analyses, with women with a more extensive drug use history more likely to be involved with child protection services. Similarly, having criminal involvement, domestic violence issues, low education levels, no driver's licence, unstable accommodation, forced sexual intercourse as a child or teenager, first child at a younger age, and inability to get help when needed were all associated with child protection involvement in the bivariate analyses. When the other variables are controlled for, however, as in the multivariate analyses, all of these variables were no longer significant, other factors being more important in child protection system involvement.

As has been found in previous research, women who had a greater number of children were more likely to be involved with child protection than others (Nair et al., 1997; Grella, Hser & Huang, 2006). In this study, we were also able to determine that it was not just the number of

children but the number of dependent-aged children the women had given birth to (that is, those under 16 years of age) that increased the risk of child protection involvement.

In the multivariate analyses, the presence of mental health problems also significantly increased the likelihood of a woman being involved with child protection services. Mental health problems were indicated here by use of psychiatric medication (usually for depression or an anxiety disorder) rather than recent psychiatric diagnosis or other measures. Again the presence of depression has been found in overseas research to be associated with child protection involvement (Nair et al., 1997; Gilchrist & Taylor, 2009).

Contact with parents was the third significant predictor of child protection involvement. Seeing their parents every day, usually their mother, reduced the odds of women being involved with child protection services in comparison to women who saw their parents less than daily. Although the importance of social supports has been recognised in previous research (as described in the review by Dawe et al., 2007), the protective effects of daily parental contact have not been highlighted in previous research exploring the predictors of child protection involvement. This is one of the most clinically significant findings from this study, the implications of which will be discussed in subsequent chapters.

These findings will be discussed in greater detail, along with their policy, practice and research implications in the final chapter of the report.

4. RESULTS OF DESCRIPTIVE ANALYSES – MAJOR DEMOGRAPHICS AND CHARACTERISTICS OF THE SAMPLE SIGNIFICANT IN THE MULTIVARIATE ANALYSES

This chapter provides additional and more detailed information about the study sample in relation to the variables that were associated with child protection system involvement in the multivariate analyses and the other major sample characteristics. It outlines the major demographic characteristics of the sample and compares them to previous Australian studies. Also presented in this section are some unexpected findings on issues that have not been examined in previous research, particularly in relation to the order in which women start using opioids and give birth to their first child.

Throughout this and subsequent chapters, where there is information available on any changes that have been made while on the opioid treatment program this will be highlighted. This information will address the second study hypothesis: *Does entry into the Opioid Treatment Program improve outcomes for women with children?*

4.1 Characteristics of the study participants

Some of the basic demographic characteristics of women on the NSW OTP at the time of interview are listed below. These characteristics will be discussed in the following section and some comparisons made with other similar studies.

Table 5: Characteristics of the study sample – mothers on the OTP

Characteristics at the time of interview	n = 171
Age	Median: 37 years Range: 21 to 52 years
Country of birth	84.8% born in Australia
Aboriginal or Torres Strait Islander status	22.2% Aboriginal
School years completed	Median: Year 10
Relationship status	41.5% not in a relationship 32.2% married/de facto 25.7% in a relationship but not living together
Employment status	12.1% employed 4.1% studying 83.8% neither studying or in workforce
Main source of income	87.1% government benefits 8.8% own income/employment 4.1% other (dependent on others, crime)
Housing	58.3% lived in public housing 23.8% private rental 9.5% own home/mortgage 8.4% boarding house, caravan, refuge, homeless

As can be seen in Table 5 above, the women had the following characteristics.

Age: The study sample ranged in age from 21 to 52 years at the time of interview, with a median age of 37 years. This indicates that the sample is similar in age to the total NSW population receiving pharmacological treatment as at June 2009 (AIHW, 2010). Furthermore, a recent study, which recruited 1,513 people from the NSW Opioid Treatment Program between 2005 and 2008, reported the mean age of its female study participants to be 35.3 years (Shand et al., 2011), very similar to the mean age found in this study of 35.8 years.

Country of birth: The vast majority of the women in the study were born in Australia (84.8%). This is similar to the percentage of Australian-born people treated in Australian drug and alcohol treatment services in 2008-09 (87%) (AIHW, 2010). Although not directly comparable, country of birth is one of the major characteristics which differs from the sample in the study by Grella, Hser and Huang (2006), of which 16.8% were African American, 22.3% Hispanic and 54.7% 'white'.

Aboriginal and Torres Strait Islanders: The proportion of Aboriginal women within this sample (22.2%) is higher than in the statewide pharmacotherapy population, of which 10.3% is reported to be Aboriginal or Torres Strait Islander (AIHW, 2010). The high proportion in this study may partly be attributed to the fact that a number of clinics within the Redfern/Waterloo area were used as recruitment sites, an area with a high Aboriginal population. The proportion of Aboriginal women in this study is comparable, however, to the proportion in the Brighter Futures evaluation (SPRC, 2010), which reported 23.6% Indigenous families, and to the OOHC population in NSW, of which 32.1 per cent of the children and young people were reported as being Aboriginal and/or Torres Strait Islander as at June 2009 (NSW Community Services, 2010).

Education: The median number of years of schooling completed was 10 years. (In 2009, the Year 7 to Year 12 apparent retention rate for girls in NSW schools was 76.5% (ABS, 2010)). These findings are also very similar to those in previous Australian research: among the sample of women on the OTP recruited by Shand and colleagues, 49.9% had completed 10 years or less of school education (Shand et al., 2011), and the sample recruited in 2001/02 as part of the Australian Treatment Outcome Study (ATOS) also reported a mean of 10 years of secondary education (Ross et al., 2005). A number in this study's sample had undertaken further education and training after leaving school whether they completed Year 12 or not. Fifteen participants (8.8% of the sample) reported completing an associate diploma, undergraduate diploma, bachelor degree or postgraduate degree in addition to their schooling. Another 36.3% reported undertaking another course, such as TAFE or vocational education, and 4.1% were currently studying. Women who completed Year 12 were less likely to be involved with child protection services in the bivariate analyses, although not in the multivariate analyses.

Relationship status: Around one-third (32.2%) of the women reported that they were in a married or de facto relationship, although an additional 25.7% reported that they were in a relationship but did not live with their partner. This is a much lower proportion than that found by Shand et al. (2011), who reported that 70.3% of women in their sample were married. Of the 99 women who reported being in a relationship, either live-in or not, half were in a relationship with the father of at least one of their children. In relation to their partner's substance use, only six women reported that their partner was a current heroin user, 57 had a partner who was in treatment for substance use, and 27 had a partner who had never used heroin.

Several women reported that they had had a partner who had died, either from an overdose or some other traumatic circumstance.

Employment status and main source of income: The proportion of women who were on government benefits was high (87.1%), but very similar to the proportion on government benefits reported by Shand et al. (2011) (83.7%). Only 12.1% of the sample was in employment, with 83.8% not in the workforce.

Housing: Just over half the sample (58.3%) reported living in public or subsidised housing managed by the NSW Department of Housing, or in community housing. Just under a quarter (23.8%) lived in private rental accommodation and 9.5% had their own home. Fourteen women (8.4%) lived in a boarding house, refuge or caravan park, or were homeless.

4.2 Mental health, K10 and BCAP

Mental health: Mental health problems have been identified as a risk factor for child protection involvement, and as a result some measures were included in this study. Clinical diagnoses were not attempted as part of the study.

In total, 90 women, or around half the sample (54.2%), reported that they had been diagnosed with or treated for a psychiatric illness in the previous 12 months. The types of psychiatric disorder reported by the participant are shown in Table 6, with some women reporting more than one diagnosis or treatment.

Table 6: Any psychiatric disorder diagnosed or treated within the previous 12 months

Psychiatric disorder reported	Number (n = 167)	Percentage
Depression	63	37.8
Anxiety disorder	38	22.9
Post-traumatic stress disorder	10	6.0
Bipolar disorder	9	5.4
Borderline personality disorder	5	3.0
Schizophrenia	4	2.4

Other studies have used diagnostic tests to determine the prevalence of psychiatric disorders among illicit drug using samples in treatment, and have reported higher rates of disorders than have been found in this study. For example, Ross et al. (2005) found that half their sample of treatment entrants reported severe psychiatric distress and over a quarter met criteria for current major depression, representing a prevalence rate many times higher than in the general Australian population. In addition, a diagnosis of post-traumatic stress disorder (PTSD) was received by almost half of their study participants, again much higher than in the general population. Personality disorders were also very common (72%) (Ross et al., 2005). Similarly, Shand et al. (2011) found high rates of psychiatric problems among female opioid treatment agency clients as follows: major depressive episode (70.5%), borderline personality disorder (64.0%), PTSD (58.5%), antisocial personality disorder (38.7%), panic disorder (31.2%), social anxiety (27.4%) and social phobia (21.3%). These were all higher among females than males.

Sixty-five women, or 38.5% of the sample, reported that they were currently taking some form of psychiatric medication. The most commonly reported were anti-depressant and anti-anxiety medications such as Valium, corresponding with the psychiatric disorders they reported being diagnosed with or treated for recently.

As discussed in relation to the multivariate analyses, women who were taking some form of psychiatric medication at time of interview were more likely to be involved with child protection services than those who were not.

Psychological distress: Most of the women completed a K10, which measures psychological distress in the previous four weeks. The K10 has been widely used in Australia and elsewhere and has established reliability and validity across diverse settings, including with injecting drug users (Hides et al., 2007; Slade, Grove & Burgess, 2011). Scores obtained from this study sample are given in Table 7. They ranged from 10 (low) to 44 (very high), with a mean score of 19.71. Most participants (62.6%) were in the ‘low’ or ‘moderate’ categories, but of particular concern were the 15 women in the ‘very high’ category.

Table 7: K10 scale results

Distress level	Number (n = 147)	Percentage
Low (score 10-15)	52	35.4
Moderate (score 16-21)	40	27.2
High (score 22-29)	40	27.2
Very high (score 30-50)	15	10.2

A paper has recently been published providing new normative data using the 2007 Australian National Survey of Mental Health and Wellbeing (Slade, Grove & Burgess, 2011), which can be used to compare with the results from this study sample. Slade, Grove and Burgess (2011) report a mean K10 score of 15.5 for women aged 35 to 44 years, and 19.0 for women of any age with a substance use disorder. The mean score of 19.71 obtained in this study is very similar to the normative score for women with a substance use disorder.

Chi square tests comparing the K10 score according to whether the women were currently involved with child protection services or not showed no difference between the two groups.

BCAP: The BCAP (Ondersma, Chaffin, Mullins & LeBreton, 2005) is a short (34-item) form of the CAPI developed by Milner (1986). The BCAP includes a lie scale (6 items) and a random responding scale (3 items) as validity measures for this test. However, Ondersma (2010) has questioned the value of these and recommends using the overall scale. Analyses were conducted both including and excluding the responses deemed invalid via the lie and random responding scales, and no difference in the results was found. The results shown in Table 8 are for all responses (n = 170); they indicate that around one-third of the sample had an elevated risk score on the BCAP.

Table 8: BCAP results

Risk level	Number (n = 170)	Percentage
Low risk	108	63.5
Elevated risk	62	36.5

Figure 1 shows the risk categories obtained on the BCAP by the two groups of women based on their child protection system involvement. The results show some tendency for respondents with current child protection involvement to have an elevated risk on the scale in comparison to those not currently involved with child protection, although this difference was not statistically significant (chi-square = 1.596, df = 1, p = 0.206).

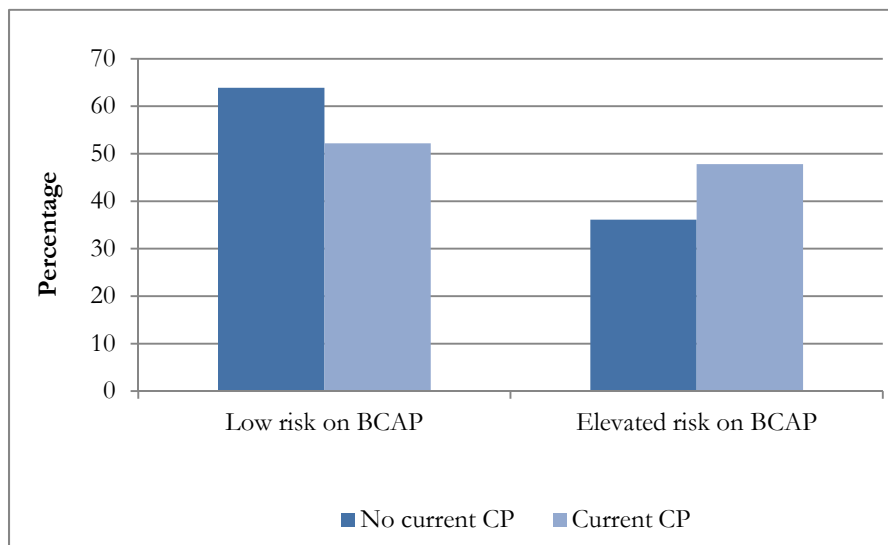


Figure 1: BCAP results by current child protection involvement

The correlation between the scores on the BCAP and the K10 obtained in this sample was tested. The findings were that there was a significant correlation between the scores on the two scales (Spearman’s correlation = 0.732; p < 0.01), meaning that a high score on the K10 was associated with a high score on the BCAP. Both scales, however, showed no relation to current child protection system involvement, as discussed.

4.3 Children: their number, ages, order in relation to heroin use

Number and ages of children: One of the selection criteria for the study was that the woman had given birth to at least one child who was under 16 years at the time of interview. Figure 2 shows the distribution of ages. In total, the 171 respondents had 400 live children among them, ranging in age from 0 (or just born) to 31. The majority of the children (75.5%; n = 302) were under 16 years of age; 51% of all the children were male.

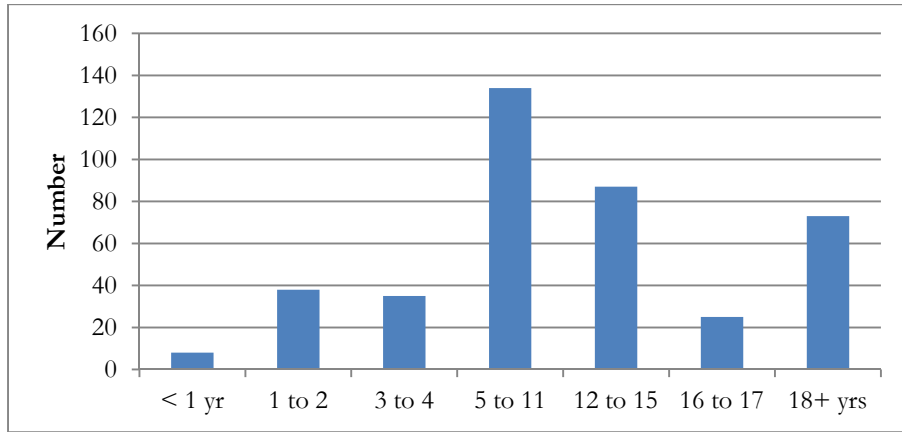


Figure 2: Ages of sample's children in years

The women in the study had a median of two children each. Fifty-one women (just under one-third) had only one child, and 32 (18.7%) had four or more. The maximum number of children was eight. Some of the women were already grandmothers, and six women were pregnant at the time of interview.

