
NEW SOUTH WALES DRUG
COURT EVALUATION:
HEALTH, WELL-BEING AND
PARTICIPANT SATISFACTION

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PREFACE

Traditionally in New South Wales, the health care and criminal justice systems have approached illicit drug users from different and somewhat opposing frameworks. The first has been primarily concerned with therapeutic outcomes for the individual, while the second has focused primarily on the protection of the community from offending committed by illicit drug users. The drug court model serves to bring together these two approaches by attending to the health needs of drug-dependent offenders in order to produce a change in their drug-related offending. Despite the central role of the treatment in the drug court model, most drug court evaluations have ignored health outcomes for participants.

The present report is part of a series of studies conducted by the NSW Bureau of Crime Statistics and Research evaluating the NSW Drug Court Trial. Other reports in this series monitor key aspects of the Drug Court's operation, examine its cost-effectiveness in reducing re-offending compared with conventional criminal justice sanctions, and outline the processes of the Drug Court Trial, identifying problems that were encountered and how these problems were resolved. This report examines changes in the health and well-being of Drug Court participants throughout twelve months of participation on the program, investigates factors that influence retention on the program and reports on participants' satisfaction with various elements of the program.

The present study involved a series of standardised interviews conducted with Drug Court participants prior to commencing the program and at four month intervals throughout their participation on the program. The information was used to assess the health of Drug Court participants relative to other populations, ascertain changes to participant's health and well-being, identify factors that influence retention on the program and assess participants' satisfaction with the key aspects of the program. The results reveal promising results for offenders while they remain on the program but highlight the difficulty of retaining entrenched drug-dependent offenders in treatment.

Dr Don Weatherburn

Director

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EXECUTIVE SUMMARY

The aims of this study were to assess the impact of the NSW Drug Court on the health and well-being of participants, to identify factors that may enhance retention on the program for at least twelve months, and to gauge participant satisfaction with the program. This study is one of a series of studies being conducted by the NSW Bureau of Crime Statistics and Research to evaluate the NSW Drug Court Trial.

The research involved a series of face-to-face interviews with a sample of NSW Drug Court participants. Interviews were conducted with 202 participants prior to their commencement on the NSW Drug Court program. Three follow-up interviews were conducted at four-month intervals with those participants remaining on the program. Approximately one third of the baseline sample (51 participants) completed all three follow-up interviews.

HEALTH AND WELL-BEING AT PROGRAM ENTRY

- Participants were in poor health on a range of physical and emotional health dimensions compared with the general Australian population prior to commencing the NSW Drug Court program.
- NSW Drug Court participants were in a significantly better state of health at program entry compared with a sample of voluntary methadone maintenance patients entering treatment.
- Over half of the respondents reported having a chronic illness prior to commencing the program, with women more likely to be suffering from a chronic illness prior to program entry than men.
- Participants who were heavier heroin users were experiencing greater levels of health problems and social dysfunction at program entry.
- Heroin users who also used tranquillisers prior to commencing the program were in a poorer state of health than heroin users who did not use tranquillisers.

CHANGES IN HEALTH AND WELL-BEING

- Strong support was found for improvements in each of the outcome measures examined: health, social functioning and drug use. These improvements were sustained over the twelve-month follow-up period.
- Significant improvements were found on all but one of the health dimensions examined. After twelve months on the program, male NSW Drug Court participants' health was rated as high or higher than the Australian population norms on each of health dimensions examined.
- Social functioning significantly improved within the first four months of program participation, with further improvements by eight months.
- Illicit drug use was significantly reduced throughout participation on the program. Median weekly spending, used as a proxy measure for illicit drug use, fell from \$1000 per week prior to commencing the program to \$175 per week after four months on the program.

RETENTION ON THE PROGRAM

- Over 60 per cent of participants had their NSW Drug Court program terminated prior to being on the program for twelve months.
- Length of suspended sentence was the only factor found to predict retention on the program for at least twelve months (or graduation within this period). Of the participants who received a suspended sentence greater than six months, 47 per cent remained on the program for at least twelve months (or graduated within this period) compared with 25 per cent of participants who received a suspended sentence of less than six months.

PARTICIPANT SATISFACTION WITH THE NSW DRUG COURT PROGRAM

- Overall, participant satisfaction with the NSW Drug Court program was very high. Less than 15 per cent of participants indicated any dissatisfaction with treatment services, Legal Aid or Probation and Parole.
- Participants most commonly rated the program as 'neither easy nor difficult', but as time on the program increased a larger proportion rated it as very difficult and a smaller proportion rated it as very easy.
- Treatment services were most commonly cited as the 'best' and 'worst' aspects of the NSW Drug Court program.
- Participants appeared to lack a clear understanding of the NSW Drug Court program prior to commencement on the program. While 85 per cent of the sample stated they had a good or very good understanding of the program when asked prior to commencing the program, upon reflection at twelve months, only 26 per cent believed they had a good or very good understanding of the program before they commenced the program.

Given the poor physical and psychological health of the offenders placed onto the NSW Drug Court program, health services that address the physical and mental health needs of participants are required. The NSW Drug Court program appears to be effective in reducing illicit drug use and improving the health and social functioning of participants while they remain on the program. However, the high rate of termination from the program suggests the overall effectiveness of the program could be improved if the retention rate for the program increased. Targeting offenders facing substantial gaol terms as their alternative to the NSW Drug Court program would increase the proportion of participants who remain on the program for at least twelve months, leading to a more efficient use of NSW Drug Court resources.

INTRODUCTION

The New South Wales (NSW) Drug Court Trial is one of several initiatives the NSW Government has undertaken in recent years in order to divert drug-using offenders from the traditional criminal justice system. The aim of the NSW Drug Court is to reduce the criminal activity of drug-dependent offenders by directing them into supervised drug treatment designed to reduce their drug use and increase their ability to function as law-abiding citizens. The NSW Bureau of Crime Statistics and Research (BOCSAR) has undertaken to evaluate several aspects of the NSW Drug Court Trial. These studies include: (1) a process evaluation of the operation of the NSW Drug Court; (2) an assessment of the cost-effectiveness of the NSW Drug Court compared with conventional criminal justice alternatives; and (3) a study examining the health and well-being of NSW Drug Court participants, predictors of retention on the program, and participants' satisfaction with the program.

This report presents the final results for study (3). The report begins with an exploration of the link between drug dependency and crime, and the use of legally coerced drug treatments, including drug courts, as an alternative criminal justice approach to the drug—crime problem. The effectiveness of these treatment programs is examined with particular attention given to drug courts. An outline of the rehabilitation program used in the NSW Drug Court Trial, and a brief description of the two other evaluation studies being conducted by BOCSAR are also provided.

The second section outlines the methodologies used in the study to evaluate the effect of the NSW Drug Court program on participants' health and well-being, identifies factors that predict longer retention on the program, and examines participants' satisfaction with various aspect of the program.

The third section presents the results of each aspect of the study. In particular, changes in physical and emotional health, social functioning and drug use are examined to assess changes in well-being. Factors associated with remaining on the program for twelve months are examined in relation to retention on the program, and the level of participant satisfaction with the NSW Drug Court Trial is also presented, along with a range of issues relating to the NSW Drug Court that have been identified by participants. The report concludes with a discussion of these findings and their implications for the effectiveness of the NSW Drug Court Trial.

ILLICIT DRUG USE AND CRIME

The drugs–crime nexus has been widely acknowledged for many years. Although the causal relationship between drug use and crime is contentious, it is clear that there is a strong association between criminal behaviour and illicit drug use. Studies have shown an over-representation of illicit drug users in the criminal justice system, and that, for heroin and cocaine addicts, the frequency of offending is strongly associated with the level of drug use.

Several Australian studies have shown a higher prevalence of illicit drug use among prisoners than in the general population. Over 40 per cent of NSW prisoners report using heroin in the six months prior to their imprisonment (Kevin 2000). This figure is vastly higher than the proportion of Australians who have used heroin over a twelve-month period, which is estimated at less than 1 per cent (Australian Institute of Health and Welfare 2000).

Overseas and Australian research has revealed an over-representation of illicit drug users in persons arrested by police. In the United States of America (United States), regular monitoring of drug use by police arrestees through the Arrestee Drug Abuse Monitoring program has shown a high level of illicit drug use among police arrestees across a wide geographic area. Over 50 per cent of adult male arrestees in each site tested positive to at least one drug. Cocaine use was detected in more than one-third of arrestees in 20 of the 32 sites in the program. Opiate use was detected less often, nevertheless at least 10 per cent of adult arrestees tested positive for opiates in 12 of the sites monitored (National Institute of Justice 2000).