As discussed in relation to the multivariate analyses, those women who had a greater number of children were significantly more likely to be involved with child protection.

Age at first birth: As can be seen in Figure 3, the women sampled had their first child at much younger ages than does the general population. Most women were in their late teens and early twenties when they had their first child, with the median age being 21. Some women gave birth to their first child at a very young age, the youngest being 14. A few women gave birth at older ages, only three of whom were over 35 years of age when they had their first child.

Among this sample 38.6% were teenage mothers, a much higher proportion than among the general Australian population, of which, in 2007, 8% were teenagers when they had their first child (Hayes, Weston, Qu & Gray, 2010).

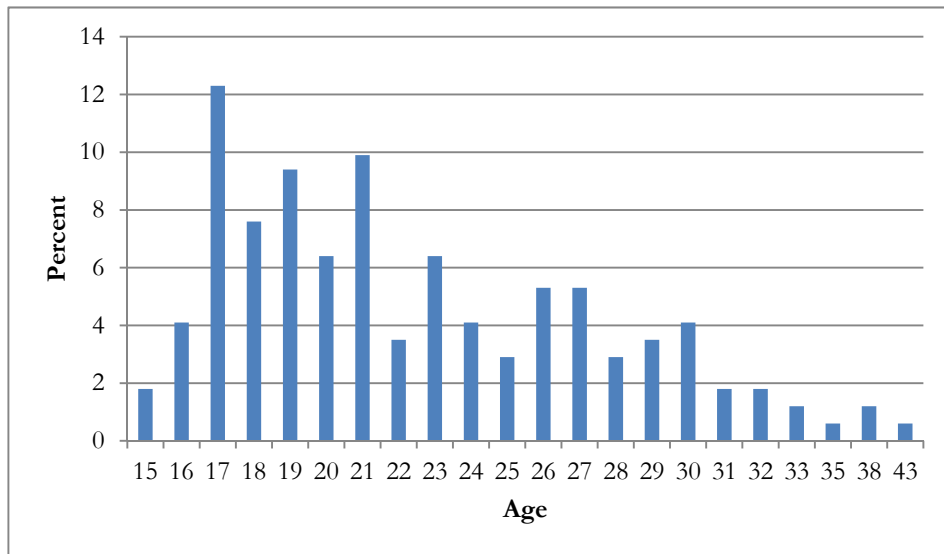


Figure 3: Age at birth of first child

Do women use heroin first or give birth first? Of interest is whether the women started using illicit drugs before or after they had children. Using some of the study data, the relationship between their age of first birth and the age they first used heroin has been examined. It can be seen that the age of first birth and the age of first heroin use was highly correlated (Spearman correlation = 0.267; $p < 0.01$). That is, women who first used heroin at an older age also tended to have their first child at an older age, and those who first used heroin in their teens also tended to have their first baby in their teens.

Table 9 shows the findings in relation to the order in which the women started heroin use and gave birth.

Table 9: Order of heroin use and first birth

Order	Number (n = 167)	Percentage
Heroin use before first birth	96	57.5
First birth before heroin use	63	37.7
Same year	8	4.8

Interestingly, there is a high proportion of women (37.7%) who started using heroin after they had their first child. Furthermore, if they had their first child in their teens then they were more likely to have their baby before they first used heroin, whereas if they had their first baby at an older age (over 20 years of age) then they were more likely to have already used heroin.

If we examine this in relation to their current child protection involvement, there was no difference in the level of child protection involvement according to whether the women had their child first or used heroin first. That is, already being a heroin user when they had their first child did not increase the chance of child protection involvement.

The number of children differed, however, according to the age the first child was born: teenage mothers had more children (median = 3) than did older first-time mothers (20-24 years, median = 2; 25 year or over, median = 1).

Because young mothers have been identified as “one of the most disadvantaged groups in Australian society” (Bradbury, 2006), comparisons were made to determine whether there were any differences in the characteristics of the teenage mothers compared to the rest of the sample. The only difference found was that the women who had their first child as a teenager were more likely to have completed fewer years of school (chi square = 15.613; $df = 2$; $p < 0.01$) than the older first-time mothers, but the level of schooling was not associated with current child protection involvement in the logistic regression analyses (although it was in the bivariate analyses).

4.4 Criminal history and domestic violence

Criminal involvement: A large number of women ($n = 70$; 41.9%) reported a prison history, 13 of whom had been in gaol within the previous 12 months. The high number is likely to be elevated by the fact that being released from prison on an OTP is a reason for being given priority access into an OTP in the community. The proportion is, in fact, very similar to that reported by Shand et al. (2011), in whose study the sample of women on the NSW OTP who had ever been in gaol was 39.5%.

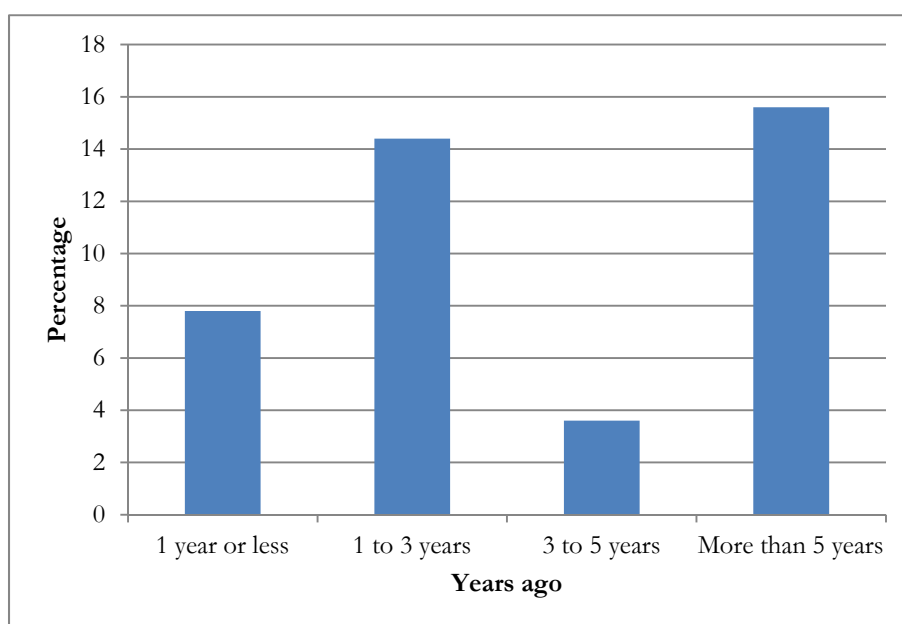


Figure 4: Time since last period in gaol

Those women who had ever spent time in gaol were more likely to be found in the bivariate analyses to be involved with child protection, but this relationship was not significant in the multivariate analyses.

Twenty-seven women (16.1%) reported that they had been in trouble with the police in the previous six months, most of whom had been arrested or cautioned by police. Seventeen were facing charges at the time of the interview for a variety of offences. These women were significantly more likely to be found, in the bivariate analyses, to be involved with child protection but not when other factors were taken into account, as in the regression analyses. Four were on a Drug Court or MERIT (Magistrates Early Referral into Treatment) program.

Changes in criminal involvement while on the OTP: There was a reduction in the number of people reporting that they had been in trouble with the police in the six months before the program ($n = 48$, 30.0%) to the time at which the interview was conducted ($n = 27$, 16.1%).

Domestic violence: Domestic violence has been found to occur at high rates within substance-using populations, with many substance-using women in violent and abusive relationships (Dawe et al., 2007). Although there appears to be a relationship between the occurrence of partner violence and female substance misuse, the direction of the relationship is unclear. There is evidence that some women use substances as a way of dealing with past experiences of victimisation but also that previous violence or trauma increases the risk of substance misuse (Dawe et al., 2007).

As a measure of domestic violence, women were asked about current AVOs, whether the police had come to their house because of violence, and whether they had left home because of violence in the previous 12 months.

The presence of these orders usually indicates police involvement in a serious domestic violence situation. Police attending a domestic violence incident where children are present have been required to report these to child protection services, but this study suggests that having an AVO also indicates a greater likelihood of the children being removed, although it was only a borderline significant relationship in both the bivariate and multivariate analyses.

Thirty women (17.5%) had taken out an AVO which was current at the time of interview. Most AVOs had been taken out against a partner or ex-partner, while one woman had taken out an AVO against a violent adult child. Most of these women (n = 26) reported that the police had come to their house because of domestic violence or violence in the past 12 months. Nine reported leaving home because of violence in the home within the previous 12 months, one of whom was homeless and whose children were in care.

4.5 Social supports

Social isolation and availability of supports: Social supports provided either through services and support workers or by family and friends are protective in the parenting process. Particularly for families that confront multiple adversities, supportive relationships provide the parent with a buffer to help them maintain child-rearing responsibilities in the face of emotional distress (Dawe et al., 2007).

Families of drug users experience greater levels of community rejection and are less involved in many areas of social life, including religious, neighbourhood, sporting and cultural activities (Dawe et al., 2007). Women in opioid treatment are more likely to report that they have no friends, suffer from loneliness, and receive less social support than either men in treatment or women not using drugs (Tunnard, 2002). Parents who experience isolation and separateness are considered to be at greater risk for caring for their children, especially when their isolation is compounded by the accumulation of other risk factors such as parental psychopathology and socioeconomic disadvantage (Dawe et al., 2007).

In order to determine the level of social support available to these women, questions were asked about the women's friends, community and social interactions. Table 10 shows the responses to the question 'How often do you see, talk to or email the following people?', a question also used in the Longitudinal Study of Australian Children (LSAC) study (AIFS, 2004). The responses show that 60.1% of the women had frequent contact with their parents, in most cases their mother, with 36.9% having daily contact. Almost half (48.8%) had frequent (weekly or daily) contact with other family members, while more than half (57.3%) had frequent contact with friends. Contact with neighbours was less common: 34.8% had no contact with neighbours, most of whom lived in public housing.

Table 10: Frequency of contact with others

	Parents (n = 168) %	Other family (n = 168) %	Your friends (n = 164) %	Your neighbours (n = 155) %
No contact	13.1	14.3	8.5	34.8
Rarely	4.2	8.3	9.1	12.9
A few times per year	5.4	10.7	2.4	0.6
At least every month	9.5	17.3	17.7	3.9
At least every week	23.2	31.5	39.0	16.8
Every day	36.9	17.3	18.3	28.4
Don't have	7.7	0.6	4.9	2.6

The responses to this question were combined into three categories in the multivariate analyses as the numbers in some categories were too small to be included separately. As discussed in relation to the multivariate analyses, those women who saw their parents daily were significantly less likely to be involved with child protection at the time of the interview. Generally, women were more likely to spend their free time with their family than with anyone else, family defined as including their parents, their extended family and their own children. Only 21.4% spent most of their free time with friends, and 18.4% spent this time alone.

Table 11 shows the results from a question also taken from the LSAC study (AIFS, 2004), which asked how often the respondents felt they 'needed support or help but were unable to get it from anyone', both before they started on their current OTP and at the time of interview. At the time of interview, 20.3% of women said they 'often' or 'very often' were unable to get help or support when they needed it, while for most it was less of a problem.

Table 11: How often women report not being able to get help when need it

How often can't get help?	Before started on OTP (n = 155) %	At time of interview (n = 163) %
Very often	14.2	8.0
Often	21.9	12.3
Sometimes	43.2	50.3
Never	20.6	29.4

As discussed previously in relation to the bivariate analyses, those women who were always able to get help when they needed it were significantly less likely to be involved with child protection than were those women who sometimes, often or very often were unable to get help.

Changes in level of support while on the OTP: Table 11 above shows that the women were more likely to report better access to support and help at the time of interview compared to before. The number reporting that they 'sometimes' or 'never' could not get help when they needed it was significantly more at the time of interview than before they started treatment (chi-square = 9.945; df = 1; p < 0.01).

Sources of support: Table 12 shows the responses to the question ‘who is the first person you turn to for help’ in general, then for help with their children.

Table 12: First person turn to for help

Relationship	First person turn to for help (n = 168) %	First person turn to for help with children (n = 153) %
Parents	33.3	41.8
Other family	8.9	18.3
Friends	11.9	5.9
Partner	31.5	14.4
No-one	7.1	7.2
Counsellor	2.4	-
Other	4.8	4.6
Not applicable	-	7.8

The results indicate that parents and partners are equally the most important source of help with general needs (64.8% combined) but when help is needed in relation to their children they are more likely to seek it from their parents and other family members (60.1%). This may partly be due to the low number of women who were in a relationship with the father of their children.

Table 13 shows the responses to questions asked about how much time the respondents spent with people who use illicit drugs, both before starting on their OTP and at the time of interview. Currently, nearly two-thirds (63.1%) reported spending no time with illicit-drug-using friends. Many reported putting a great deal of effort into trying to stop seeing their former drug-using friends, who they often described as ‘not really friends’. Some also commented that they had few ‘straight’ friends so this left them feeling isolated and with few friends.

Table 13: Time spent with drug-using friends

How many people spend time with use illicit drugs?	Before started on OTP (n = 156) %	At time of interview (n = 157) %
None	12.2	63.1
A few	39.7	30.6
Most	30.8	5.1
All	17.3	1.3

Changes in time spent with drug-using friends while on the OTP: The responses above show a large increase in the number reporting that ‘none’ of the people they spend time with now use illicit drugs compared with the number they spent time with before starting on their program (chi-square = 86.240; df = 1; p < 0.001).

4.6 Community and safety

Community and safety: A small number of questions were included in the interview schedule, some from the *NSW Population Health Survey* (Centre for Epidemiology & Research, 2010), which touch on trust, safety and neighbourhood connection, the results from which can be seen in

Table 14. The majority (63.8%) responded, when asked how they felt about their community, that it was ‘good’ or ‘very good’. They were also asked how strongly they agreed or disagreed with a range of statements about their neighbourhood.

Table 14: Feelings about their community

Response	I feel a strong sense of identity with my neighbourhood (n = 161)	Most people in my neighbourhood can be trusted (n = 159)	I feel safe walking down my street after dark (n = 159)	My area has a reputation for being a safe place (n = 158)
Strongly agree	5.6	5.7	10.1	3.2
Agree	42.2	31.4	57.9	35.4
Neither agree or disagree	22.4	17.6	5.0	13.9
Disagree	26.1	37.7	24.5	40.5
Strongly disagree	3.7	7.5	2.5	7.0

More people agreed than disagreed that they ‘felt a strong sense of identity with their neighbourhood’ and that they ‘felt safe walking down their street after dark’. In relation to the question ‘most people in my neighbourhood can be trusted’ and ‘my area has a reputation for being a safe place’, they tended to be more evenly divided between ‘agree’ and ‘disagree’.

Although there were some slight differences in question wording, results from the 2009 *NSW Population Health Survey* show that 69.6% of females aged 35-44 agreed or strongly agreed that ‘most people in my neighbourhood can be trusted’, compared to 37.1% in this study sample. Furthermore, 75.2% of females aged 35-44 years agreed or strongly agreed that ‘my area has a reputation for being a safe place’, compared to 38.6% in this study sample. These differences in responses indicate a tendency for the sample from this study to be less trusting of neighbours and to feel less safe in their neighbourhoods. This tendency holds even when comparing with the responses from the *NSW Population Health Survey* with females from the most disadvantaged areas in NSW, who rated their neighbourhood lower than did those living in more advantaged areas.

Living situation: Women were asked how long they had been living in their current residence. Figure 5 shows that around one-third (34.1%) had been living there for less than 12 months. The mean length of time was 30 months in their current residence.

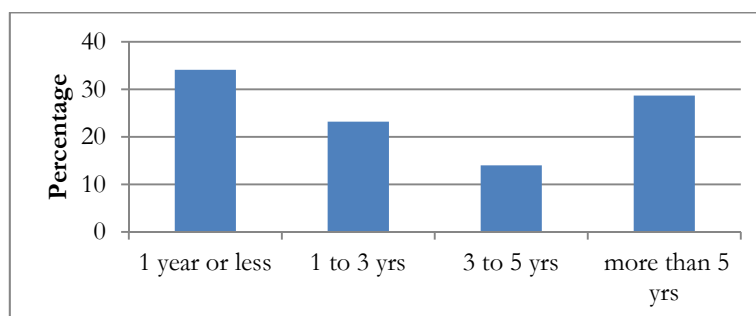


Figure 5: Length of time living in current location

The majority of the women (73.1%) reported being happy with their living situation, while the rest were unhappy or indifferent.

Eighty women (46.8%) reported being the only adult living in their household with children, and 20 (11.7%) reported living alone, mostly in public housing. Sixteen women were living with either or both parents.

4.7 Summary

- Study participants fit the profile of substance users in treatment that has been found in previous research. This sample, however, included a higher proportion of Aboriginal participants (22.2%), a level consistent with a child protection population.
- The vast majority were very disadvantaged with low levels of education (median Year 10), most (87.1%) were on government benefits, and 58.3% lived in public housing. Few (32.2%) were in live-in relationships. Just under half (41.9%) had ever spent time in gaol, and 17.5% had current AVOs out, generally against a partner or former partner.
- Around half the sample reported they had been diagnosed or treated for a psychiatric illness in the previous 12 months, and 38.5% were currently taking medication for a psychiatric disorder. Scores from the K10 indicated higher distress levels than in the general population but consistent with a substance-using population. Scores on the BCAP were highly correlated with those on the K10. Neither score was associated with child protection system involvement.
- Women in the study had their first child at much younger ages than the general population, generally in their late teens or early 20s. Just over one-third of the sample started using heroin after having their first child, generally the younger mothers.
- Many of the women were the only adult in their household. They appear to be less trusting of neighbours and feel less safe in their neighbourhoods than do other women, even those living in disadvantaged areas.
- Women were more likely to spend time with family than with anyone else and particularly relied on their family for help with their children. Supports provided by parents, usually mothers, and other family are of great importance to the women, the presence of which reduces the likelihood of child protection involvement.

5. RESULTS – OTHER CHARACTERISTICS OF THE STUDY SAMPLE

This chapter provides additional information on areas such as the women’s financial situation, their own carer and abuse history, and their substance use.

5.1 Financial situation

Income levels: Low income and unemployment are associated with substance-using families and with child maltreatment, although the causal relationships are not clear. For many families, poverty pre-dates substance use. Low socioeconomic status and poverty affect child outcomes, including their physical health, educational achievements, social emotional and behavioural outcomes (Dawe et al., 2007). There is also evidence that socioeconomic status is a key factor in the determination of parenting style (Dawe et al., 2007). There were several questions included in this study which explored issues related to income and financial stress.

Income levels reported by the women in this study were very low, with most (86.6%) estimating their income to be between \$20,000 and \$32,000 per annum or lower. Many had difficulties estimating their gross income levels as they had a number of automatic payments being deducted from their income for essentials such as rent and electricity bills.

Women were asked how many people were dependent on the income that they reported. Again, there was some confusion over contributions of partners or ex-partners in calculating their gross income and the number of people dependent on this income. As can be seen in Table 15, there were many cases of large numbers of people being dependent on small incomes. Only five people had incomes over \$67,599.

Table 15: Number dependent on income

Income	1	2	3	4	5	6	Total
< \$7,799	2	1					3
\$7,800-12,999	23	12	3	1			39
\$13,000-20,799	14	27	13	5	2		61
\$20,800-31,199	10	13	16	4			43
\$31,200-41,599		2	5				7
\$41,600-51,999		2	3	1			6
\$52,000-67,599	1	2				1	4
> \$67,599			3	2			5

The vast majority of these women (87.1%) were dependent on government benefits as their main source of income.

Changes in main source of income while on the OTP: Some estimation of the changes in sources of income can be made from a question which asked about the main source of income in the three months prior to starting on the OTP compared with at the time of interview. The responses are shown in Table 16.

Table 16: Income source before starting OTP compared with currently

Main source of income	Prior to starting OTP (n = 169)	Current (n = 171)
Government benefits	71.6	87.1
Own income/employment	18.3	8.8
Dependent on others	4.1	2.9
Other (e.g. crime, sex work)	5.9	1.2

As can be seen above, there was an increase in the number of people reporting that they were on government benefits at the time of interview compared to the time at which they entered the program. There was a small decrease in the number who said they were employed from the time they started on the program to the time of the interview, which may reflect the difficulty maintaining employment, particularly for mothers, when attending an OTP clinic. The number of women involved in sex work or crime decreased from nine at the time they started on the program to two at the time of interview.

Financial stress: Some questions were included in the study about financial stress experienced by the study participants. Figure 6 shows the number of people who reported that any of the listed responses had happened to them in the previous three months because of a shortage of money, a question that has also been asked in the LSAC study (AIFS, 2004). One hundred and thirty-seven study participants (80.6%) reported that they had experienced at least one of these problems in the previous three months, reporting 2.4 financial problems each on average. This study sample had experienced a great deal more financial problems than has been reported by the LSAC sample, 83% of whom reported *no* financial hardships in either Wave 1 or Wave 2 of data collection compared to the 19.3% among this sample (AIFS, 2008).

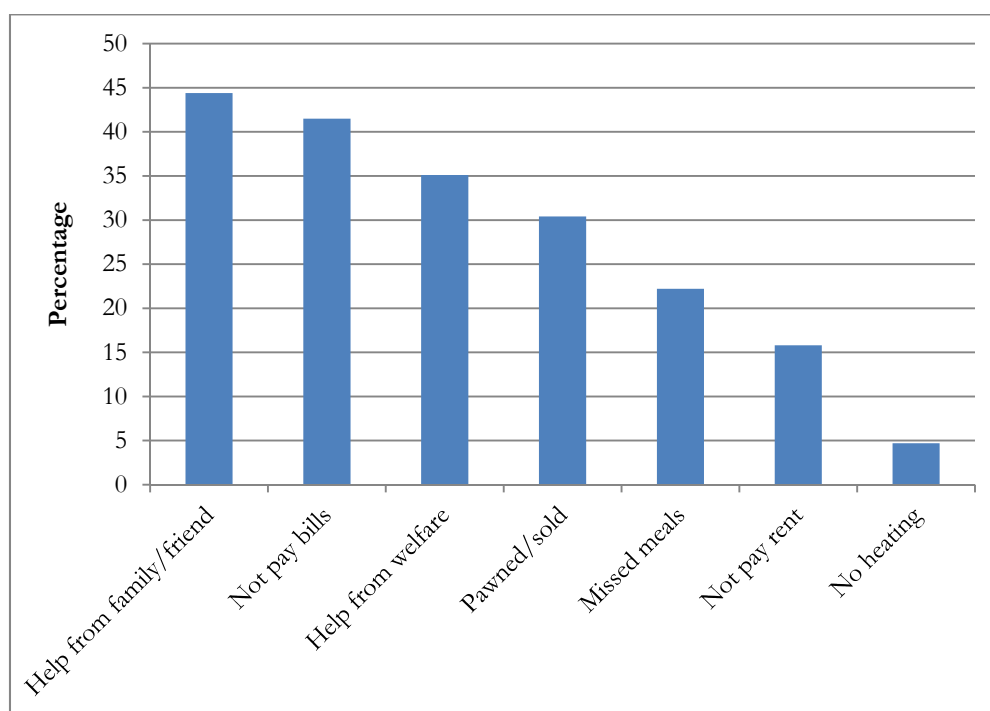


Figure 6: Whether any of the following had happened in the past three months because of a shortage of money

Changes in financial situation while on the OTP: In relation to their financial situation, study participants were asked whether being on the OTP had helped their financial situation. Around two-thirds (65.3%; n = 111) responded that being on the OTP had made their financial situation better, while 18.8% said it was the same, and 11.8% that their financial situation was worse. People who were on public programs were much more likely to say that their financial situation was better than were people on private programs (chi-square = 7.482; df = 1; p < 0.01), generally because of the costs associated with being on a private program.

Current driver's licence: A question asking whether people had a current driver's licence was added into this study because of an interest in the impact of fines on disadvantaged populations. Only 29.6% (n = 50) of the sample had a current driver's licence. The most common reason for not having a driver's licence was 'never having one' (49.4%), followed by having lost their licence because of fines (21.8%). Several mentioned the difficulties and time associated with travelling to their OTP, and in transporting children to their activities. Women without a driver's licence were significantly more likely to be found in the bivariate analyses to be involved with child protection, but not in the multivariate analyses, as discussed previously.

5.2 Health status

Physical health: Because health problems experienced by the women themselves can impact on their ability to parent their children, some questions were included about this issue. Women were asked how they rated their own health in general, with their responses shown in Table 17. Also included are the results for females from the *NSW Population Health Survey* (Centre for Epidemiology & Research, 2010).

Table 17: Ratings of own health

In general, would you say your health is...?	Number (n = 165)	Percentage	Popn Health Survey Females
Excellent	7	4.2	19.1
Very good	25	15.2	29.5
Good	67	40.6	29.8
Fair	51	30.9	15.4
Poor/very poor	15	9.1	6.2

Women tended to rate their general health as 'good' or 'fair' (71.5%), with few rating their health as 'very good' or 'excellent' (19.4%). Comparing the health ratings from this study to those of the general population reveals that the women in this study were much less likely to rate their health status highly.

Overall, 49 women (28.7%) reported that they had some type of physical illness. These illnesses covered a wide range, the most common being hepatitis C (17 women), followed by heart and circulation problems (n = 7), then asthma (n = 4).

Nine women had some difficulty understanding and responding to the interview and appeared to have some intellectual impairment. Only eight women overall reported having any private health insurance.

5.3 Women’s carer and abuse history

Each study participant was asked for some information about their own childhood. Most responded that they were mostly brought up by their own mother (83.0%), and around half (52.0%) by their father as well.

Parents: Overall, 67 women (41.4%) said the person who had raised them had an alcohol or other drug problem, most commonly alcohol. Around a third (30.3%) of the women’s fathers had a problem with alcohol, and 20.1% of their mothers had an alcohol problem. Slightly more of their mothers had a drug problem other than alcohol compared to their fathers, but numbers were generally small and related to ‘pills’. Similarly, Shand et al. (2011) found that 56.4% of females in their study had a parent with a substance use problem.

Half the women (51.5%) reported that they spent some period of time living away from home when they were a child or teenager, with most being a teenager when this occurred. Generally when the respondents lived away from home they lived with other family (16.4%), on the streets or with friends. Interestingly, only a small proportion (7.6%) lived in foster care from a young age or were adopted.

A series of questions were asked about violence and problems at home. A high proportion (60.7%) of the sample reported avoiding spending time at home as a child or teenager because of problems there; 28.9% said that the police came to their home when they were growing up because of violence there, and 36.2% reported leaving home at some stage during their childhood because of violence at home. In response to the question ‘were you well cared for as a child?’, one-quarter of the sample (28.7%) responded ‘no’.

Women’s abuse history: Because there is consistent evidence that child maltreatment and drug use problems are associated (Conroy et al., 2009), a series of questions that had been developed for a previous study by the National Drug and Alcohol Research Centre (NDARC) (the *Comorbidity and Trauma Study*) were asked concerning the women’s own abuse history in this study. The results are shown in the Table 18.

Table 18: Childhood abuse reported by the sample

When you were a child or teenager...	Proportion responding ‘yes’ (n = 168)
Were you ever hit or physically abused repeatedly?	41.4
Did you ever have any unwanted sexual experiences?	55.4
Did anyone force or persuade you to have sexual intercourse against your wishes?	44.0
Can you think of any upsetting sexual experiences with a relative or someone in authority?	36.5
None of the above	35.5

One hundred and seven women (64.5% of the sample) reported that they had suffered some type of abuse as a child or teenager, and that they suffered 2.7 different types of abuse on

average. That means that if they suffered one type of abuse they tended to suffer other types as well. These abuses took place across a wide range of ages, on average at around 10 years of age (although there were a large number of missing responses to this question). The most common type of abuse was unwanted sexual experiences (55.4%).

Similarly, Conroy et al. (2009) found high rates of child maltreatment, particularly sexual abuse (72%) among their opioid-dependent female sample from NSW, which tended to be severe, chronic and perpetrated by someone known to them.

5.4 Substance use history

Information was collected from the women about their substance use and treatment history, as their substance use and its impact on parenting is a central issue in this study. Table 19 shows self-reported substance use data, including the age the respondent first used each substance (if ever), recent use, and usage levels in the month before they started on the OTP, presented in order of the frequency in which they had been used.

The most common substances ever used by this population of women on the NSW Opioid Treatment Program were cannabis (98.2% of the sample), tobacco (96.5%), alcohol (95.9%) and heroin or other opioids (97.7%). The four people who had never used heroin were dependent on 'street methadone' and codeine (including Nurofen Plus) and were placed on an OTP for that reason. Meth/amphetamine (89.4%) and cocaine (83.4%) had also been tried at high rates.

The age and order of commencing the different substance types follows the usual pattern that has been found in previous research on illicit drug-using populations (Degenhardt, Lynskey & Hall, 2000; Taplin, 2000; Ross et al., 2005; Shand et al., 2011). In this sample, the first substance used was tobacco or cigarettes (mean age of first use 13.4 years), then alcohol (14.5) and cannabis (15.1), then 'harder' drugs such as heroin (20.3) and meth/amphetamine (20.2), then cocaine (22.6). The age of first cannabis use and first heroin use among this sample was slightly higher than that found by Shand et al. (2011), who reported 14.2 years and 19.4 years respectively as the ages of initiation by their sample of females on the NSW OTP.

In the month before starting on their Opioid Treatment Program, the majority were using heroin and tobacco or cigarettes daily or almost daily. The high level of heroin use is expected as they must generally prove they are dependent on heroin to gain acceptance onto an OTP. Some (n = 17) reported detoxifying or reducing their level of usage immediately prior to starting on the OTP. Cannabis was the next most common substance used at the time of treatment entry, used by 42.1% of the sample on an average of 24.6 days in the month prior to starting on their program.

Some additional questions were asked about alcohol use. Women were asked if they had ever had a problem with alcohol; 68.9% responded 'no' while 9.3% said they had had a problem with alcohol in the previous 12 months, and another 21.7% more than 12 months ago.