A high rate of illicit drug use among police detainees has been also been found in Australia through the recently introduced Drug Use Monitoring in Australia (DUMA) program. DUMA collects information on a regular basis from four sites spread across three States: NSW, Queensland and Western Australia. The DUMA findings provide evidence of a strong link between property offending and opiate use. Opiates were detected in 43 per cent of urine samples taken from males detained for property offences. This can be contrasted with only 18 per cent of samples taken from males detained for a violent offence (Makkai 2000).

The frequency of offending has also been shown to increase with the level of an offender's illicit drug use. In a study of incarcerated offenders, Chaiken (1983) found that for both violent and non-violent offenders, those who had a high level of spending on heroin had the highest crime rates. Another study of opiate users in the United States found that crime rates for robbery, burglary and other theft offences increased with the self-reported frequency of heroin use (Johnson et al. 1985).

Additional evidence for a link between level of illicit drug use and frequency of offending can be found in a study of incarcerated property offenders in NSW. Stevenson and Forsythe (1998) found heroin users had a higher median weekly income from burglaries (\$3000) than non-users of heroin (\$1000). They also found higher rates of burglary to be significantly associated with greater expenditure on illicit drugs regardless of the type of illicit drug used. The strong association between opiate use and property offending gives support to the proposition that offenders with an expensive drug habit tend to commit income-generating offences (Wish & Johnson 1986).

LEGALLY COERCED TREATMENT

In response to the apparent failure of the traditional criminal justice system to elicit long-term behaviour change among drug-dependent offenders, alternative options have been sought. Legally coerced treatment for alcohol- and drug-dependent offenders has been used in the United States since the 1930s (Leukefeld & Tims 1988), and in Australia for over 20 years (NSW Bureau of Crime Statistics and Research 1981). The principal aim of coerced treatment is to divert drug-dependent offenders into treatment in order to reduce the severity of their dependency, and in turn, reduce their offending. Typically, offenders are given the choice of participating in the treatment option or accepting the traditional criminal justice path (Hall 1997). In many such programs, offenders are threatened with penalties, including incarceration, if they do not comply with treatment specifications.

Legally coerced treatment interventions have both criminal justice and therapeutic goals. As such, the major goal of legally coerced treatment from the criminal justice perspective is to achieve beneficial outcomes for the community through a reduction in criminal

activity related to drug dependence. Additional benefits to the criminal justice system potentially include a reduction in the number of persons who are incarcerated as well as improved caseloads for other courts. The therapeutic goals of coerced treatment relate to the well-being of individual offenders, including improved health, increased skills for dealing with relapse, the development of life skills, increased employability, and enhanced social functioning. While coming from different frameworks, both sets of goals are inter-related, as the ability to realise criminal justice goals is likely to be enhanced by first attending to the therapeutic goals of treatment (Swain 1999).

To date, evaluations of legally coerced treatments have focused on their success in limiting re-offending and reducing drug use. While voluntary community-based methadone maintenance treatment has been found to be effective in reducing drug use and criminal behaviour (Ward, Mattick & Hall 1992; Hall 1996), there is debate as to whether or not legally coerced treatment for drug-dependent offenders provides equivalent outcomes. Due to the lack of Australian evaluations, evidence for the effectiveness of legally coerced treatment programs is largely drawn from programs conducted in the United States during the 1960s. In a review of the role of legal coercion in the treatment of offenders with heroin problems, Hall (1997) found reasonable evidence in the international literature to suggest legally coerced treatment programs are effective in reducing drug use and offending.

DRUG COURTS

Specialist drug treatment courts, often referred to as 'drug courts', offer a relatively new approach to legally coerced treatment. Although many drug courts offer offenders a choice of participation on the program, the alternative, usually a custodial penalty, constitutes a significant incentive to join the program. The criminal justice implication of not participating in a drug court program, and the judicial supervision of treatment once on the program, has led drug courts to be seen by many as a form of legally coerced treatment.

Despite having operated in the United States for over a decade, drug courts have only recently been introduced in Australian criminal justice systems. While drug courts vary widely in structure and share many features with other legally coerced treatment programs, most drug courts appear to contain the following elements:

- immediate intervention;
- non-adversarial adjudication;
- 'hands-on' judicial involvement in the offender's treatment;
- treatment programs with clear rules and structured goals; and
- a team approach, led by the judge and bringing together the prosecutor, defence, treatment provider and corrective services (Hora, Schma & Rosenthal 1999).

Drug courts have been embraced in the United States with considerable enthusiasm. Since the first of this style of court was introduced in 1989, over 650 drug courts have commenced operation in the United States, and an additional 427 are currently being planned. By June 2001, an estimated 226,000 adults had enrolled in a drug court program (OJP Drug Court Clearinghouse and Technical Assistance Project 2001).

NSW was the first Australian state to adopt the drug court approach. In February, 1999, the NSW Drug Court commenced as a two-year pilot program modelled on United

States style drug courts. Within two years drug court programs were being piloted in Queensland, Western Australia and South Australia. Drug courts can now also be found in Canada and Ireland.

Despite the rapid growth of drug court programs there have been few comprehensive evaluations conducted to assess their success in meeting either criminal justice or therapeutic goals. Furthermore, many of the studies conducted to date have been marred by methodological limitations, such as the lack of adequate comparison groups, limited outcome measures and inadequate follow-up periods (Belenko 1998 & 2001). Notwithstanding these shortcomings, evidence is emerging that drug courts may be effective in reducing drug-related crime.

Of the existing studies, the primary focus has been concerned with the effectiveness of these specialist courts in reducing recidivism and illicit drug use. In a review of drug court programs in the United States, Belenko (1998) concluded that criminal behaviour, as measured by arrest rates, is substantially reduced during participation on a drug court program. Furthermore, examination of post-program recidivism rates has consistently shown that the rate of recidivism for drug court program *graduates* is significantly lower than that for comparison groups. However, if all drug court participants (including both graduates and non-graduates) are compared with non drug court comparison groups, the outcome in post-program recidivism is not so encouraging. An evaluation of the Escambia and Okaloosa drug court programs in the United States found that 30 months after starting a program, 48 per cent of drug court graduates had been arrested, compared with 63 per cent of the comparison group consisting of matched probationers (Peters & Murrin 2000). However, the study also showed that 86 per cent of program non-graduates were arrested during the follow-up period.

In relation to drug use, Belenko (1998 and 2001) found that illicit drug use is substantially reduced while offenders are on a drug court program. On average, 18 per cent of United States drug court participants return a positive urine test, compared with over 35 per cent of persons on probation (OJP Drug Court Clearing House and Technical Assistance Project 2001). However, there is little information available on post-program drug use for drug court graduates.

While there are encouraging signs pointing to the success of drug courts in reducing criminal behaviour, information regarding the effect of drug court programs on the health and well-being of participants is scarce. Many drug courts now offer a range of support services to treat not only drug dependence, but a range of associated personal problems that most participants experience, such as unemployment, family problems, and mental health issues. The comprehensive range of services offered comes in recognition of the need to address a range of issues if participants are to achieve long-term rehabilitation (OJP Drug Court Clearinghouse and Technical Assistance Project 1999). However, the only indicators of well-being regularly collected by drug courts in the United States, aside from urine test results, are related to employment and parenting. As of June 2001, 78 per cent of all United States drug court graduates had gained or retained employment. Furthermore, over 2,000 drug-free babies had been born to drug court participants and over 3,500 parents participating on drug court programs regained custody of their children (OJP Drug Court Clearing House and Technical Assistance Project 2001). While these appear to be positive outcomes, no comparisons with other criminal justice options are provided. Moreover, we have little knowledge of how participants' health and social functioning might be altered throughout their participation on a drug court program.

THE PRESENT STUDY

There were four objectives of this study. The first was to compare the level of well-being of NSW Drug Court participants prior to commencing the program with that of other populations. The second was to assess the extent to which participation on the NSW Drug Court program improved the well-being of participants in terms of their general physical and psychological health, social functioning and level of drug use. The third was to identify factors which may predict the length of participants' retention on the program, and the final objective was to investigate participants' satisfaction with various elements of the NSW Drug Court program.

METHOD

DESIGN

The study was prospective, single-group study of NSW Drug Court program participants. Each person in the study acted as his or her own control throughout the study.

Interviews with NSW Drug Court participants were used to assess respondents' health, well-being and satisfaction with the program. A baseline interview was conducted prior to participants' commencement on the program. The baseline data was used for comparisons with future outcomes of participants and with other populations. Follow-up interviews were conducted at four-month intervals, i.e. four months, eight months and twelve months after the baseline interview. Although a participant's program may be temporarily interrupted as a result of periods of absconding from the program or being held in custody, it was not considered appropriate to exclude such periods when calculating the four-month period between interview rounds.¹ As the program was designed to take approximately twelve months to complete, it was anticipated that the interview at twelve months would coincide with completion of the program.²

The interviews involved the use of standardised assessment instruments. Additional socio-demographic data on the participants and their urinalysis test results were obtained through the NSW Drug Court's data collection. The urine tests were conducted on a regular basis by the NSW Drug Court and treatment providers as a key element of supervision while on the NSW Drug Court program.