Table 19: Substance use history and current use

Drug type	Ever used/ tried? Yes	Age first used (mean age in years)	Mean number days used in 30 <i>before</i> <i>treatment</i> (and number who used)	Mean number days used in <i>past 30</i> (and number who used)
Cannabis (n = 171)	168	15.1	4.6 (n = 72)	13.4 (n = 76)
Heroin (n = 171)	167	20.3	27.6 (n = 150)	5.6 (n = 37)
Tobacco/cigarettes (n = 168)	165	13.4	29.5 (n = 147)	29.1 (n = 155)
Alcohol (n = 168)	164	14.5	13.9 (N=40)	8.3 (n = 68)
Meth/amphetamine (speed, ice, crystal) (n = 170)	152	20.2	10.8 (n = 25)	5.5 (n = 10)
Cocaine (n = 169)	141	22.6	15.9 (n = 27)	4.7 (n = 15)
Tranquillisers and sleeping pills (n = 166)	95	23.4	16.5 (n = 34)	10.0 (n = 20)
Ecstasy (n = 167)	93	22.3	2 (n = 5)	1.3 (n = 3)
(Street) methadone or buprenorphine (n = 167)	64	26.1	9.3 (n = 26)	3.0 (n = 5)
Painkillers and analgesics for <i>non-medical purposes</i> (n = 167)	26	24.3	18.1 (n = 16)	20.8 (n = 4)

Women using heroin and caring for children: Of the 37 women who reported using heroin at least once in the month prior to the interview, 21 women were identified as having children living with them. This does not mean, however, that they were using heroin at the same time as they were caring for children.

Changes in substance use while on the NSW OTP: Except for tobacco, cannabis and alcohol, the number of people using the listed substances has reduced over the period the women have been on the OTP. Tobacco was still used by the vast majority of the women (92.3%), and there was some increase in the number of women reporting recent alcohol usage (to 40.5%), but an apparent decrease in the number of days on which alcohol was consumed. Heroin use reduced markedly from the time the study participants started on the program, both in the numbers reporting any use in the past month, decreasing to 21.6% from 88.3% of the sample, and in the number of times used, from 27.6 days to 5.6 days per month.

5.5 Summary

- Most women were on very low incomes and experiencing a number of financial problems.
- Less than one-third (29.6%) of the women had a current driver's licence, and several reported transport difficulties.
- Most rated their health status more poorly than did the general population, with more than a quarter reporting some type of physical illness.
- 64.5% of the women reported suffering some type of abuse as a child, with most suffering more than one type. Much of this abuse occurred when they were young girls (age 10 years on average) and was sexual in nature.
- Many reported a number of problems at home when they were growing up, with half living away from home at some stage, but generally not in foster care.
- The study participants had extensive substance use and drug and alcohol treatment histories, again consistent with previous research on substance users in treatment.
- Heroin use reduced markedly from the time the study participants started on the program, both in the number reporting any heroin use in the past month (from 88.3% to 21.6%) and in the number of times used (27.6 to 5.6 days per month).

6. RESULTS – CHILDREN AND PARENTING

This section provides a description of the women’s children, their involvement with child protection system, and whether the children are living with their mother, in OOHC or elsewhere. The children’s schooling and any health issues are also discussed. A number of issues around the women’s parenting practices which have not been examined in previous research with this population are also included.

6.1 Child protection system contact and involvement

Child protection reports: If we examine the extent to which these families have been involved with the child protection system, a high rate of involvement is evident.

Most of the mothers (n = 109, 63.7%) reported that one or more of their children had been the subject of a report to child protection services within the last 16 years. Alternatively, of the 302 children aged 16 years and younger that the study participants have given birth to, 191 (64.2%) had at some stage been the subject of a child protection report.

Study participants were asked who had made the child protection report and the major reasons for it, the last time they were reported. Their answers are given in Table 20.

Table 20: Person making the latest report

Who reported ?	Number (n = 109)	Percentage
Family (incl. in-laws, partner, ex-partner)	30	27.5
Opioid Treatment Program (OTP)	18	16.5
Self	14	12.8
Hospital (incl. maternity)	14	12.8
Criminal justice (police, prison)	14	12.8
Friend/neighbour	13	11.9
Other health/medical service	10	9.2
Childcare/school	9	8.3
Other	6	5.5

Over one-third of women (n = 42; 38.5%) were reported by a health service – either their Opioid Treatment Program, a hospital (generally the maternity ward where they had just given birth), or another health or medical service. Family (including their own family, their partner, their ex-partner or his parents) were the next most common notifiers to child protection services, with 27.5% of women (n = 30) responding that family had reported them. Fourteen women (12.8%) contacted child protection services themselves, generally seeking support of some kind. The remainder were reported by the criminal justice system (12.8%), friends or neighbours (11.9%), or childcare/school (8.3%).

The reasons they were reported to child protection services, as reported by the women, are shown in Table 21. Multiple reasons were provided by some.

Table 21: Reasons for their latest child protection report

Reason for report	Percentage (n = 109)
AOD use (incl. partner AOD)	65.1
Domestic violence	23.9
Lack of supervision	13.8
Crime/imprisonment (incl. partner)	11.9
Support needed	9.2
Housing/homelessness	7.3
Mental health/psychiatric	7.3
Malicious reports	6.4
Neglect (inc. missing school & appointments)	4.6
Child death	2.8
Physical abuse/injury of child	2.8

By far the most common reason the women gave for being reported to child protection services was substance use (including alcohol), some of which was attributed to their partner's substance use; this was the reason given for being reported by 65.1% of the women. Given that all the women were either currently or previously illicit drug users, this high rate of substance use as a reporting reason is not surprising. Domestic violence was the next most common reason for being reported, given by 23.9% of the women. Mental health issues, the other major risk factor of concern to child protection services, was given by only 7.3% of women as a reason for being reported.

Table 22 shows data that was extracted from *KiDS* records for those women who consented to their child protection records being examined.

Table 22: Summary data from KiDS records on reports and OOHC

Information from KiDS records	Number/percentage
Number records examined shortly after interview*	74
Number about whom initial reports had been made	71
Number initial reports per person (average)	13.6
Proportion of initial reports in which drug or alcohol abuse by carer was recorded	31.6%
Number pre-natal reports for 'drug abuse by carer'	11
Number women with at least one child in care	37 (48.7%)
Proportion of women with a child in care for which the reason for being in care was 'drug or alcohol abuse by carer'	56.8%

As can be seen above, there are a large number of reports in relation to the women's children, 13.6 reports on average, of which about one-third related to 'drug or alcohol abuse by carer'. Eleven prenatal reports were recorded in relation to 'drug abuse' by the mother, some of which were multiples. Around half of the women whose *KiDS* records were examined had at least one

child in OOHC, with more than half being in care with ‘drug or alcohol abuse by carer’ as the recorded reason.

Children in OOHC: Information was collected from the women themselves about whether their children were in OOHC at the time of interview: 56 women (32.7%) had at least one child in OOHC at the time of their interview.

If data on the respondents’ individual children are examined, as in Table 23, it can be seen that 99 (32.8%) of the respondents’ children under 16 years of age at the time of interview were in care. This is very close to the findings of Grella, Hser and Huang (2006), who reported 34.2% of children in care among their sample of women entering substance use treatment in the USA.

Table 23: Children in OOHC by age

Age in years	Number of children	Number in OOHC	Percentage in OOHC
< 1	8	2	25.0
1-2	38	14	36.8
3-4	35	17	48.6
5-11	134	50	37.3
12-15	87	16	18.4
16-17	25	0	0
18 +	73	N/A	N/A
Total	400	99	32.8

As can be seen above, children in OOHC as a proportion of the number of children in that age group varies according to the age of the child. The proportion of children in care in this sample increased over the first few years of life until the 3-4 year age group, by which stage almost half are in care. The proportions in care then reduce as children age, with 18.4% in care by 12-15 years.

Although the overall pattern is similar, these data show some differences from the statewide population, in which those aged under four years constitute 23.7% of the OOHC population (NSW Community Services, 2010), compared with 33.0% in this study, as can be seen in Table 24.

Table 24: Distribution by age group: percentage in OOHC statewide compared with percentage in this study

Age in years	Percentage children in OOHC this study	Percentage children in OOHC Statewide*
< 1	2.0	3.0
1-2	14.0	9.5
3-4	17.0	11.2
5-11	51.0	42.6
12-15	16.0	24.7
16-17	0.0	8.9
Total	100	100

* Source: NSW Community Services (2010) *Annual Statistical Report 2008-09*.

Not all the children within one family were in care in every case. In a number of cases older children returned or remained at home while younger siblings were removed, although in some cases middle children were the ones in care.

Of those in OOHC at the time of interview, a higher proportion than the state average of 50.8% (NSW Community Services, 2010) were living in kinship care (n = 66; 66.7%) and 33.3% were in foster care. More than half (56.1%) of the children in kinship care were living with their grandparents (some also with their father), and 40.9% with other extended family. All those in foster care were, of course, living with non-related adults.

Population estimates: At the conclusion of the study, data were obtained from the NSW Department of Health (Pharmaceutical Service Branch) on the number of women being dosed at each type of dosing point. Using these data, data on the OOHC population (AIHW, 2011), and the proportions obtained in this study of women with dependent children who were involved with child protection services, estimates have been made of the population, as shown in Table 25.

Table 25: Estimates of the number of women on the OTP involved with child protection in NSW

30 June 2010 Pharmacotherapy population	No. OTP clients *	No. women *	No. women with children < 16yrs (est.)**	No. women current child protection (est.)**
Total NSW	18,456	6,230 (33.8%)	3,054 (49.0%)	1,192 (38.6%) 998 (32.7% OOHC)

* Source: NSW Department of Health data, supplied June 2011.

** Source: 'Child protection and mothers in substance abuse treatment' study data.

As at June 2010, there were 6,230 women on the NSW Opioid Pharmacotherapy Program (NSW Health, 2011), constituting 33.8% of the pharmacotherapy population. If we assume, based on data from this study, that 49.0% of these women are the mothers of children under 16 years of age, and that 38.6% of them are involved with child protection services at any one time, with 32.7% women having children in OOHC, we can see that they constitute a significant proportion of the OOHC population. As at 30 June 2010, we estimate that 1,192 women on the Opioid Treatment Program were involved with child protection services, 998 of whom had at least one child in OOHC.

If it is further assumed, based on the data from this study, that each of these 998 women has a median of 1.8 children under 16 years of age in OOHC, then an estimated 1,796 children from the population of mothers on the OTP were in OOHC in June 2010. Given that there were 16,175 children in OOHC as at 30 June 2010 (AIHW, 2011), this population constitutes an estimated 11.1% of the OOHC population.

Age children were removed: Of interest is the age at which the children were removed from their mother's care; this was calculated based on the mother's self-report for those children who were in care at the time of interview. As can be seen in Table 26, almost half (42.4%) of those children currently in OOHC were removed at birth or soon after, generally from the maternity ward, and were still in OOHC at the time of interview.

Table 26: Proportion removed at birth by age group

Age in years	Number in OOHC	Number removed at birth	Percentage removed at birth
< 1 year	2	2	100
1-2 years	14	11	78.6
3-4 years	17	11	64.7
5-11 years	50	16	32.0
12-15 years	16	2	12.5
Total	99	42	42.4

Among the younger age groups the proportion of children removed at birth is much higher than among the older age groups. This could reflect the fact that children are more likely to be removed at birth in recent years than they were in the past, or that children from the older age groups are more likely to have returned home (and are therefore not captured in these data) and had in fact higher rates of removal at birth than appear here. Few children, however, were reported to have been in OOHC and had since returned home.

Differences in geographic areas in the likelihood of current child protection involvement: When the level of child protection system involvement is examined by geographic area it can be seen that there are differences: some OTP clinics were more likely than others to have higher proportions of women currently involved with the child protection system. The clinics with the higher child protection involvement were all in the one geographic region, Redfern/Waterloo. In this area 50.6% of the women reported current child protection involvement while the rest of the sample, from other areas of Sydney, had a current level of child protection involvement of 29.2%, and the difference was significant (chi-square = 8.212; df = 1; p < 0.01).

Differences in the characteristics of the women in these programs did not explain the differences in child protection involvement between these areas; that is, the women were similar but there was a significant difference in the rate at which they were involved with child protection services by area.

Current child protection system involvement but not OOHC: Ten of the women in the sample reported that they were involved with child protection services but did not have any children in OOHC at the time of interview. Three were receiving services through Community Services and six were under the Brighter Futures program, an early intervention program that provides targeted support to vulnerable children and families. Data were missing for the tenth participant.

Further information on the services people receive through these programs will be given in subsequent chapters.

Children living away from their mother but not in OOHC: As well as the 99 children who were in OOHC, another 57 children aged 16 years and younger were *not* living with their mothers at the time of interview for various other reasons, including Family Court orders ($n = 15$) and informal arrangements with family to care for their children ($n = 42$). Informal arrangements were most likely to be with the children's father or grandparents, while Family Court orders were most likely to be for the father to have custody.

In total, 156 children aged under 16 were living away from their mothers at the time of interview. In other words, half (51.7%) of all the children these women had given birth to were not in their care at the time of interview.

Previous living away arrangements: Forty women reported that their children had lived elsewhere (that is, not with them), excluding the current arrangements. The majority ($n = 24$) of these were private arrangements for their children to live with their extended family, usually as a way of the family providing support to the mother. Those women whose children had lived with their extended family under a private arrangement previously were much less likely to have children in OOHC at the time of interview (chi-square = 8.75; $df = 1$; $p < 0.01$).

Another four women reported that their children had previously been the subject of custody arrangements placing them elsewhere. Only eight women reported that their children aged under 16 years had been removed by the child protection system in the past and were now back in their mother's care. Another three women had placed their children in care on a voluntary basis in the past.

Child protection system involvement

Table 27 provides a summary of the child protection system involvement as reported by the 171 women in this study.

Table 27: Current, past or no child protection involvement past 16 years

Child protection system involvement of respondents	Number (n = 171)	Percentage
Current child protection involvement, i.e. at least one child in OOHC &/or recent investigation or service within last six months	66	38.6
Past involvement with child protection, i.e. previous report, investigation or OOHC	43	25.1
No child protection contact in last 16 years	62	36.3

Just over one-third of the women had current involvement with child protection, defined as at least one child in OOHC (n = 56), at the time of interview or an investigation or service provision within the past six months (n = 10). Approximately one-quarter had had some past child protection service involvement (n = 43), and may have had a child in care within the past 16 years. Another third (n = 62) had had no child protection service contact in relation to any of their children aged 16 years or younger.

Reason for child protection report and current child protection involvement: Table 28 shows the reasons for being reported to child protection services that have been given by the women, according to whether they were currently involved with child protection or had been in the recent past. More than one reason was reported for several of the women. Women who had not had any child protection involvement in the past 16 years were not included in this table. Women who were currently involved with child protection tended to report substance use, domestic violence, crime/imprisonment and mental health issues more often than did the women who had been involved with child protection in the past (usually a child protection report or investigation). Nearly all of those who were the subject of reports that the women considered malicious were not currently involved with child protection, confirming their own assessment.

Table 28: Reason for report by current or past child protection (CP) involvement

Reason for report	Current CP number (n = 66)	Current CP percentage	Past CP number (n = 43)	Past CP percentage
AOD use (incl. partner AOD)	52	78.8	19	44.2
Domestic violence	19	28.8	7	16.3
Lack of supervision, or neglect	11	16.7	9	20.9
Crime/imprisonment (incl. partner)	12	18.2	1	2.3
Support needed	6	9.1	4	9.3
Housing/homelessness	6	9.1	2	4.7
Mental health/psychiatric	7	10.6	1	2.3
Malicious reports	1	1.5	6	14.0
Other	3	4.5	8	18.6

This suggests that those women who say they have been reported to child protection services for alcohol or other drug use are much more likely to be involved with child protection services currently than those who were not reported for AOD use (chi-square = 13.728; df = 1; p < 0.001). This is also consistent with the findings from the bivariate analyses in Chapter 3.