Predictors of retention on the NSW Drug Court program were examined by comparing participants who were no longer participating on the program at twelve months, either because their program was terminated prior to graduation or because they had absconded from the program, with participants who were still actively participating at twelve months or had graduated from the program. A combination of socio-demographic data collected at the baseline interview and data obtained through the NSW Drug Court's data collection were used for this section of the study.

PROCEDURES

The baseline interviews were held between March 1999 and April 2000, were conducted face-to-face, and lasted approximately 40 minutes. The interviews were conducted after respondents had been accepted into the detoxification stage of referral to the NSW Drug Court, and were conducted while the respondent was held in the court cells, awaiting a court appearance.

Follow-up interviews were conducted for all baseline respondents as close as possible to four, eight and twelve months after the baseline interview. Generally the follow-up interviews were conducted face to face, took 15 minutes to complete, and were held within the court complex on a day coinciding with the respondent's scheduled NSW Drug Court appearance. The follow-up interviews were conducted between July 1999 and April 2001.

Sometimes difficulties arose in arranging the follow-up interviews within the scheduled

interview period. Where this was the case, attempts were made to conduct the interview by telephone, or a self-completion questionnaire was given to respondents to be returned by reply-paid mail.

Subjects were informed that participation in the study was voluntary and that the information they provided was confidential and would not affect their acceptance into, or participation on, the NSW Drug Court program. All interviews were conducted by trained interviewers independent of the NSW Drug Court program.

SAMPLE

Of the 231 offenders approached to participate in the study, 223 consented to participate. Of this group, 202 people were included in the final sample. Nine respondents were excluded because they formed part of a pilot to test the interview schedule and 12 were excluded as they were later found to be ineligible for the NSW Drug Court program.

Given the high participation rate (over 95% of eligible persons approached for interview), it is reasonable to conclude that the baseline sample included in this study are reasonably representative of the participants on the NSW Drug Court Trial.

Table 1: Response rate for follow-up interviews and reasons for not completing the follow-up interviews

	<i>4-month</i>		<i>8-month</i>		<i>12-month</i>	
	<i>No. respondents</i>	<i>% of baseline</i>	<i>No. respondents</i>	<i>% of baseline</i>	<i>No. respondents</i>	<i>% of baseline</i>
Completed	112	55.4	87	43.1	65	32.2
Reason for not completing						
Program terminated	58	28.7	94	46.5	126	62.4
Absconded	21	10.4	12	5.9	2	1.0
Refused	1	0.5	1	0.5	1	0.5
Died	1	0.5	1	0.5	1	0.5
Other	9	4.5	7	3.5	0	0.0
Program completed	0	0.0	0	0.0	7	3.5
Total	202	100.0	202	100.0	202	100.0

Table 1 shows the response rates for each follow-up interview, and reasons why people did not complete the follow-up interview.

The twelve-month interview was completed by 65 (32%) baseline respondents. However, not all of these respondents completed each of the follow-up interviews. Only 51 respondents (25% of the baseline sample) completed all three follow-up interviews.

The most common reason why people did not complete a follow-up interview was because their program had been terminated prior to the interview period.

INTERVIEW SCHEDULE

The questionnaire was developed in consultation with NSW Drug Court Team members to minimise duplication of data that would be collected routinely by the Court. It was then refined after being piloted on nine respondents.

The finalised baseline interview schedule consisted of: the Short Form-36 Question Health Survey (SF-36) (Ware et al. 1993); the Opiate Treatment Index (OTI) social functioning scale (Darke et al. 1992); and a modified version of the OTI drug use scale. The interview schedule also contained questions relating to: drug use history; weekly legal income and spending; drug treatment history; criminal history; demographic details and measures of participants' understanding and expectations of the program.

The follow-up interviews included the SF-36, the OTI social functioning scale, weekly income and spending, and questions regarding the participant's satisfaction with various aspects of the NSW Drug Court program.

SF-36 Health Survey

The SF-36 is a well-established questionnaire containing multi-item scales used for measuring eight dimensions of health and well-being: physical functioning (10 items), role limitations due to physical functioning (4 items), pain (2 items), general health (2 items), vitality (4 items), social functioning (2 items), role limitations due to emotional functioning (3 items) and mental health (5 items). An additional single item dimension, called health transition, compares a person's current health with their health one year ago.³ All items pertaining to each dimension (excluding health transition) are summed and transformed to form a scale from 0 to 100, where a higher score indicates a better state of health or well-being.

The definitions of each of the dimensions are given below:

- Physical functioning: the extent to which a person is limited by their health in performing a range of physical activities, from playing strenuous sport to bathing and dressing.
- Role limit-physical: the extent to which a person's physical health impacts on their work or other daily activities.
- Bodily pain: the intensity of pain experienced and the extent to which the pain affects a person's daily activities.
- General health: current health status and health expectations relative to others.
- Vitality: a person's level of energy and fatigue.
- Social functioning: the extent to which health or emotional problems impact on a person's social activities with others.
- Role limit-emotional: the extent to which a person's emotional problems impact on their work or other daily activities.
- Mental health: the amount of time a person experiences depression, anxiety, nervousness and happiness.

Opiate Treatment Index

The OTI is an Australian instrument developed to measure outcomes for people receiving treatment for opiate use, including their social functioning and level of drug use. The present study used modified versions of these two scales. The social functioning scale was used in each interview round while the modified OTI drug use scale was given to subjects in the baseline interview as a measure of drug use prior to commencing the

NSW Drug Court program.

The OTI social functioning scale consists of questions relating to various aspects of social functioning, including housing, employment, family and relationships. However, in the first phase of a person's NSW Drug Court program, participants are usually discouraged from seeking employment and associating with past friends. As participants progress on the program and their program commitments decrease, they are encouraged to seek training and employment. Consequently, it is reasonable to expect that while participants are in Phase 1 of the NSW Drug Court program, compliance with the program could preclude them from gaining high social functioning scores as measured by the OTI. However, the validity of the OTI social functioning scale should increase as participants progress to a NSW Drug Court program phase that enables them to obtain employment.

The reference period for the OTI social functioning scale was shortened from six months to four months in the follow-up interviews to coincide with the time period between interviews.

The reference period for the OTI drug use scale was modified after the pilot phase of the study. The standard OTI drug use scale requires respondents to recall their last two episodes of drug use within the past four weeks. However, this reference period was unlikely to reflect typical drug use in the community for respondents who had been in custody during the past month. Consequently, the reference period for the OTI drug use scale was changed from the month prior to the interview, to the month prior to the participant entering custody. An estimate of typical drug use during the new reference period was obtained.

Spending on illicit drugs

Participants' illicit drug use was another aspect of well-being that was to be assessed in the present study. However, respondents could not be relied upon to be truthful about their drug use while on the program due to the potential for participants to be sanctioned for illicit drug use. While research has generally provided support for the validity of self-reported opiate use data (Flack et al. 1992; Mieczkowski 1990; Darke 1998), the validity varies according to the perceived consequence of reporting the behaviour and with the group being interviewed, with criminal justice populations being less likely to provide honest responses than treatment populations (Harrison 1997).

Accordingly, an alternative measure was sought to obtain an indication of change in illicit drug use. Instead of asking respondents about their drug use directly, they were asked about their level of spending and legal income. The spending behaviour of participants is likely to be heavily influenced by their spending on illicit drugs, and therefore, to be associated with their level of drug use. It was assumed that respondents' daily living expenses would not be substantially affected by their participation on the NSW Drug Court program. Attempts were made to increase respondent honesty by assuring confidentiality of responses and highlighting the interviewer's independence from the NSW Drug Court Team.

The use of changes in self-reported spending as a proxy for changes in illicit drug use is not entirely satisfactory as, arguably, questions regarding respondent honesty remain. In an attempt to assess the veracity of any changes in the self-reported spending data, urinalysis results were also examined. It must be noted that urinalysis results as a measure of drug use also have limitations. While all NSW Drug Court participants are

required to submit to regular, supervised urine testing, it became apparent in the first few months of the Court's operation that some participants were substituting their urine samples with clean samples. A further limitation of urinalysis as a measure of drug use is the short half-life of some illicit substances, meaning that they can only be detected within a few days of use. In addition, urine tests only indicate if specific drugs were used and do not provide information on the frequency of use.

Participant satisfaction

Participants were asked to rate five aspects of the program on a five-point Likert scale at each of the follow-up interviews. The participants were asked to rate their satisfaction with treatment services; their satisfaction with Probation and Parole services; their satisfaction with Legal Aid; the fairness of the NSW Drug Court; and the difficulty of the program. Participants were also asked for their perceptions of the best and worst aspects of the NSW Drug Court program, and for their suggestions for improvements to the program at the baseline, four-month and eight-month interviews.

RESULTS

CHARACTERISTICS OF BASELINE SAMPLE

The characteristics of the study respondents indicate that the NSW Drug Court consists of the type of offenders it was intended to target: predominantly heroin-dependent offenders, heavily entrenched in the criminal justice system.

Demographics

Of the 202 people who took part in the baseline round of interviews, 165 (82%) were male and 37 (18%) were female. Respondents were primarily European/Caucasian (157 persons or 78%). Ten per cent identified themselves as Aboriginal or Torres Strait Islander, and 5 per cent identified themselves as Asian. The respondents' ages ranged from 18 to 62 years, with the average age at the time of the baseline interview being 27 years. Thirty-nine per cent were married or in a de facto relationship at the time of the baseline interview. The median weekly legal income reported by respondents was \$165, while the median weekly spending of respondents was \$1000.

Sixty-one per cent of respondents reported having a chronic illness at the time of entry to the program. Women were significantly more likely to report having a chronic illness (84%) than were men (56%: $\chi^2 = 10.0$, $df = 1$, $p = 0.002$).

Pattern of drug use prior to commencing the NSW Drug Court program

The overwhelming majority of baseline respondents (82%) identified heroin as their drug of choice. The next most common drug of choice was amphetamines, preferred by 10 per cent of respondents. The median age when the drug of choice was *first* used was 18 years, while the median age of first *daily* use of the drug of choice was 19 years. Those who nominated heroin as their drug of choice were significantly older when they commenced using this drug compared with those who nominated an alternative drug as their drug of choice (19 years of age compared with 17 years of age: $t = 2.8$, $df = 199$, $p = 0.005$).⁴

The respondents' pattern of drug use during their most recent non-custodial four-week period is shown in Table 2.⁵

The illicit drugs most commonly used by respondents were heroin and cannabis. Eighty-seven per cent of respondents reported using heroin during their most recent non-custodial four-week period, and 75 per cent reported using heroin every day during this period. Fifty-seven per cent reported using cannabis at some time during the reference period, while 31 per cent reported using cannabis every day.

Table 2 also indicates a pattern of polydrug use during the reference period for most respondents. Only 34 respondents reported using only one of the drugs surveyed (excluding alcohol and tobacco). Of these, 27 used only heroin, four used only amphetamines and three used only cannabis.

Table 2: Respondents' drug use in the four weeks prior to current imprisonment

<i>Drug</i>	<i>Used in past four weeks</i>		<i>Daily use</i>	
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
Heroin	176	87.1	151	74.8
Other opiates	26	12.9	5	2.5
Alcohol	49	24.3	10	5.0
Cannabis	116	57.4	63	31.2
Amphetamines	61	30.2	20	9.9
Cocaine	45	22.3	18	8.9
Tranquillisers	76	37.6	22	10.9
Hallucinogens	13	6.4	0	0.0
Inhalants	3	1.5	0	0.0
Tobacco	197	97.5	197	97.5

Note: $n = 202$. Percentages add to more than 100 because many respondents used more than one drug during the time frame.

Treatment history

Most respondents (82%) indicated that they had previously attempted drug treatment.⁶ One hundred and thirteen respondents (56%) had previously been on a methadone program, 71 (35%) had previously been admitted to an inpatient detoxification centre, while 45 (22%) had undergone outpatient detoxification. Seventy-three respondents (36%) had commenced a residential rehabilitation program, 52 (26%) had attended outpatient counselling regarding their drug use, 39 (19%) had participated in a self-help group and 14 (7%) had received naltrexone.

Fifty respondents (25%) were receiving a pharmacological drug treatment at the time of referral to the NSW Drug Court. Of these, 42 (84%) were on methadone. Women were more likely than men to be receiving a pharmacological drug treatment (38% compared with 22%). This represents a statistically significant difference ($\chi^2 = 4.2$, $df = 1$, $p = 0.041$).

Criminal History

On average, baseline respondents received their first criminal conviction at 17 years of age. The median number of prior convictions for respondents was 12 and the maximum number was 62. One person had not received a conviction prior to being referred to the NSW Drug Court. Seventy-six per cent of respondents had previously received a prison sentence.

WELL-BEING AT BASELINE

In the following section of this report the well-being of NSW Drug Court participants prior to commencing the program is examined in more detail. The relationship between the level and type of pre-program drug use and participant well-being is examined. In addition, the baseline health status of participants is compared with two other populations: Australian population norms and a sample of heroin-dependent users voluntarily entering methadone maintenance treatment.

Drug use and well-being

The relationship between the level of drug use and the two other measures of well-being (health and social functioning) prior to program commencement was examined. Baseline mean scores on the SF-36 dimensions and the OTI social functioning scale were compared with level of drug use as measured by the modified OTI drug use scale. Relationships were tested using Kendall's tau-b. Significant correlations were found between the amount of heroin used and the OTI social functioning score ($r = 0.116, p = 0.022$) and the SF-36 role limit-physical dimension ($r = -0.122, p = 0.028$). A significant correlation was also found between the level of tranquilliser use and the SF-36 bodily pain dimension ($r = -0.143, p = 0.012$).⁷ Although the correlations were small, the results indicated that social dysfunction and the impact of poor physical health on daily activities were significantly associated with higher levels of heroin use, and physical pain was significantly associated with higher levels of tranquilliser use.⁸

The baseline well-being scores were also examined to identify if there were any significant differences in baseline scores for respondents who used a combination of heroin and tranquillisers with those heroin users who did not use tranquillisers. The Kruskal-Wallis test was used to identify significant differences between groups. The results showed a significant difference between groups on three SF-36 dimensions: bodily pain ($\chi^2 = 7.3, df = 1, p = 0.007$), general health ($\chi^2 = 3.9, df = 1, p = 0.050$) and social functioning ($\chi^2 = 4.3, df = 1, p = 0.039$). On each of these dimensions, those who used tranquillisers had lower health and well-being scores than those who did not.

Comparison with Australian population

The health and well-being of NSW Drug Court participants as assessed at baseline by the SF-36 was compared with population norms collected as part of the 1995 National Health Survey (Australian Bureau of Statistics 1997). The normative data collected are based on a random sample of 18,800 adult residents of private dwellings throughout Australia. The normative data were broken down by a range of variables including age and gender. In the comparison of NSW Drug Court participants with the normative data, two age ranges for males and females were selected: 18 to 24 years and 25 to 34 years. These categories account for 90 per cent of the male respondents and 73 per cent of the female respondents to the baseline interviews.

Comparisons between the two groups were made by comparing the 95 per cent confidence intervals of the mean scores for both groups on each SF-36 health dimensions. It can be concluded that there is no significant difference between groups when there is an overlap between the confidence intervals. Statistical tests were not used to detect differences between groups due to data limitations for the Australian population norms.

Figure 1 shows the 95 per cent confidence interval ranges for the mean SF-36 scores of male NSW Drug Court participants at baseline, compared with Australian population norms, by age.⁹

There were 69 male NSW Drug Court participants between the ages of 18 and 24 at the time of the baseline interview, but SF-36 data were missing for one participant. There were 81 male participants aged between 25 and 34 years.