Contact between the mother and her birth children: Once a child has been removed from their parents' care, contact between them becomes an issue. If reunification is being considered, then more frequent contact is generally encouraged than if final orders have been made for the child to remain in OOHC. As final orders had been made for many of the families in this study, contact had become infrequent and often contact four times per year had been ordered.

Table 29 shows what type of contact the women reported having with their children under the age of 16 years who were not living with them, according to the type of care arrangement. The data relate to the 156 individual children not living with their mother at the time of the interview.

Table 29: Contact and living arrangements

	No recent contact	Regular supervised contact	Irregular contact	Other	Total
No formal arrangement	3	0	6	26	35
Family Court	3	1	1	9	14
Kinship care	7	28	8	23	66
Foster care	9	21	1	2	33
Other	2	0	1	0	3
Total	24	50	17	60	151

Missing: 5

This shows that around two-thirds of children in foster care had regular supervised contact (n = 21), while the rest of those in foster care had no recent contact or had irregular contact.

Less than half (n = 28; 42.4%) of those in kinship care had regular supervised contact, which may occur as little as four times per year and in a special contact centre. Around one-quarter (n = 15) had no recent or irregular contact, and this was generally if the children were placed with their father (ex-partner) and/or paternal grandparents. Quite a large number of those in kinship care (n = 23) made their own contact arrangements, either because it had been left to their own discretion or, at times, Children's Court orders were ignored.

Where there was no formal arrangement or a Family Court order in place, families were more likely to make their own arrangements.

Contact arrangements were the focus of a great deal of distress for the women whose children were not living with them because of issues such as the infrequency of the contact permitted, their inability to deal with the emotions that seeing their children aroused in them, their feelings of being excluded from their children's lives (particularly by the paternal extended family), and court orders that prevented the women from seeing their own family of origin when they had her children in their care. The chaos in which many of the women lived made it difficult for them to meet scheduled appointments for contact and to make the appropriate travel arrangements, and the associated distress meant they at times reported either using substances in

order to cope or avoided seeing their children from embarrassment about their perceived failure as a parent. In addition, examination of the KiDS records shows that a great deal of time was spent on organising contact visits in some cases.

6.2 Children’s schooling, childcare, health and behavioural problems

School and childcare attendance: Women were asked for some information about each child’s attendance at school or childcare, but only in relation to those under the age of 16 at the time of interview. Just over half (53.9%) of children who were aged five or younger were attending either school or childcare at the time of interview. Looking at children aged three to five, the age when preparation for school is most important, nine children in this group were not attending school or childcare. Those aged five years and younger were less likely to be attending school or childcare if they were living with their mother than if they were living elsewhere (chi square = 8.71; df = 1; p < 0.01). This finding is not surprising given that most of the women were not employed. Several commented that they would have liked to have placed their children in childcare but were unable to obtain a place.

The vast majority (94.7%) of children aged between six and 16 years were attending school at the time of interview, while 11 were not. Twenty-three (11.8%) of those attending school were reported to be having problems at school, mostly among the older age groups.

Health and behavioural problems: All the mothers were able to respond as to whether their children had any health problems or not. Major health or behaviour problems can make it difficult to care for children and can increase the chances of poor parenting and child maltreatment. For example, of children who have a developmental disability, 10-25% are likely to experience abuse and neglect (Trocmé et al., 1998). Children with substance-using parents are at an elevated risk of displaying both aggression and behavioural problems (Whitaker et al., 2006) and of later developing a conduct disorder (Pickles et al., 2001).

Mothers reported that 64 of the 302 children aged under 16 years (21.2%) had some type of behavioural or health problem, with some having several types of problems. The types of problems reported can be seen in Table 30.

Table 30: Type of health or behavioural problem

Type of problem	Number (n = 64)
Behaviour problems – non-specified	20
Speech/language problems (developmental)	11
Eye problems (physical)	10
ADHD (behavioural)	7
Autism (developmental)	6
Developmental delay (developmental)	3
Obesity (physical)	3
Hearing problem (physical)	2
Cerebral palsy (physical)	2
Other physical problems (physical)	10

Missing = 2

Among those who were reported to have problems ($n = 64$), behavioural problems were the most common (43.9%), then developmental problems (30.3%) and physical problems (27.3%).

Having a child with health, learning or behaviour problems significantly increased the likelihood of being involved with child protection services (chi-square = 8.461; $df = 1$; $p < 0.01$), and most of these children had been placed in OOHC. As can be seen in Table 31, 45.5% of women involved with child protection services had one or more children with a health or behaviour problem.

Table 31: Having a child with a health, learning or behaviour problem and child protection involvement

Women who have one or more children with a problem	Not involved with child protection	Current child protection involvement
Yes	25 (24.0%)	30 (45.5%)
No	79	36

Child deaths: Fourteen mothers (8.2% of the sample) reported that they had had a young child who had died. Some of these children had died many years ago, but all of the women reported significant feelings of loss and grief as a result of losing their child.

Six of these deaths were reported to be stillbirths. Of the remaining eight deaths, two died of SIDS (one was six months, and the age of the other was unknown), one drowned (aged one year), one died of an unspecified muscle disease (aged three years), one died of spina bifida (aged two months, and a twin), and another died of viral meningitis (aged three years). The other two children died at age four and 19 months respectively, of unknown causes. Those women who had had children who had died were just as likely to have children in OOHC as not.

6.3 Parenting issues

Women were asked a number of questions about their parenting. Many of these questions had not previously been asked of substance-using parents, but, as many of the questions used had been drawn from Australian studies with parents in the general population, some comparisons can now be made between the different groups of parents.

The following question was taken from the LSAC study (AIFS, 2004); it measures global self-efficacy of parenting. Parents were asked to self-assess their ability as a parent on a five-point scale ranging from 'Not very good at being a parent' to 'A very good parent'.

Table 32: ‘Overall as a parent, do you feel that you are ...?’

Response	Number responding (n= 167)	Percentage	LSAC responses (age 4-5 yrs)
Not very good at being a parent	1	0.6	0.3
A person who has some trouble being a parent	15	9.0	2.8
An average parent	57	34.1	32.0
A better than average parent	50	29.9	34.7
A very good parent	44	26.3	30.1

Overall, the category with highest number of responses among this sample was ‘an average parent’ (34.1%). Interestingly, more than half of the women (56.2%) considered themselves to be ‘better than average’ or a ‘very good parent’. This percentage is lower than the LSAC sample of parents of children aged 4-5 years, 64.8% of whom rated themselves as above average (AIFS, 2004). However, more women in this sample rated themselves negatively than did the LSAC sample (9.6% compared with 3.1%).

There were no differences in the ratings the women gave themselves according to whether they were currently involved with child protection services or had children in OOHC compared with those who had no child protection involvement.

Another question taken from the LSAC questionnaire measured the importance of monitoring and supervising children. This question was less successful in its application to this population as many of these children were older and respondents appropriately responded that the need to know where their child was and what they were doing depended on the age of the child. Nevertheless, all women responded that they agreed or strongly agreed with the question that it is important that parents know where their child is and what they are doing all the time.

Women were also asked whether they thought that their drug use had ever affected their ability to look after or parent their children. Half (52.1%) of the women responded that their drug use had affected their ability to parent their children, while slightly less than half (45.5%) responded that it had not, as shown in Table 33. There were no differences in responses according to whether the women were currently involved with child protection services or had children in OOHC compared with those who had no child protection involvement. Those women who said their drug use affected their parenting described themselves as being unwell or preoccupied, and reported that any money and time they had went towards the drugs rather than the children. Those who said their drug use did not affect their parenting reported that they always put the children’s needs first, that they used drugs only when the children were being cared for by family, and that they did not use drugs when they had children with them.

Table 33: Self-reported effects of substance use on parenting

Has drug use affected your parenting?	Number (n = 165)
Yes	86
No	75
Not applicable	4

Women were also asked whether their children were either aware of their substance use or that they were receiving treatment for substance use.

Table 34: Children's awareness of substance use

Are your children aware of substance use?	Number (n= 165)
Yes	81
No	82
Not applicable	2

Essentially an equal number women reported that their children were aware of their substance use and/or treatment as not. Their awareness usually depended on the child's age, younger children being less likely to be aware of their mother's substance use and/or treatment. Some women reported going to great lengths to ensure that their children did not know about their substance use and/or treatment, and reported being very upset when their children were told about it by either family or the child protection system. There were no differences in responses according to whether the women were currently involved with child protection services or had children in OOHC compared with those who had no child protection involvement.

Women were also asked whether their children came with them to the opioid treatment clinic.

As shown in Table 35, more than half the women (56.3%) said that they never brought their children to the clinic. In a number of cases this was because they did not have their children in their care. Those who brought their children to the clinic 'most of the time' or 'all of the time' all had a child under the age of five years.

Table 35: Whether children attend OTP

Do your children come to the OTP?	Number (n= 167)
None of the time	94
A little of the time	45
Some of the time	18
Most of the time	6
All of the time	4

Attending the clinic can be advantageous in that it brings the children into the view of the clinical treatment staff and means that parents, particularly single parents, are not obliged to make alternative care arrangements for their daily dosing. It is seen as undesirable by many parents and clinicians as it exposes the children to the drug-using population at the clinic. Some women reported going to great lengths to prevent exposing their children to the OTP, by attending dosing at very early hours of the morning or when their children were at school. Dosing hours at some clinics made it difficult for them to do this.

Parenting courses: Women were asked if they had ever done a parenting course or similar activity. Around one-third of the women (31.7%) reported participating in a parenting course, although just over one-third of these completed less than six weeks of their course. Just under one-third completed six weeks exactly and another third completed 12 or more weeks. Most were unsure of the name of their parenting course, but of the named courses ‘123 Magic’ was the most common (n = 11), followed by ‘Triple P’ (n = 8) and ‘TIPS’ (n = 3). Nearly all who participated in a parenting course said that they found it ‘helpful’ or ‘very helpful’.

Those women who reported past or current involvement with child protection services were significantly more likely to have participated in a parenting course than were those who had no child protection system involvement (chi-square = 8.330; df = 1; p < 0.01). There was some tendency for those who had participated in a parenting course to have spent longer in treatment, but the difference was not significant.

Changes in parenting ability while on the OTP: Women were asked whether their parenting ability had become better or worse, or stayed the same, while on the OTP.

Table 36: Changes in parenting ability while on the OTP

Has your ability to parent got.....?	Number (n= 166)
Worse	2
Same	17
Better	129
Not applicable	16

The vast majority of women (n = 129; 73.5%) reported that their parenting ability had improved while on the program. Two said it had become worse, while 16 had become parents while on the program so they were unable to answer. Most reported that being on the OTP made them more stable and able to lead a more normal life.

6.4 Summary

- Women in this sample were most commonly reported to child protection services by a health service (including the OTP and maternity hospital), then by family, and mostly for substance use.
- One-third of the children were in OOHC. Of the 99 children under the age of 16 who were in care, 66 were in kinship care, mostly with grandparents or extended family. Another 57 children were not living with their mothers because of Family Court orders or informal family arrangements.
- Between 37% and 49% of the children aged one to 11 years were in OOHC. Almost half (42.4%) of those in care had been removed at birth (or within six months of birth), with higher rates among the younger age groups.
- Half of all contact between the mother and birth children was supervised, especially if the children were in foster care.
- 21.2% of the children were reported to have some type of behavioural or health problem. Women with children who had such problems were significantly more likely to be involved with child protection services. Fourteen women reported that they had had a child who died.
- Around one-third of the women reported having undertaken a parenting course, with those currently involved with child protection significantly more likely to have done so.
- The vast majority of women rated themselves as doing an average or above average job of parenting, although fewer than in the LSAC study. Although half acknowledged that their parenting ability was adversely affected by their substance use, half also reported that they kept their children unaware of their use and/or OTP.

7. RESULTS – SUBSTANCE USE TREATMENT

This section provides information about the services and treatment the study participants received through their Opiate Treatment Program. Specific pharmacological treatment issues, such as dosage levels, take-away doses and drug testing, will be described. Issues such as the reasons the women started this treatment type, the types of problems they presented with and the services and interventions they received through their program will be covered, and the following hypotheses will be addressed:

- Are mothers in the OTP who are involved with Community Services more likely to be retained in the OTP than those not involved?
- Does a greater number of services/supports provided to the mother decrease the likelihood she will be involved with child protection services?

7.1 NSW Opioid Treatment Program background

Pharmacotherapy treatment is used in Australia for people who are dependent on opioids such as heroin, and is delivered in NSW through the Opioid Treatment Program.

The most commonly used and most rigorously researched of the pharmacotherapies is methadone. Methadone is a synthetic opioid agonist used mainly for maintenance therapy. It reduces the use of heroin through cross-tolerance, which results in a reduction of heroin withdrawal symptoms, less desire to use heroin, and reduced euphoric effect when heroin is used. Methadone is taken as a syrup, orally on a daily basis (AIHW, 2010).

Buprenorphine is the other main pharmacotherapy used for treating opioid dependence and was first registered for use in Australia in 2000. Buprenorphine is often called a partial opioid agonist, having actions similar to the full agonist drugs but with less efficacy, so that increases in dose have progressively less effect. Two buprenorphine products are currently registered in Australia for the treatment of opioid dependence, Subutex and Suboxone (buprenorphine combined with naloxone). Both forms are taken in tablet form sublingually and can be taken less often than methadone, even every three days, reducing the need for daily dosing (AIHW, 2010).

Both pharmacotherapies are predominantly used as part of a maintenance program. Both methadone and the buprenorphine products are dispensed through clinics (public or private) or approved pharmacies. In NSW, medical practitioners must attend training and be authorised if they are prescribing pharmacotherapy to more than five clients. Dosing is generally supervised, and in certain circumstances clients may be eligible to receive a take-away dose. In NSW, opioid pharmacotherapy can be free, usually through a public clinic, or there can be a charge for dosing at a pharmacy or private clinic. In June 2009 there were 17,868 people on the OTP in NSW, and 43,445 nationally (AIHW, 2010). In NSW, 80.7% of these people were on methadone, and the rest on buprenorphine.

A large body of research evidence demonstrates that pharmacotherapy treatment for opioid dependence is successful for many individuals in reducing the harms associated with opioid dependence (see e.g. Ritter & Chalmers, 2009). Recent Cochrane Reviews have found that methadone is an effective maintenance therapy intervention for the treatment of heroin dependence, as it retains patients in treatment and decreases heroin use better than treatments that do not utilise opioid replacement therapy (Mattick et al., 2009), and that buprenorphine is an

effective intervention for use in the maintenance treatment of heroin dependence, but is less effective than methadone delivered at adequate dosages (Mattick et al., 2008).

Nationally, 34.9% of pharmacotherapy clients are women, a proportion that has been relatively stable for many years (AIHW, 2010). As discussed previously, there were 6,230 women on the NSW OTP as at June 2010, constituting 33.8% of the pharmacotherapy population (NSW Health, 2011). Of these, 19.9% were being dosed at public clinics, 14.3% at private clinics, 55.3% at pharmacies, and the rest in prison or elsewhere.