As seen in Figures 1(a) and (b), NSW Drug Court participants were in extremely poor health prior to entering the NSW Drug Court program, compared with the general male population. On seven of the eight dimensions of health and well-being measured by the SF-36, NSW Drug Court participants had mean scores significantly lower than the

Figure 1(a): Baseline mean SF-36 scores of NSW Drug Court participants and Australian population for males, aged 18-24 years

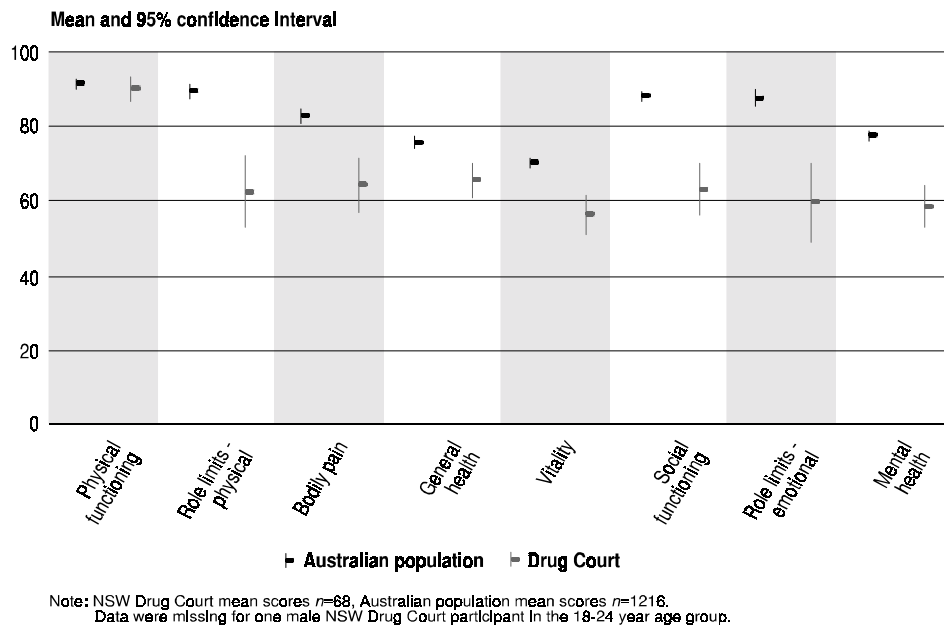
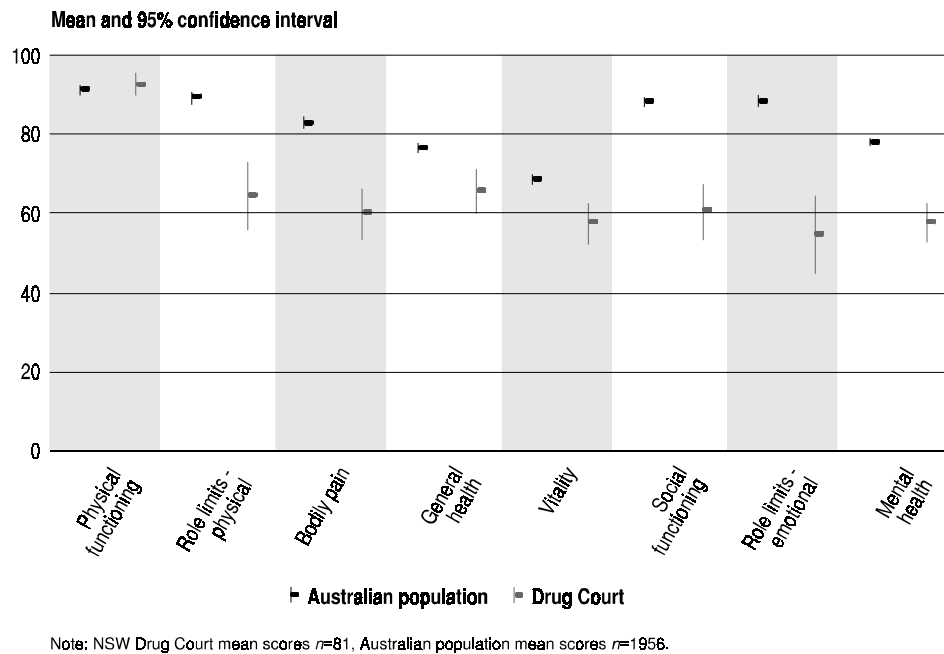
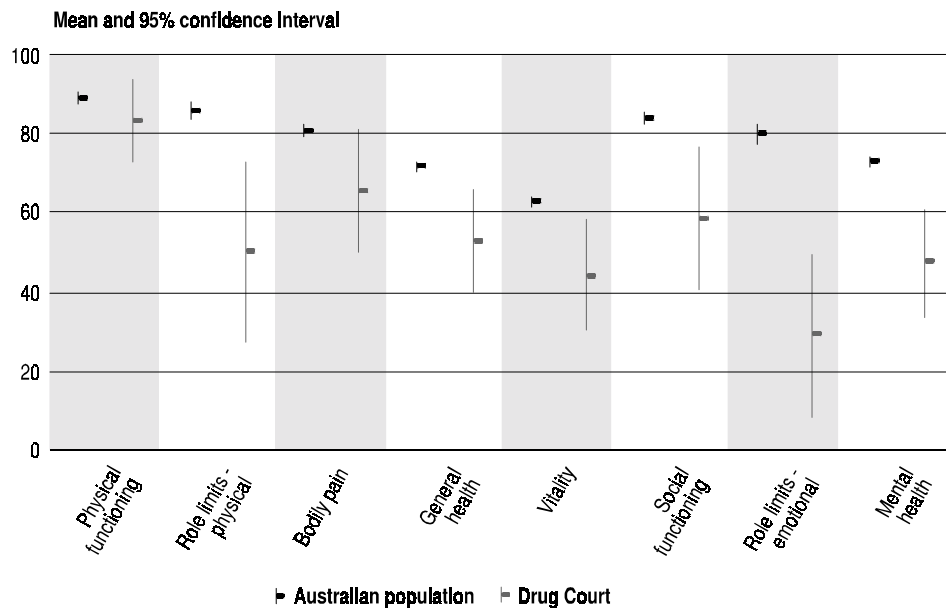


Figure 1(b): Baseline mean SF-36 scores of NSW Drug Court participants and Australian population for males, aged 25-34 years



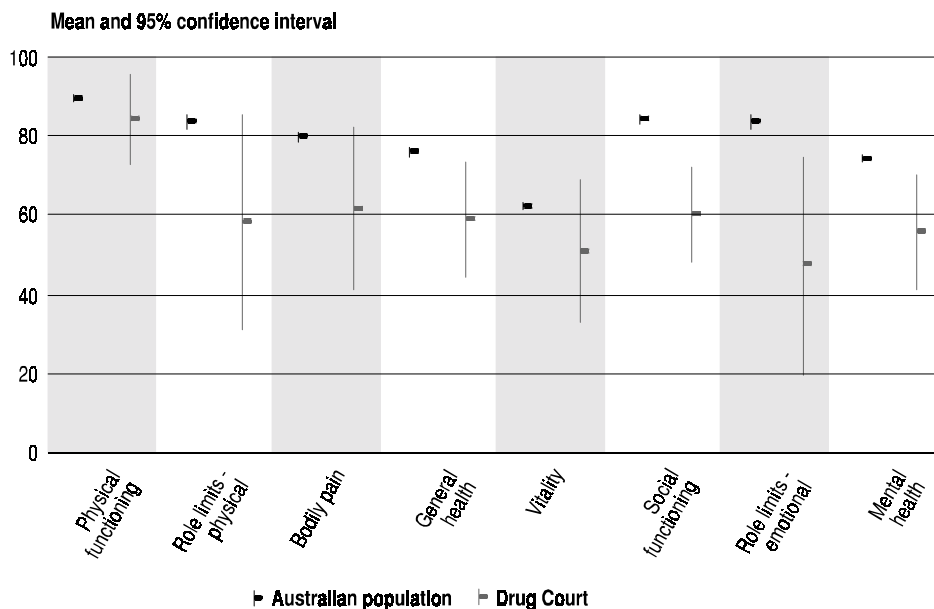
Australian male population norms. For males in both age groups, there was only overlap between NSW Drug Court participant mean scores and Australian male population norms at the 95 per cent confidence interval on the physical functioning dimension. The same pattern was found at the 99 per cent confidence interval for each dimension. The physical functioning dimension relates to limitations in performing physical activities

Figure 2(a): Baseline mean SF-36 scores of NSW Drug Court participants and Australian population for females, aged 18-24 years



Note: NSW Drug Court mean scores $n=15$, Australian population mean scores $n=1331$.

Figure 2(b): Baseline mean SF-36 scores of NSW Drug Court participants and Australian population for females, aged 25-34 years



Note: NSW Drug Court mean scores $n=12$, Australian population mean scores $n=2182$.

ranging in difficulty, from lifting heavy objects to bathing and dressing oneself. The results indicate that although male NSW Drug Court participants experienced significant impairments in their mental and physical health prior to commencing the NSW Drug Court program, their health status did not place significant limitations on their physical activities.

Figures 2(a) and 2(b) show the 95 per cent confidence interval ranges for the mean SF-36 scores of female NSW Drug Court participants prior to entry on the NSW Drug Court program, compared with Australian population norms, by age.

The number of female NSW Drug Court participants in each of the age ranges was considerably smaller than that for males. Only 15 female NSW Drug Court participants were aged between 18 and 24 years at the time of the baseline interview, and only 12 were aged between 25 and 34 years.

The results indicate that female participants were in poorer health prior to commencing the NSW Drug Court program than the Australian female population on a number of health and well-being dimensions. From Figure 2(a) it can be seen that there was no overlap at the 95 per cent confidence interval range between NSW Drug Court participants' mean scores and Australian population norms for females aged 18 to 24 on six of the eight dimensions: role limits-physical, general health, vitality, social functioning, role limits-emotional and mental health. Moreover, there was no overlap at the 99 per cent confidence interval range for four of these dimensions: general health, social functioning, role limits-emotional and mental health. These findings indicate that the health of female NSW Drug Court participants was significantly worse than the health of women of the same age in the general population on these dimensions.

Figure 2(b) shows that at the 95 per cent confidence interval level, female participants aged between 25 and 34 were found to have significantly lower mean scores than the Australian population on four of the eight dimensions. There was no overlap at the 95 per cent confidence interval range for the general health, social functioning, role limits-emotional and mental health dimensions of health and well-being. Only the social functioning dimension was shown to have no overlap between mean scores for NSW Drug Court participants and the Australian population at the 99 per cent confidence interval level.

Although it appears that female NSW Drug Court participants fared better than male participants when compared with Australian population norms on a range of dimensions, such a conclusion may be erroneous. The failure to detect significant differences between the mean scores of female participants and Australian population norms on several health and well-being dimensions may be due to a lack of power because of the small sample size, rather than an absence of any real differences between the groups.

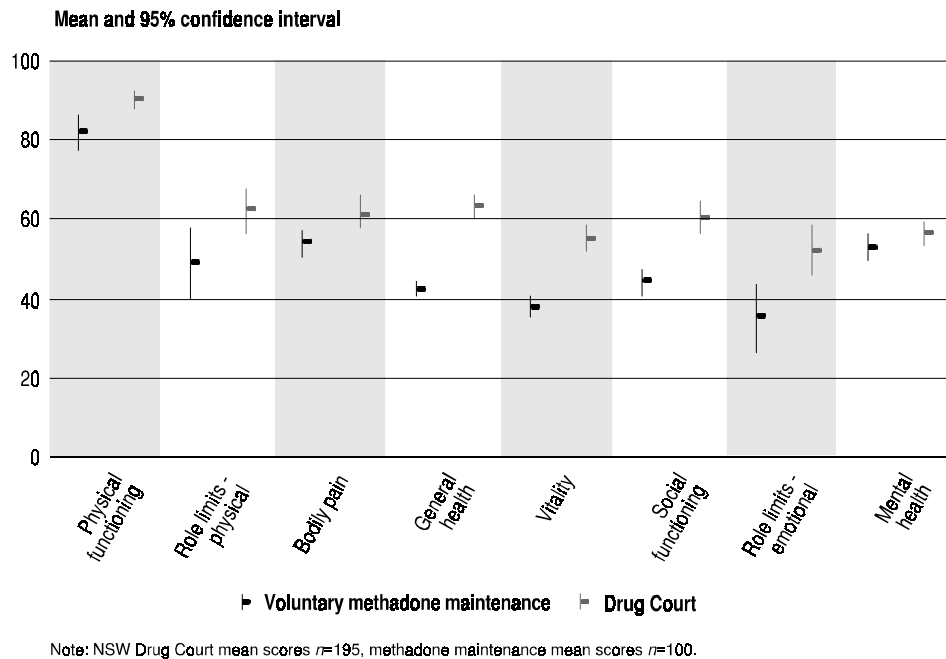
While it is reasonable to presume that the low SF-36 scores obtained by NSW Drug Court participants are related to their drug use, it is important to note that persons experiencing greater socio-economic disadvantage have poor health and well-being scores (Australian Bureau of Statistics 1997). As NSW Drug Court participants generally fall into the low socio-economic category, low SF-36 scores would be expected regardless of level of drug use.

Comparison with a drug-dependent population

Data were also obtained for comparison of NSW Drug Court participants' health with another drug-using population. Ryan and White (1996) collected SF-36 data from a sample of 100 persons commencing a voluntary methadone maintenance program in South Australia from February 1993 to March 1994. Interviews were..... conducted in the first week on the program. The age range of this sample was from 18 to 42 years, with an average age of 29 years. Fifty-eight per cent of the sample were male and 17 per cent were employed either full-time or part-time at the time of the interview. Figure 3

shows a summary of the 95 per cent confidence interval ranges for the mean SF-36 scores of the methadone maintenance clients at program entry compared with a sub-sample of baseline mean scores for NSW Drug Court participants, aged 18 to 42 years old.

Figure 3: Baseline mean SF-36 scores of NSW Drug Court participants and methadone maintenance clients, aged 18-42 years



Although NSW Drug Court participants generally have poorer health prior to commencing the program than the Australian population, Figure 3 shows their health to be significantly better than the group voluntarily entering methadone maintenance treatment. As seen in Figure 3, the mean scores for the NSW Drug Court participants were higher for each of the health and well-being dimensions measured by the SF-36 compared with the group voluntarily entering methadone maintenance. At the 95 per cent confidence interval range, the mean scores of the two groups overlapped on only the role limits-physical and mental health dimensions. However, at the 99 per cent confidence interval range overlap between the mean scores of the two groups were found on two additional dimensions: bodily pain and role limits-emotional. This outcome suggests that, at treatment entry, the NSW Drug Court participants were in significantly better health than voluntary patients entering a methadone maintenance clinic on a range of health and well-being dimensions, including physical functioning, general health, vitality and social functioning. Nevertheless, caution should be taken in the interpretation of these results as the sample differences (age and gender) may also impact on the differences between SF-36 scores.

CHANGES IN PARTICIPANTS' HEALTH AND WELL-BEING

Changes in well-being throughout the program were examined for the 51 participants who completed the baseline, four-month, eight-month and twelve-month interviews.

It should be noted that while it was anticipated that the majority of participants would be close to completing their program by twelve months, 19 of the 51 (37%) participants interviewed at twelve months were still in Phase 1 of the NSW Drug Court program, 15 persons (29%) were in Phase 2, and only 17 persons (33%) were in Phase 3 or had graduated from the program.

Changes measured by the SF-36 Health Survey

Changes in mean SF-36 scores between each interview were examined for the 51 respondents who completed each interview round. Each participant's mean scores from each interview round were examined in relation to their mean scores at baseline and each follow-up interview. As data for the SF-36 were not normally distributed, non-parametric techniques for data analysis were used. A Wilcoxon signed ranks statistics test was used to detect the statistical significance of changes in test scores. The results were analysed for the entire sample as the small number of female participants would render an analysis by gender unreliable.

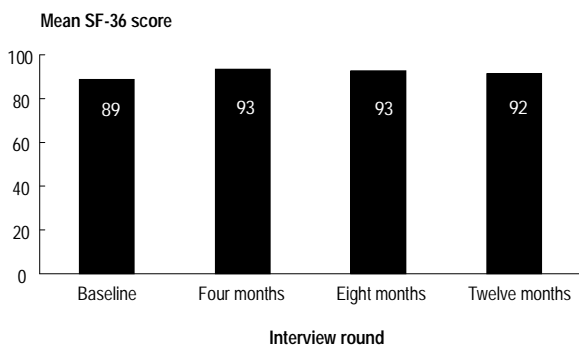
Figures 4(a) to 4(h) present a summary of the mean SF-36 scores at each interview round for the 51 people who completed all rounds of interviews for the eight SF-36 health dimensions.

Examination of Figures 4(a) to 4(h) reveals an increase in SF-36 health scores from the baseline interview to the four-month interview on each of the dimensions examined. This increase was statistically significant for all dimensions except for role limits-emotional.¹⁰ However the increase from the baseline role limits-emotional score to the twelve-month score for this dimension was statistically significant.¹¹

Overall the improvements in health from baseline to four months, as measured by the SF-36 health dimensions, were maintained throughout respondents' participation in their first twelve months on the NSW Drug Court program. While significant improvements in the physical functioning dimension were detected between baseline and four months and between baseline and eight months, a slight reduction in scores in the last two interview rounds resulted in a failure to detect a statistically significant improvement from the baseline to twelve-month scores.¹²

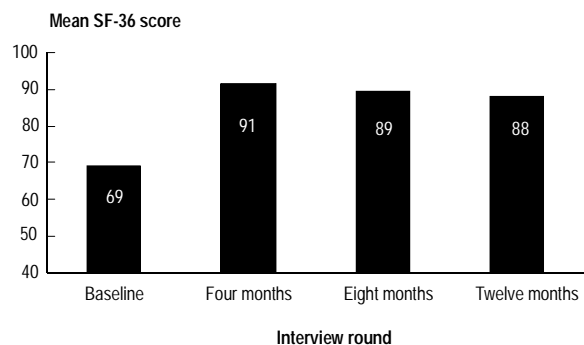
The mean, standard deviations and 95 per cent confidence intervals for each SF-36 dimension, at each interview round, for the 51 respondents who completed each interview round are located in Appendix A.