The following section provides an overview of the information on the treatment study participants received while on the OTP, which was collected as part of the study. Some of these treatment issues are of particular interest to the child protection system, such as dosage levels, attendance at dosing, numbers of take-away doses and drug-use testing. However, there are a number of other treatment-related factors that affect women's ability to parent their children, such as the costs and time spent attending the OTP for dosing, the services and supports they receive on the program, and the length of time they have spent on the program. It is also interesting to examine the reasons the women entered treatment, why they started pharmacological treatment, and how children and parenting issues affect these decisions.

Because there are differences in the structure of the public and private OTP systems, some comparisons between the public and private clinics are also provided.

7.2 Reasons for entry, retention and service provision

Dosing clinic: People who are managed through clinics, particularly public clinics, are generally considered to be less stable than those being dosed at community pharmacies, to which clients are generally encouraged to transfer after they have been stable on the OTP for a period. In order to test whether the clients at the public clinics differed from those at private clinics in this study, some comparisons between the public and private respondents were undertaken on a number of variables. On all of the demographic characteristics compared, there were no differences between the public and private clinic clientele, except for in the following two characteristics:

- Public clinics had significantly greater numbers of Aboriginal clients than did the private clinics (chi square = 13.812; df = 1; $p < 0.001$).
- Private clinics had significantly greater numbers of women who were employed than did the public clinics (chi square = 7.080; df = 2; $p = 0.029$).

Previous treatment history: Women were asked a number of questions about their previous drug treatment history. Most (82.0%) of the women had been in treatment previously, with a median of three previous alcohol or other drug treatments. Nearly two-thirds (63.2%) had been on an opioid pharmacotherapy program previously, and, not surprisingly, most of those who had received any treatment previously had done so for opioid use (78.4%).

The median age they received their first alcohol or drug treatment was 23 years, the youngest being 15. Three were first treated aged in their forties and 44 were in their teens.

Reasons for treatment entry: Women were asked whether they had been prompted or referred to treatment the last time they started treatment. Over half the sample (63.6%) said they were self-referred to treatment, while family (19.9%) and health practitioners (12.6%) referred or suggested to a number of people that they enter treatment. Only six people were referred by child protection services to this episode of treatment, but 19 people in total reported that contact or the threat of contact with child protection was a reason for entering treatment.

This differs from the entry pathways into treatment found by Grella, Hser and Huang (2006) whose Californian sample of mothers was most commonly referred by the criminal justice system (37.6%) with only 30.7% self-referred.

Women in this study were also asked why they had sought treatment at that particular time. Their responses are given in Table 37.

Table 37: Reason for seeking treatment

Reason	Number (n = 159)
Sick of lifestyle/lifestyle getting out of control	48 (30.2%)
Child-related reasons:	47 (29.6%)
Pregnancy	20
Use affecting kids or kids about to find out	15
Kids removed/wanted them back	7
Didn't want to lose child	6
Hanging out/sick of using heroin	29 (18.2%)
Financial reasons	29 (18.2%)
Legal/gaol/trouble with police	14 (8.8%)
Physically sick/in hospital	6
Wanted to keep job/working	4
Other	26
Total	203

A number of reasons were provided by many of the women, the most common being that they were sick of the lifestyle (30.2%), that they were sick of using heroin and 'hanging out' (18.2%), and that they could not afford to keep using heroin (18.2%). Nearly one-third (29.6%) reported entering treatment for child-related reasons: either the woman was pregnant, her use was starting to affect the children, or she had lost or was afraid of losing her children to child protection services.

Women were asked the main reason why they started a pharmacological treatment program rather than another type of treatment, such as a residential rehabilitation service. The most common reasons given are shown in Table 38.

Table 38: Reasons for choosing pharmacological treatment

Main reason for OTP	Number (n =160)	Percentage
Could stay caring for my children	35	21.9
Had tried other treatments	27	16.9
Pregnant at the time of entry	21	13.1
Unaware of other treatments	18	11.3
OTP was recommended by someone	13	8.1
OTP keeps me stable	11	6.9
Other	35	21.9

Again, reasons related to children featured highly, with 35.0% citing either pregnancy or being able to continue caring for their children as the main reason for choosing pharmacological treatment. Some of the women were not yet mothers at the time they entered the OTP on this occasion. When asked why they chose their particular clinic, the vast majority cited proximity as the main reason (60.2%).

Problems experiencing at the time of treatment entry: Each respondent was asked which areas she was experiencing problems with at the time she entered treatment. The responses are shown, in order of decreasing frequency, in Table 39. The area most commonly nominated as a problem area was emotional wellbeing (58.5%) of respondents, closely followed by financial and family relationships (55.5% each). Only 4.7% of the sample reported having no problems on entry to the OTP.

Table 39: Types of problems at entry and whether they changed on OTP

Problem area	Problems at OTP entry (Number of 'yes' responses) (n = 164)	Changes since on OTP (‘Better’ responses as % of those with problem)
1. Emotional wellbeing (not coping)	96 (58.5%)	78.1
2. Financial	91 (55.5%)	73.6
3. Family relationships (including partner)	91 (55.5%)	71.4
4. Physical health	66 (40.2%)	77.3
5. Parenting/childcare issues	66 (40.2%)	63.6
6. Mental health/psychiatric/ psychological	62 (37.8%)	67.7
7. Legal/crime	39 (23.8%)	74.4
8. Employment	39 (23.8%)	46.2
9. Other	4 (2.4%)	50.0

Changes in extent of problems while on the OTP: For each problem area, between 70% and 80% of respondents reported that their situation was 'better', though improvements were not as strong in the areas of mental health (67.7%), parenting (63.6%) and employment (46.2% responded 'better'). Only a very small number ($n = 12$) said their situation was 'worse' in any of these areas and the rest said they were the 'same'.

Service provision through the OTP: Participants were asked which services they had received in the previous six months either through the OTP or another agency. Their responses are listed in Table 40 in order of the frequency with which they were received. The vast majority (85.8%) reported receiving at least one of these services, and a small proportion (14.2%) received none. The median number of services received was two. General medical/health and individual counselling were the most common services received.

Women who were currently involved with child protection services received more services than the women who were not ($p < 0.001$). There were three services that were more commonly received by those mothers involved with child protection. Table 41 shows the services that those currently involved with child protection were significantly more likely to have received: individual counselling (chi-square = 10.204; $df = 1$; $p < 0.01$), legal assistance or advice (chi-square = 9.533; $df = 1$; $p < 0.01$) and childcare (chi-square = 5.648; $df = 1$; $p < 0.05$). The reasons for this difference are unclear, but it seems likely that the women seek the services of a counsellor and a lawyer when their children have been removed from their care. It is known that some received childcare through their involvement with an early intervention program, which may explain the difference here.

Table 40: Services received and would like to have received through OTP

Service type	Received within previous six months (n = 169)	Would like to have received previous six months (n = 167)
1. General medical/health (excl. dose discussions)	75 43.9%	–
2. Counselling – individual	63 36.8%	32 18.7%
3. Educational/vocational/employment assistance or training	44 25.7%	14 8.2%
4. Housing assistance	37 21.6%	36 21.1%
5. Psychiatric/mental health services	36 21.1%	6 3.5%
6. Legal assistance/advice	30 17.5%	5 2.9%
7. Financial advice/assistance	29 17.0%	15 8.8%
8. Childcare	23 13.5%	–
9. Pregnancy/antenatal services *	15 8.8%	–
10. Counselling – group	11 6.4%	–
11. Domestic violence counselling/help	9 5.3%	–
12. Family planning services/advice	8 4.7%	–
13. Parenting skills/classes	8 4.7%	28 16.4%
14. Anger management course	3 1.8%	–
15. Other (specify)	12 7.0%	25 14.7%

Table 41: Service types received significantly more often by those currently involved with child protection

Service type	Not involved with child protection % received service	Current child protection involvement % received service
Individual counselling	27.9	52.3
Legal assistance/advice	10.6	29.2
Childcare	8.7	21.5

When asked which services they would have liked to receive over the previous six months, the most common response was housing assistance (21.1%), followed by individual counselling (18.7%) and parenting skills/classes (16.4%).

There were differences between public and private clinics in terms of the likelihood of having received some services within the previous six months. Participants at public clinics were more likely than those at private clinics to receive financial advice or assistance (chi-square = 4.454; df = 1; $p < 0.05$), housing assistance (chi square = 7.182; df = -1; $p < 0.01$), and psychiatric or mental health services (chi square = 6.081; df = -1; $p < 0.05$).

When participants were asked whether they had a caseworker at their drug treatment service, only 27.3% responded that they did. Most who reported that they had a caseworker, however, found them 'very helpful'. Participants at public clinics were significantly more likely to report that they had a caseworker at their drug treatment clinic than were those at private clinics (chi-square = 57.586; df = 1; $p < 0.001$). Only eight (7.6%) private clinic clients reported having a caseworker. One public clinic had a much higher reported caseworker presence than all other clinics.

Study participants mostly (80.1%) reported that they had an appointment with the OTP prescriber at least monthly, with 35.8% seeing them every one to two weeks. People at private clinics had more frequent appointments with their prescriber than did their counterparts at public clinics, and this difference was significant (chi-square = 52.203; df = 3; $p < 0.001$). Only 8.1% of participants found their appointments with their prescriber 'not at all helpful' with the rest finding them 'some help' or 'very helpful'.

Length of time on current OTP: The median length of time the women had been in the OTP for this current episode was four years. One-quarter of the sample had been on their program for less than two years, with 55.0% for less than five years.

One of study hypotheses was that women who were involved with child protection services be retained longer on their OTP than women who were not. Comparisons of the length of time spent on the OTP on this occasion show that there was no significant difference between the two groups. As can be seen in Figure 7, and from the median time on the program, there was some tendency for those not involved with child protection to have spent more time on the OTP (median = 4 years) than those not involved (median = 3 years) but it was not statistically significant (Mann-Whitney test: Z score = -0.138; $p = 0.890$).

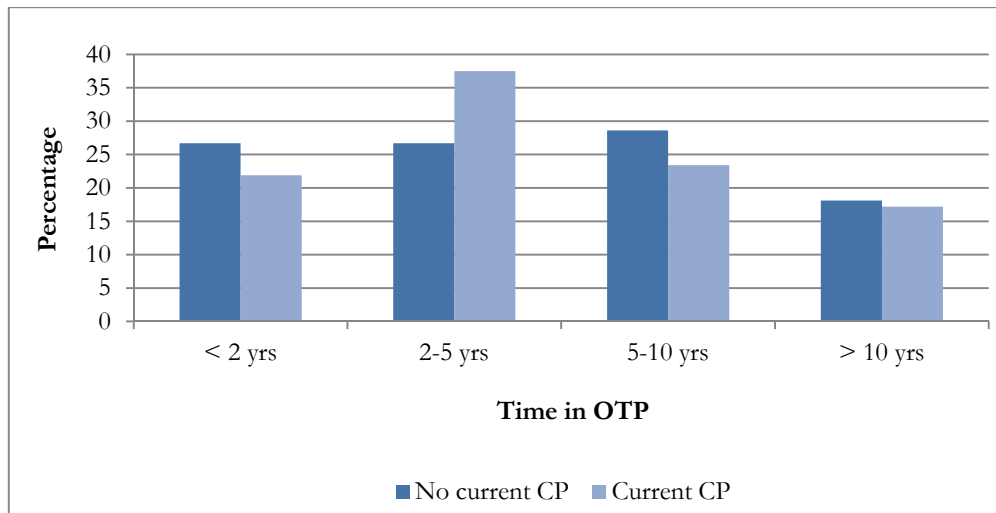


Figure 7: Time on OTP according to whether currently involved with child protection or not

7.3 Clinical issues

Dosing levels: The vast majority of the respondents were on methadone (77.8%), with the rest on the buprenorphine products Subutex (11.1%) and Suboxone (9.4%). The median dosage level for methadone was 80mg (range 10mg to 200mg), and 12mg each for Subutex and Suboxone (range 2mg to 24mg). The number of people prescribed each dosage level is shown in Figure 8.

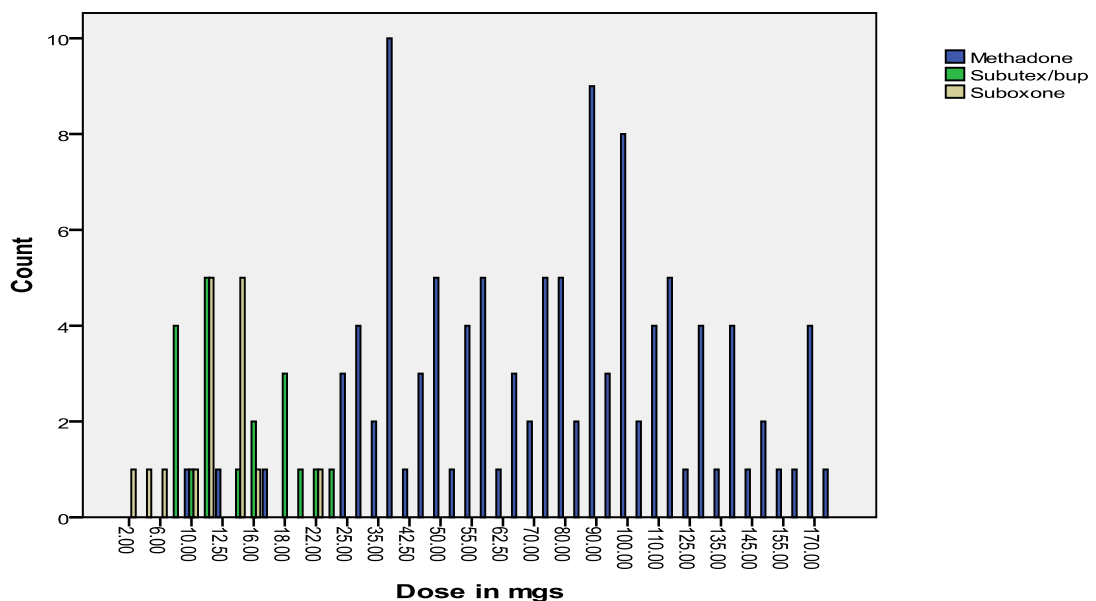


Figure 8: Dosage levels prescribed

Dosage levels prescribed did not differ significantly between the public and private clinics.

Attendance at the OTP: Because being on a pharmacological treatment program, particularly methadone, usually requires daily attendance at dosing, respondents were asked how much time they spent travelling to their clinic. A total of 45.8% of respondents travelled 15 minutes or less each way to their clinic for dosing and 75.9% travelled 30 minutes or less each way. Twenty-

three people (13.9%) travelled significant amounts of time, 60 minutes or more each way. Those with the shorter travelling times tended to live in the inner city areas where the clinics were closer, some within walking distance from their home.

Participants reported attending a median of five days per week for dosing. Those being dosed at private clinics generally attended for dosing less often, a median of three days per week, while those at public clinics attended a median of seven days per week.

The monetary costs associated with travelling to their clinic were mentioned by several participants.

Costs to the client: Participants in this study reported, as expected, that there were no charges or direct costs for dosing at public clinics, although one person in the study was being dosed at a community pharmacy at the time of interview and paying \$40 per week.

All those who were being dosed at private clinics paid for their dosing. The median cost at private clinics was \$56 per week, and ranged between \$35 and \$76 per week.

Take-away doses: Information on the number of take-away doses received each week was collected from the study participants. Just under half of the participants (45.5%) received no take-away doses at all. If they did receive take-aways, the median number they received was four. Those receiving take-aways tended to be at private clinics (median = 4; range 0-5), with women being dosed through public clinics much less likely to receive take-aways (median = 0; range 0-6) because of a policy decision to restrict take-aways in this sector, particularly when the adult has childcare responsibilities.

As policies around pharmacotherapy take-away doses have been affected by concerns over children ingesting these doses, participants who had received take-aways were asked whether anyone at their treatment program had talked to them about safe storage and usage of take-aways; 68.6% of women reported receiving such information. Most of those receiving take-aways reported that they stored them in a high cupboard (57.5%) or in a locked safe (18.4%).

Most of those with children under the age of two years also reported that the risks of co-sleeping with babies and toddlers had been explained to them.

Drug testing: Participants were asked how often they had to provide a urine specimen at their drug treatment service. Their responses are shown in Table 42.

Table 42: Frequency of urine testing at OTP

Frequency of urine testing	Percentage (n = 164)
Randomly	46.6
Fortnightly	21.7
Monthly	18.0
Weekly	5.6
Every three months	3.1
Not required	4.3

Almost half said they were tested randomly at their OTP, with the rest tested fortnightly or monthly predominantly.

Study participants were also asked whether they had had to provide urine specimens for an agency other than their drug treatment service; 36.4% of respondents (n = 59) reported that they had provided urine tests for child protection services previously and a small number had provided them for other agencies such as the Probation and Parole Service. Those who had been required to undergo urine testing for another agency were usually required to attend a pathology laboratory up to three times per week to undergo this urine testing. A small number did this additional testing through their OTP, some at their own request as a record of their current substance use or absence thereof.

7.4 Summary

- Most women when asked why they sought pharmacological treatment said that they had themselves chosen to do so (63.6%); 35.0% cited either pregnancy or being able to care for their children as the main reason for choosing pharmacological treatment in preference to other treatments. When asked why they chose their particular clinic, the vast majority cited proximity as the main reason (60.2%).
- Nearly all (95.3%) said they were experiencing a large number of problems at treatment entry, most commonly in their emotional wellbeing (58.5%), financial situation (55.5%) and family relationships (55.5%).
- In response to questions about services in the previous six months, the most commonly received were general medical (43.9%) and counselling (36.8%). Women who were currently involved with child protection services received more services than the women who were not. Three services were more commonly received by those mothers involved with child protection than those who were not: counselling, legal assistance and childcare. Women receiving their pharmacological treatment through a public clinic were more likely to have a caseworker than those at private clinics.
- Reductions in substance use, criminal involvement, number of problem areas and time spent with illicit drug-using friends, along with improvements in parenting ability, financial situation and sources of support were reported by the women since starting on their OTP. Women involved with child protection, however, stay no longer on the OTP than women who are not.

8. DISCUSSION

The results from this study of mothers on the NSW Opioid Treatment Program are important. This is the first relatively large-scale Australian study to interview mothers with a history of substance use about their children, parenting issues, and involvement with the child protection system. It builds on existing knowledge from studies conducted outside Australia and, by comparing with this overseas research, allows us to better determine their applicability to the Australian situation.

As with all studies, there are some limitations that should be considered when interpreting the findings from this study. Firstly, it is a study of women on the NSW Opioid Treatment Program and as such may be limited in its generalisability to other jurisdictions and populations. Secondly, the cross-sectional design of the study means that issues of causation cannot be examined. Thirdly, much of the data collected in the study relies on self-reported information, and this may affect the accuracy of some of the information about events a long time in the past. Efforts have been made to address these limitations in the body of the report. Despite these limitations, this study is an important addition to the evidence in this field.

Factors other than substance use are important: The results from this study show that, rather than severity of substance use being associated with mothers' involvement with the child protection system, other factors are of greater importance. In this study, the mothers who were involved with child protection had a greater number of children, had current mental health problems (usually depression or anxiety), and had less support from their parents than those not involved with child protection services. A focus on substance use may, in practice, obscure these other factors, which can be ameliorated.

Overseas research also clearly points to the greater importance of factors other than substance use in predicting child protection involvement. Three studies in particular have examined the factors associated with child protection involvement among samples of substance-using mothers, one using administrative data (Grella, Hser and Huang, 2006) and the others interviewing study participants directly (Nair et al., 1997; Gilchrist & Taylor, 2009).

Grella, Hser and Huang (2006), in their sample of 4,156 substance users entering treatment in California, USA, found that mothers who were involved with child welfare were younger, had more children, had less education, and had more economic problems. They were more likely than those not involved with child protection to be referred by the criminal justice system or other service providers, to have a history of physical abuse, and to be treated in outpatient programs. The severity and extent of substance use was not associated with child protection involvement, although there were more primary methamphetamine users among those involved with child protection than not.

Mental health problems: Nair and colleagues (1997) reported that having depressive symptoms was one of five variables associated with having children placed in substitute care in their sample of 152 substance-using women who had just given birth in Maryland, USA (along with younger age, current heroin use, having more children, and having children already in care).

Gilchrist and Taylor (2009) found that current depressive symptoms, lifetime involvement with prostitution, lifetime history of homelessness, living with a drug user, and having ever been incarcerated were associated with study participants not living with any of their children

compared with living with at least one child. The participants in this study were 185 female drug users who had ever given birth and were attending crisis and treatment services in Scotland.

Depression was, therefore, significant in two of the three studies of factors associated with child protection involvement among substance-using mothers. Other research has also highlighted that the high rates of depression and anxiety found among women in treatment for substance-use problems (Ross et al., 2005; Shand et al., 2011) and psychiatric disorders, particularly major depression, have been associated with higher rates of relapse and poorer treatment outcomes (Ross et al., 2005). In this study, mental health problems were indicated by being on a psychiatric-type medication, usually for depression or an anxiety disorder, rather than a recent psychiatric diagnosis or a measure of current distress (Kessler 10), and were significantly associated with child protection involvement.

Number of children: The number of children in the home was found in two of the overseas studies to be a predictor of child protection involvement (Nair et al., 1997; Grella, Hser & Huang, 2006), and this may be because the number of children can affect the emotional, social and physical resources available for individual children (Nair et al., 2003). Similarly, in this study, for each additional child the mother had, the odds of child protection involvement increased by 1.4. The women involved with child protection also had more children under 16 years than those not involved.

Age: Although in two of the studies discussed (Nair et al., 1997; Grella, Hser & Huang, 2006) women of a younger age were more likely to be involved with child protection, this finding was not supported in the multivariate analyses undertaken in this study, which may have been a result of multi-collinearity problems. All three overseas studies also found a variety of indicators of disadvantage that were associated with child protection involvement among substance-using women in treatment, although not all the same ones.

Social supports: The role of social supports available to parents and child protection involvement has been discussed previously (e.g. Dawe et al., 2007) but its association with child protection involvement in multivariate models has not previously been found with substance-using mothers. The study by Nair and colleagues (1997) found that social support was a significant predictor in their bivariate analyses, women who had a greater number of and more adequate supports being less likely to have their children placed in substitute care, but not in the multivariate analyses. A recent study by Berlin, Appleyard and Dodge (2011) found that the mothers' own physical abuse history directly predicted child maltreatment but that this association was mediated by mothers' social isolation and aggressive responses. Women who were abused during childhood are at risk of developing inadequate supportive friendships, romantic partners and social networks, all of which can hinder their abilities to support and protect their own children (Berlin, Appleyard and Dodge, 2011). Suchman and colleagues (2006) found that mothers who perceived their own mothers as uncaring and intrusive were more likely to have lost custody of a minor child. This finding may partly explain why women who saw their parents daily in this study were less likely to be involved with child protection services – they had a better relationship with their own parents and therefore were better parents themselves as well as having someone to help with the children.

Contact: In this study, information obtained from the women with children in care revealed additional complexities around arrangements for 'contact' which reduce the possibilities for contact with their own parents. This, in turn, can restrict the family supports available to the mother and her ability to parent when children are reunified or other children are in the home. This is an area in which the research evidence provides little guidance.

Extent of child protection involvement: There were high levels of child protection involvement in this sample, with one-third of the women having at least one child in OOHC, many of whom had been removed at birth or soon after. (Another 25.1% had child protection involvement more than six months previously.) Again, this is very close to the findings of Grella, Hser and Huang (2006)(who reported 34.2% of children in care among their sample of women entering substance use treatment), but higher than those of Suchman and colleagues (2006) who reported 23% of women entering methadone maintenance treatment had a child in care. In this study, it appears that a lower proportion (5.8%) had recently been provided with family services or interventions through the child protection system than is apparent in the Grella and colleagues study sample (23.8%).

Disadvantage: Similar to previous research with women in substance-use treatment events (Hans, 2000; Dawe et al., 2007; Forrester & Harwin, 2006; Jones, 2004), the sample in this study was largely a disadvantaged one. Most of the women had themselves been subjected to abuse as children and had significant substance use histories, mental health, financial and housing problems. Many had also been criminally involved. A significant number lacked significant relationships: they tended to be single, lived with no other adults, and lacked social supports.

Improvements in treatment: While in pharmacological treatment, the vast majority of women in the study made improvements in a large number of areas which impacted on their ability to care for their children – in particular, their substance use, criminal involvement and sources of support improved. The frequency and amount of substance use among the women in this study reduced markedly while they were in pharmacological treatment. Heroin use reduced markedly from the time the participants started on the program, both in the number reporting any heroin use in the past month (from 88.3% to 21.6%) and in the number of times used (27.6 to 5.6 days per month). One in five of the women, not all of whom were caring for children, were using heroin to some extent at the time of interview, but at greatly reduced amounts and frequencies.

Retention in treatment: Women involved with child protection, however, stayed no longer on the OTP than women who were not, a source of concern given these improvements and the large body of research that show the benefits of retention in treatment, particularly opioid pharmacological treatment (Ward, Mattick & Hall, 1998; Mattick et al., 2001; Ritter & Chalmers, 2009; Mattick et al., 2008; Mattick et al., 2009). Furthermore, one of the main reasons given for choosing pharmacological treatments in this study in preference to other treatments was that the women were able to continue caring for their children.

9. IMPLICATIONS FOR POLICY AND PRACTICE

The findings discussed above have implications for child protection and drug treatment policy and practice in relation to substance use by parents. These mothers have significant problems which are of greater importance in terms of child protection involvement than the severity of their substance use, when all factors are considered. Mental health issues and a lack of supportive relationships are particular problems.

From previous research we know that having been abused as a child increases the risk of substance-use problems, mental health problems and other adverse outcomes as an adult, particularly among women (Berlin, Appleyard & Dodge, 2011; Widom, Marmorstein & White, 2006; Lansford, Dodge, Pettit & Bates, 2010). The women recruited into this study exhibit many of these characteristics. This history has prompted some authors to suggest that we should be ‘treating’ maltreated girls, especially those who have been sexually abused, and assisting them to develop constructive strategies for coping with the experiences of stressful life events (White & Widom, 2008; Gilchrist & Taylor, 2009). In addition, it has been suggested, we should be providing targeted services to substance-misusing women before they become mothers, particularly as most have their children at a young age, in order to reduce intergenerational harm (Gilchrist & Taylor, 2009). For mothers who have been victims of physical abuse, the importance of reducing their social isolation is paramount in order to break the cycle of child maltreatment (Berlin, Appleyard & Dodge, 2011). In order to do this, service providers need a good understanding of women’s abuse histories and the ability to coordinate services and tailor interventions to their specific needs.

Although this study did not find that increased service provision prevented involvement with child protection services, this may be due to the fact that the women who were involved with the child protection system had, in fact, greater services needs because of their mental health problems and lack of supports. A recent study by Grella and colleagues (2009) found that mothers who were treated in programs providing a “high” level of family-related or education/employment services were approximately twice as likely to reunify with their children as those who were treated in programs with “low” levels of these services. Their findings ‘support the importance of addressing a broad range of treatment needs of child-welfare-involved mothers, particularly their need to obtain skills to achieve economic stability and to improve their parenting ability, which are requisites to successful reunification with their children. Mothers’ participation in substance abuse treatment may afford them a critical opportunity to address these needs, which may ultimately yield beneficial outcomes for themselves and their children’.

Rees and colleagues (2011) have recently called for services to better assist women who have experienced gender-based violence, and for women-only treatments to be provided. They comment that the shortage of dedicated women-only treatment services and services that specifically cater to substance-misusing women and their children has long been an issue of concern.

This research supports a focus on interventions which treat substance-using women’s mental health problems and improves their social supports. It is important that such services are provided if we are to reduce the high rates of intergenerational abuse, trauma and disadvantage among these women and their children.

10. FUTURE RESEARCH

The findings from this study provide guidance for future research, examples of which are suggested below:

- Because of the serious problems that bring the children of substance misusers into care, intensive and coordinated interventions are needed if we are to prevent ongoing and future child protection system involvement. Family Drug Courts (FDC) were developed in the USA to deal with the challenges of working with these families and are being trialled in the UK. The small number of FDC outcome studies published have found evidence for their effectiveness in supporting parents to successfully enter, remain in, complete treatment and to be reunified with their children (see review by Taplin & Mattick, 2011). A feasibility study followed by a pilot study is suggested for New South Wales to determine the applicability, feasibility, effectiveness and cost-effectiveness of such an intervention in the Australian situation..
- As part of the *Pathways of Care* longitudinal study of children and young people in OOHC in NSW which is currently underway, a unique opportunity exists to examine some of the issues identified in this research. For example, a sample of girls who have been sexually abused before entry into care could be particularly studied and the predictors of future mental health, substance use and further abuse determined. An opportunity exists to also trial an intervention to ‘treat’ these girls as has been suggested by the authors above.
- The importance of social supports, particularly from parents, was clearly identified in this research, the daily presence of which reduced child protection involvement. This study identified particular complexities around arrangements for ‘contact’ which in some cases reduced the contact women had with their own parents and extended family. A study of different contact regimens could help determine which types (supervised or unsupervised, location of visits), frequencies and strategies assist reunification, when that is the goal, or assist birth parents, carers and children to cope with limited contact when the goal is not to reunify.