Figure 4(a): Mean SF-36 physical functioning scores at each interview for NSW Drug Court participants completing all interviews



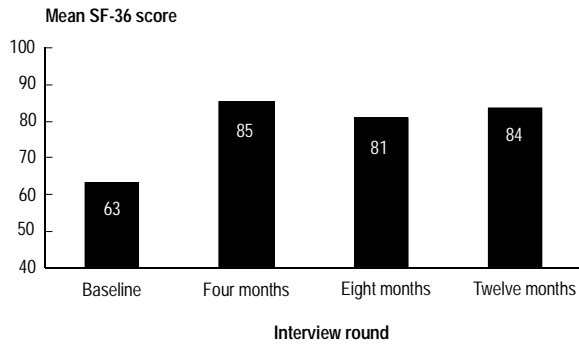
Note: n = 51 participants

Figure 4(b): Mean SF-36 role limits-physical scores at each interview for NSW Drug Court participants completing all interviews



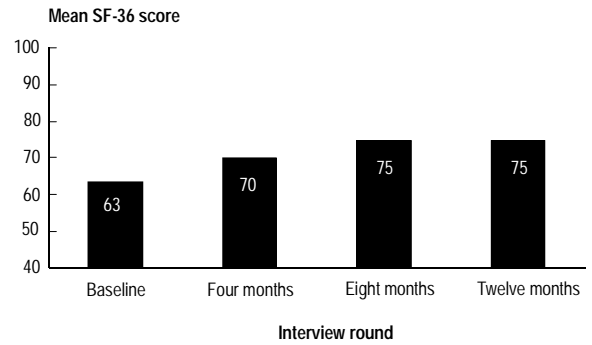
Note: n = 51 participants

Figure 4(c): Mean SF-36 bodily pain scores at each interview for NSW Drug Court participants completing all interviews



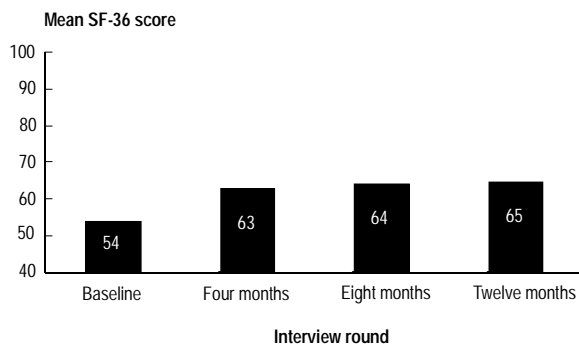
Note: n = 51 participants

Figure 4(d): Mean SF-36 general health scores at each interview for NSW Drug Court participants completing all interviews



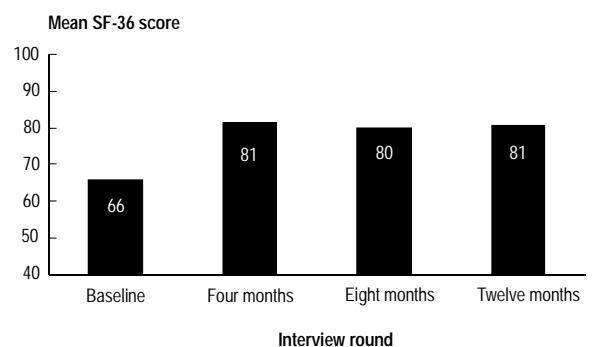
Note: n = 51 participants

Figure 4(e): Mean SF-36 vitality scores at each interview for NSW Drug Court participants completing all interviews



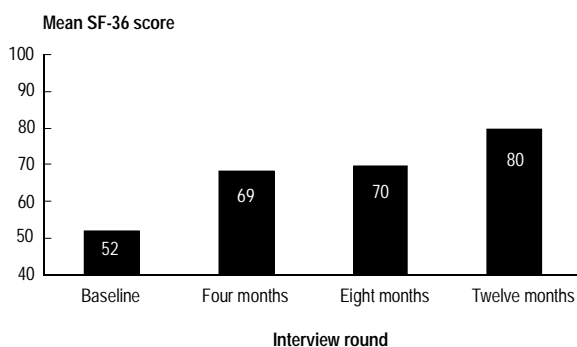
Note: n = 51 participants

Figure 4(f): Mean SF-36 social functioning scores at each interview for NSW Drug Court participants completing all interviews



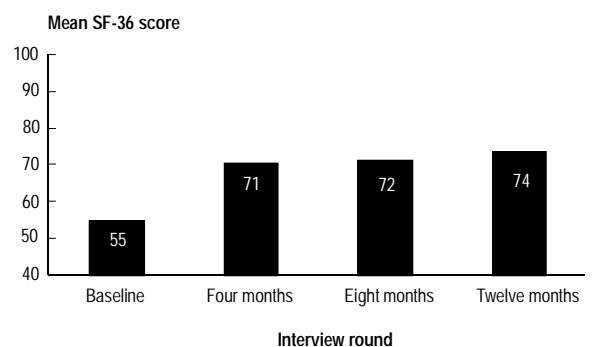
Note: n = 51 participants

Figure 4(g): Mean SF-36 role limits-emotional scores at each interview for NSW Drug Court participants completing all interviews



Note: n = 51 participants

Figure 4(h): Mean SF-36 mental health scores at each interview for NSW Drug Court participants completing all interviews



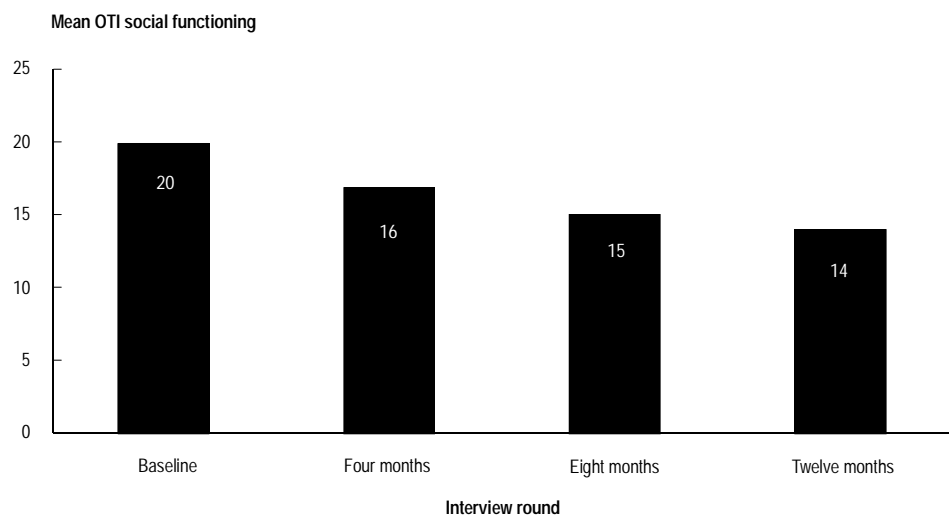
Note: n = 51 participants

Changes in OTI social functioning

Changes in social functioning scores were examined for all participants who completed the OTI social functioning questionnaire at all interview rounds. As with the analysis of the SF-36 scores, a separate analysis by gender was not appropriate due to the small number of female participants who completed the follow-up interviews.

Figure 5 shows the mean OTI social functioning scores at each interview round for the 51 respondents who completed an interview at each round.

Figure 5: Mean OTI social functioning scores for participants who completed each interview



Note: $n = 51$ participants

As lower scores on the OTI social functioning scale represent higher social functioning, Figure 5 reveals a steady improvement in social functioning throughout participation on the NSW Drug Court program. A paired t-test was conducted on the data to test for significant improvements from one time period to the next. The test indicates statistically significant improvement in social functioning from baseline to four months ($t = 3.02$, $df = 50$, $p = 0.004$), and from four months to eight months ($t = 2.25$, $df = 50$, $p = 0.029$). While the mean OTI social functioning scores continued to fall from eight months to twelve months, the change was not statistically significant ($t = 1.63$, $df = 50$, $p = 0.110$).