11. REFERENCES

- Australian Bureau of Statistics (ABS) (2010) *Australian Social Trends*, Catalogue no. 4102.0, ABS, Canberra, [http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/LookupAttach/4102.0Publication14.12.101/\\$File/41020_ASTDec2010.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/LookupAttach/4102.0Publication14.12.101/$File/41020_ASTDec2010.pdf)
- Australian Institute of Family Studies (AIFS) (2004) *Longitudinal Study of Australian Children (LSAC) Annual Report 2004*, <http://www.aifs.gov.au/growingup/pubs/ar/ar2004/highlights.html>
- Australian Institute of Family Studies (AIFS) (2008) *Growing up in Australia: The Longitudinal Study of Australian Children, 2006-07 Annual Report*, Australian Institute of Family Studies, Melbourne, <http://www.aifs.gov.au/growingup/pubs/ar/ar200607/annualreport2006-07.pdf>
- Australian Institute of Health & Welfare (AIHW) (2009) *National Opioid Pharmacotherapy Statistics Annual Data collection: 2008 Report*, Cat. no. AUS 115, Canberra: AIHW.
- Australian Institute of Health & Welfare (AIHW) (2010) *National Opioid Pharmacotherapy Statistics Annual Data collection: 2009 Report*, Cat. no. AUS 125, Canberra: AIHW.
- Australian Institute of Health and Welfare (AIHW) (2010) *Alcohol and Other Drug Treatment Services in Australia 2008-09: Report on the National Minimum Data Set*, Drug Treatment Series No. 10, Cat. no. HSE 92, Canberra: AIHW.
- Australian Institute of Health and Welfare (2011) *Child Protection Australia 2009-10*, Child Welfare Series No. 51, Cat. no. CWS 39, Canberra: AIHW.
- Barth, R.P., Gibbons, C. & Guo S. (2006) Substance abuse treatment and the recurrence of maltreatment among caregivers with children living at home: A propensity score analysis', *Journal of Substance Abuse Treatment*, 30, 93-104.
- Berlin, L. J., Appleyard, K. & Dodge, K.A. (2011). Intergenerational Continuity in Child Maltreatment: Mediating Mechanisms and Implications for Prevention. *Child Development*, 82(1), 162-176.
- Berry, W.D. & Feldman, S. (1985) *Multiple Regression in Practice*. Sage University Paper Series on Quantitative Applications in the Social Sciences. 07-050. Newbury Park, CA, Sage.
- Bradbury, B. (2006) Disadvantage among Australian young mothers, *Australian Journal of Labour Economics*, 9(2), 147-171.
- Burns, L., Mattick, R.P. & Cooke, M. (2006) The use of record linkage to examine illicit drug use in pregnancy, *Addiction*, 101, 873-882.
- Centre for Epidemiology and Research (2010) *2009 Report on Adult Health from the New South Wales Population Health Survey*, Sydney: NSW Department of Health.
- Conroy, E., Degenhardt, L., Mattick, R.P. & Nelson, E.C. (2009) Child maltreatment as a risk factor for opioid dependence: Comparison of family characteristics and type and severity of child maltreatment with a matched control group, *Child Abuse & Neglect*, 33(6), 343-352.
- Darke, S. (1998) Self report among injecting drug users: A review, *Drug & Alcohol Dependence*, 51, 253-263.

- Dawe, S., Frye, S., Best, D., Lynch, M., Atkinson, J., Evans, C. & Harnett, P.H. (2007) *Drug Use in the Family: Impacts and Implications for Children*, Australian National Council on Drugs: Canberra.
- Degenhardt, L. & Day, C. (eds) (2004) *The Course and Consequences of the Heroin Shortage in New South Wales*, Technical Report No. 204, National Drug and Alcohol Research Centre, Sydney.
- Degenhardt, L., Lynskey, M. & Hall, W. (2000) Cohort trends in the age of initiation of drug use in Australia, *Australian and New Zealand Journal of Public Health*, 24(4), 421-426.
- Delfabbro, P., Borgas, M., Rogers, N., Jeffreys, H., & Wilson, R. (2009) The social and family backgrounds of infants in South Australian out-of-home care 2000-2005: Predictors of subsequent abuse notifications, *Children and Youth Services Review*, 31(2), 219-226.
- Forrester, D. & Harwin, J. (2006) Parental substance misuse and child care social work: Findings from the first stage of a study of 100 families, *Child & Family Social Work*, 11(4), 325-335.
- Fuller, T.L. & Wells, S.J. (2003) Predicting maltreatment recurrence among CPS cases with alcohol and other drug involvement, *Children and Youth Services Review*, 25(7), 553-569.
- Gilchrist, G. & Taylor, A. (2009) Drug-using mothers: Factors associated with retaining care of their children. *Drug & Alcohol Review*, 28(2), 175-185.
- Green, B.L., Furrer, C.J., Worcel, S.D., Burrus, S.W.M. & Finigan, M.W. (2009) Building the evidence base for family drug treatment courts: Results from recent outcome studies, *Drug Court Review*, VI(2), 53-82.
- Gregoire, K.A. & Schultz, D.J. (2001) Substance-abusing child welfare parents: Treatment and child placement outcomes, *Child Welfare*, 80(4), 433-452.
- Grella, C.E., Hser, Y.-I. & Huang, Y.-C. (2006) Mothers in substance abuse treatment: Differences in characteristics based on involvement with child welfare services, *Child Abuse & Neglect*, 30, 55-73.
- Grella, C.E., Needell, B., Shi, Y. & Hser, Y.I. (2009) Do drug treatment services predict reunification outcomes of mothers and their children in child welfare? *Journal of Substance Abuse Treatment*, 36, 278-293.
- Hall, W.D., Ross, J.E., Lynskey, M.T., Law, M.G. & Degenhardt, L.J. (2000) How many dependent heroin users are there in Australia? *Medical Journal of Australia*, 173, 528-531.
- Hans, S.L. (2000) Parenting and parent-child relationships in families affected by substance abuse, in H.E. Fitzgerald, B. Lester & B. Zuckerman (eds) *Children of Addiction: Research, Health and Public Policy Issues*, New York: Routledge Falmer.
- Hayes, A., Weston, R., Qu, L. & Gray, M. (2010) *Families Then and Now: 1980-2010*, Australian Institute of Family Studies Fact Sheet.
- Hides, L., Lubman, D.I., Devlin, H., Cotton, S., Aitken, C., Gibbie, T. & Hellard, M. Reliability and validity of the Kessler 10 and Patient Health Questionnaire among injecting drug users, *Australian & New Zealand Journal of Psychiatry*, 41(2), 166-168.

- Jeffreys, H., Hirte, C., Rogers, N. & Wilson, R. (2008) *Parental Substance Misuse and Childrens Entry into Alternative Care in South Australia, 2006*, Strategy & Research Division, Research & Analysis Unit, Government of South Australia.
- Jones, L. (2004) The prevalence and characteristics of substance abusers in a child protective service sample, *Journal of Social Work Practice in the Addictions*, 4(2), 33-50.
- Kessler, R.C., Andrews, G., Colpe, L.J., Hiripi, E., Mroczek, D.K., Normand, S.-L.T., Walters, E.E. & Zaslavsky, A.M. (2002) Short screening scales to monitor population prevalences and trends in non-specific psychological distress, *Psychological Medicine*, 32(06), 959-976.
- Lansford, J.E., Dodge, K.A., Pettit, G.S. & Bates, J.E. (2010) Does physical abuse in early childhood predict substance use in adolescence and early adulthood? *Child Maltreatment*, 15(2), 190-194.
- Llewellyn, G., McConnell, D. & Ferronato, L. (2003) Prevalence and outcomes for parents with disabilities and their children in an Australian court sample, *Child Abuse & Neglect*, 27(3), 235-251.
- Lundgren, L.M., Schilling, R.F., Fitzgerald, T., Davis, K. & Amodeo, M. (2003) Parental status of women injection drug users and entry to methadone maintenance, *Substance Use & Misuse*, Vol. 38, No. 8, 1109-1131.
- McMahon TJ, Winkel JD, Luthar SS, Rounsaville BJ. (2005) Looking for poppa: parenting status of men versus women seeking drug abuse treatment. *American Journal of Drug & Alcohol Abuse*, 31(1), 79-91.
- Mattick, R.P., Breen, C., Kimber, J. & Davoli, M. (2009) Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence, *Cochrane Database of Systematic Reviews*, Issue 3. Art. No.: CD002209. DOI: 10.1002/14651858.CD002209.pub2.
- Mattick, R.P., Kimber, J, Breen, C. & Davoli, M. (2008) Buprenorphine maintenance versus placebo or methadone maintenance for opioid dependence, *Cochrane Database of Systematic Reviews*, Issue 2. Art. No.: CD002207. DOI: 10.1002/14651858.CD002207.pub3.
- Mattick, R.P. & the NEPOD Study Group (2001) *National Evaluation of Pharmacotherapies for Opioid Dependence: Report of Results and Recommendations*, National Drug and Alcohol Research Centre, Sydney.
- Meier, P.S., Donmall, M.C. & McElduff, P. (2004) Characteristics of drug users who do or do not have care of their children. *Addiction*, 99(8), 955-61.
- Milner, J.S. (1986) *The Child Abuse Potential Inventory Manual, Second Edition*, DeKalb, IL: Psytec.
- Milner, J.S., Gold, R.G., Ayoub, C. & Jacewitz, M.M. (1984) Predictive validity of the Child Abuse Potential Inventory, *Journal of Consulting & Clinical Psychology*, 52, 879-884.
- Nair, P., Black, M.M., Schuler, M., Keane, V., Snow, L. & Rigney, B.A. (1997) risk factors for disruption in primary caregiving among infants of substance abusing women. *Child Abuse & Neglect*, 21(11), 1039-1051.
- Nair, P., Schuler, M.E., Black, M.M., Kettinger, L. & Harrington, D. (2003) Cumulative environmental risk in substance abusing women: Early intervention, parenting stress, child abuse potential and child development, *Child Abuse & Neglect*, 27(9), 997-1017.

- NSW Community Services (2010) *Annual Statistical Report*, NSW Government Human Services, http://www.community.nsw.gov.au/docswr/_assets/main/documents/docs_data/annual_statistics_report08-09.pdf
- NSW Community Services (2010) *Quarterly Data June 2009–June 2010*, NSW Government Human Services, http://www.community.nsw.gov.au/docswr/_assets/main/documents/docs_data/quarterlyjun09_jun10.pdf
- Ondersoma, S. J., Chaffin, M. J., Mullins, S. M., & LeBreton, J. M. (2005) A brief form of the Child Abuse Potential Inventory: Development and validation, *Journal of Clinical Child & Adolescent Psychology*, 34(2), 301-311.
- Ondersma, S. (2010) Personal communication.
- Pickles, A., Rowe, R., Simonoff, E., Foley, D., Rutter, M. & Silberg, J. (2001) Child psychiatric symptoms and psychosocial impairment: Relationship and prognostic significance, *The British Journal of Psychiatry*, 179(3), 230-235.
- Rees, S., Silove, D., Chey, T., Ivancic, L., Steel, Z., Creamer, M., Teesson, M., Bryant, R., McFarlane, A.C., Mills, K.L., Slade, T., Carragher, N., O'Donnell, M., & Forbes, D. (2011). Lifetime Prevalence of Gender-Based Violence in Women and the Relationship With Mental Disorders and Psychosocial Function. *The Journal of the American Medical Association*, 306(5), 513-521.
- Ritter, A. & Chalmers, J. (2009) *Polygon: The Many Sides to the Australian Opioid Pharmacotherapy Maintenance System*, ANCD Research Paper, 18, Australian National Council on Drugs, Canberra.
- Ross, J., Teesson, M., Darke, S., Lynskey, M., Ali, R., Ritter, A. & Cooke, R. (2005). The characteristics of heroin users entering treatment: Findings from the Australian treatment outcome study (ATOS). *Drug and Alcohol Review* 24, 411-418.
- Ryan, M., Harwin, J. & Chamberlain, C. (2006) *Report on the Feasibility of Establishing a Family Drug and Alcohol Court at Wells Street Family Proceedings Court*, prepared for LB Islington, Westminster, CAFCASS, Wells St Inner London FPC and Brunel University.
- Scannapieco, M. & Connell-Carrick, K. (2007) Assessment of families who have substance abuse issues: Those who maltreat their infants and toddlers and those who do not, *Substance Use & Misuse*, 42, 1545-1553.
- Shand, F. L., Degenhardt, L., Slade, T. & Nelson, E.C. (2011) Sex differences amongst dependent heroin users: Histories, clinical characteristics and predictors of other substance dependence. *Addictive Behaviors*, 36(1-2), 27-36.
- Slade, T., Grove, R. & Burgess, P. (2011) Kessler Psychological Distress Scale: Normative data from the 2007 Australian National Survey of Mental Health and Wellbeing, *Australian & New Zealand Journal of Psychiatry*, early online version.
- Smith, B.D. (2003) How parental drug use and drug treatment compliance relate to family reunification, *Child Welfare*, 82, 335.
- Smith, B.D. & Testa, M.F. (2002) The risk of subsequent maltreatment allegations in families with substance-exposed infants, *Child Abuse & Neglect*, 26, 97-114.

- Social Policy Research Centre (SPRC) (2010) *The Evaluation of Brighter Futures: NSW Community Services Early Intervention Program. Final Report*, NSW Department of Human Services, Sydney, http://www.community.nsw.gov.au/docswr/_assets/main/documents/brighter_futures_evaluation4.pdf
- Stewart, D., Gossop, M. & Trakada, K. (2007) Drug dependent parents: Childcare responsibilities, involvement with treatment services, and treatment outcomes, *Addictive Behaviors*, 32, 1657-1668.
- Suchman, N. E., McMahon, T.J., Zhang, H., Mayes, L.C. & Luthar, S. (2006). Substance-abusing mothers and disruptions in child custody: An attachment perspective. *Journal of Substance Abuse Treatment*, 30(3), 197-204.
- Taplin, S.A. (2000) *Factors Affecting Retention on Methadone Maintenance Programs*, doctoral dissertation, Department of Public Health & Community Medicine, University of Sydney.
- Taplin, S. & Mattick, R.P. (2011) Family drug courts: An option for the Australian child protection system, *Developing Practice*, 28(1), 13-22.
- Trocme, N., MacLaurin, B., Fallon, B., Daciuk, J., Billingsley, D., Tourigny, M. et al. (2001) *Canadian Incidence Study of Reported Child Abuse and Neglect: final report*, Ottawa, Ontario: Minister of Public Works and Government Services Canada.
- Tunnard, J. (2002) Parental drug misuse: A review of impact and intervention studies, *Research in Practice*, http://www.rip.org.uk/publications/documents/researchreviews/drugs_misuse.pdf
- Walsh, C., MacMillan, H.L. & Jamieson, E. (2003) The relationship between parental substance abuse and child maltreatment: Findings from the Ontario Health Supplement, *Child Abuse and Neglect*, 27(12): 1409-1425.
- Ward, J., Mattick, R. & Hall, W. (eds) (1998) *Methadone Maintenance Treatment and Other Opioid Replacement Therapies*, Harwood Academic Publishers, The Netherlands.
- Whitaker, R.C., Orzol, S.M. & Kahn, R.S. (2006) Maternal mental health, substance use and domestic violence in the year after delivery and subsequent behavior problems in children at age 3 years, *Archives of General Psychiatry*, 63, 551-60.
- White, H.R. & Widom, C.S. (2008) Three potential mediators of the effects of child abuse and neglect on adulthood substance use among women. *Journal of Studies on Alcohol & Drugs*. 337-347.
- Widom, C.S., Marmorstein, N.R. & White, H.R. (2006) Childhood victimisation and illicit drug use in middle adulthood. *Psychology of Addictive Behaviors*, 20(4), 394-403.
- Young, N.K., Boles, S.M. & Otero, C. (2007) Parental substance use disorders and child maltreatment: Overlap, gaps, and opportunities, *Child Maltreatment*, 12(2), 137-149.
- Zhou, A.Z. & Chilvers, M. (2010) Infants in Australian out-of-home care, *British Journal of Social Work*, 40(1), 26-43.