The OTI social functioning scale is likely to underestimate improvements in social functioning measured in the first two follow-up interview rounds because it includes length and stability of employment as factors that contribute to social functioning. NSW Drug Court participants are discouraged by the Court from obtaining employment while they are in Phase 1 of their program as it may hinder participation in other aspects of the program, such as attending Court and treatment. Those participants who were employed at the baseline interview would, on the most part, have had to restrict or leave their employment commitments once they commenced the NSW Drug Court program. Although the Court would view this change in employment status positively,

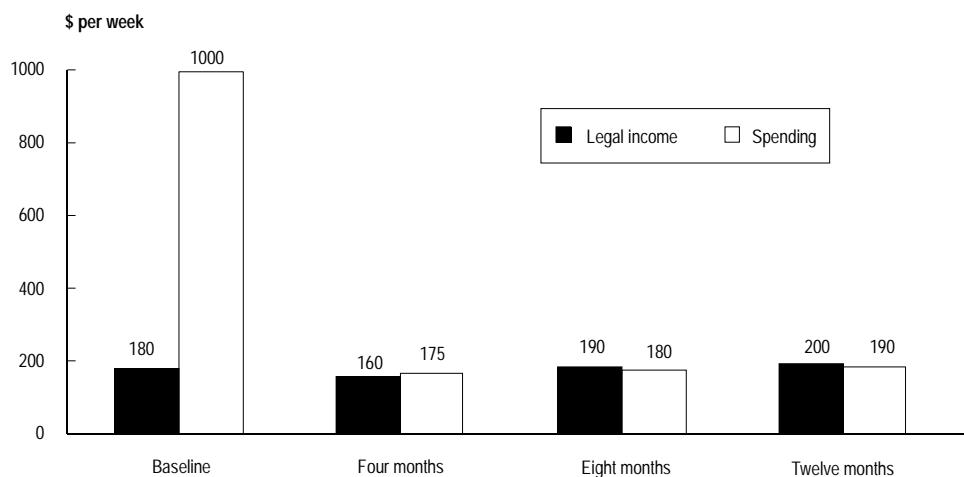
it would result in an increased OTI social functioning score indicating a lower state of social functioning. While it was originally anticipated that most participants would have moved on from Phase 1 after three months, 19 of the 51 persons in the above sample were still in Phase 1 of the NSW Drug Court program at twelve months.

Changes in level of drug use

Changes in weekly legal income and weekly spending between the interview rounds were examined as a proxy for changes in illicit drug use and are shown in Figure 6.

Figure 6 shows a dramatic drop in spending from the baseline interview to the four-month interview. The median weekly spending fell from \$1000 per week at the baseline interview to \$175 per week at the four-month interview ($Z = -5.62, p < 0.001$). The reduced spending at four months was maintained at eight and twelve months. In contrast, the median weekly legal income at each of the four time periods was similar (\$180, \$160, \$190 and \$200 respectively). The only statistically significant change in legal income was an increase in income between the four-month and eight-month interviews ($Z = -2.55, p = 0.011$).

Figure 6: Median weekly legal income and weekly spending for NSW Drug Court participants who completed each interview



Note: $n = 51$ participants

Clearly, the reduction in spending cannot be attributed to a reduction in legal income. It seems likely that the reduction in spending is attributable, at least in part, to a reduction in spending on illicit drugs, and therefore a reduction in illicit drug use. The increase in legal income between four and eight months may reflect participants gaining some employment as they progress through the NSW Drug Court program.

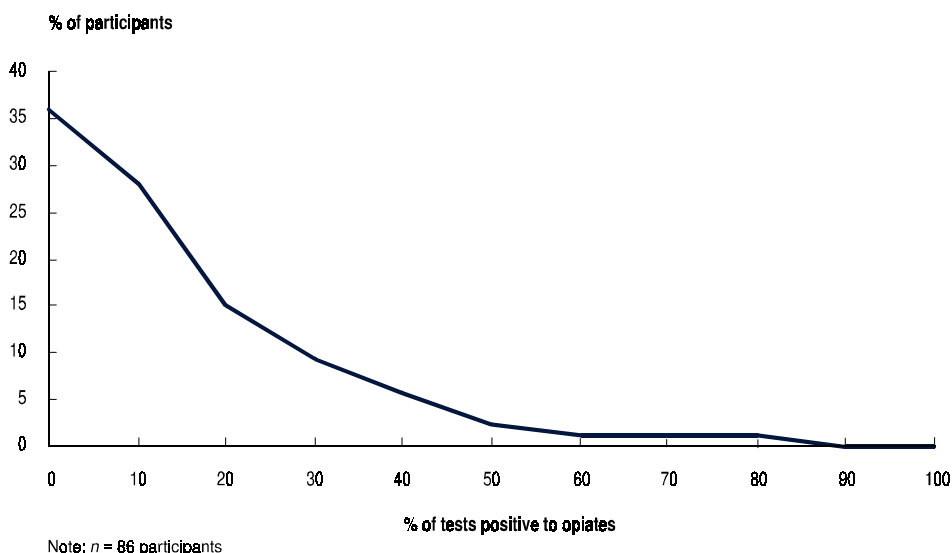
The evidence of a decrease in illicit drug use from the analysis of self-reported spending and legal income is supported by urinalysis results obtained from the NSW Drug Court. The NSW Drug Court screens for heroin, opiates, cocaine, amphetamines, cannabis, benzodiazepines, and methadone. This study restricted the analysis of urine test results to the detection of opiates. Detection of heroin was not used in the analysis as it is rapidly metabolised by the body, changing its chemical form, eventually into morphine.

As a result heroin is rarely detected (Bigger 1979). However, a positive test to opiates indicates the detection of morphine, resulting from the use of either heroin or codeine (found in some over-the-counter medication). As a positive test to opiates may result from the use of codeine-based medication, the use of opiate test results as an indicator of heroin use may actually overestimate the frequency with which participants used heroin.

Urinalysis results were examined for a sample of participants who took part in this study, were interviewed at four months, and who had urine tests at a rate of at least once per week for the first four months of their NSW Drug Court program. This would exclude persons who absconded for any significant period of time in the first four months of the program, and persons who were not given regular urine tests. As the frequency of testing varied among participants, the percentage of positive urine tests was calculated for each individual. This sample of 86 persons represents 77 per cent of the 112 persons who provided self-report income and spending information at four months. Of this sample, 71 participants (83%) reported using heroin in the four weeks prior to entering custody for the NSW Drug Court program, and 61 (71%) reported daily heroin use during this period.

Figure 7 shows the distribution of the percentage of urine tests which were positive to opiates.

Figure 7: Distribution of percentage of urine tests positive to opiates during the first 4 months of program participation

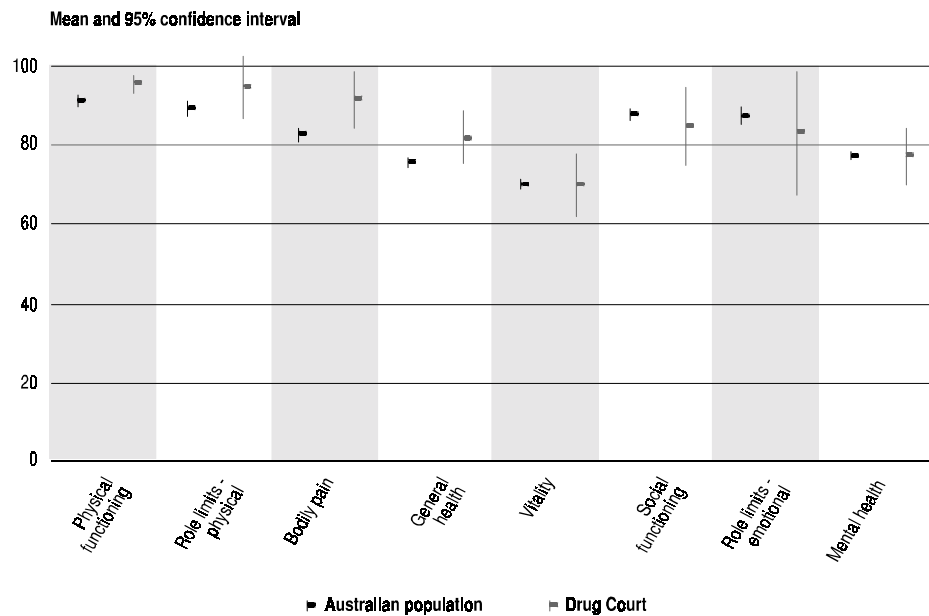


From Figure 7 it can be ascertained that over 35 per cent of the sample had no tests positive to opiates, no participant had all urine samples testing positive to opiates, and less than 5 per cent of participants had over 50 per cent of their samples testing positive to opiates. Therefore, it can be concluded that most respondents only tested positive to heroin occasionally. These results suggest a reduction in heroin use when compared with the proportion of the sample (71%) who were using heroin every day prior to commencing the NSW Drug Court program.

Comparison of twelve-month scores with Australian population norms

Mean scores on the SF-36 at twelve months were compared with the Australian population norms. The comparison was only made for male participants who completed the twelve-month interview as there were too few female participants in each age category to make a meaningful comparison.¹³ The 95 per cent confidence intervals of the twelve-month mean scores for male NSW Drug Court participants, aged 18 to 24 years and 25 to 34 years, compared with the Australian population norms are shown in Figures 8(a) and 8(b).

Figure 8(a): Mean 12-month SF-36 scores of NSW Drug Court participants and Australian population for males, aged 18-24 years



Note: NSW Drug Court mean scores $n=20$, Australian population mean scores $n=1216$.

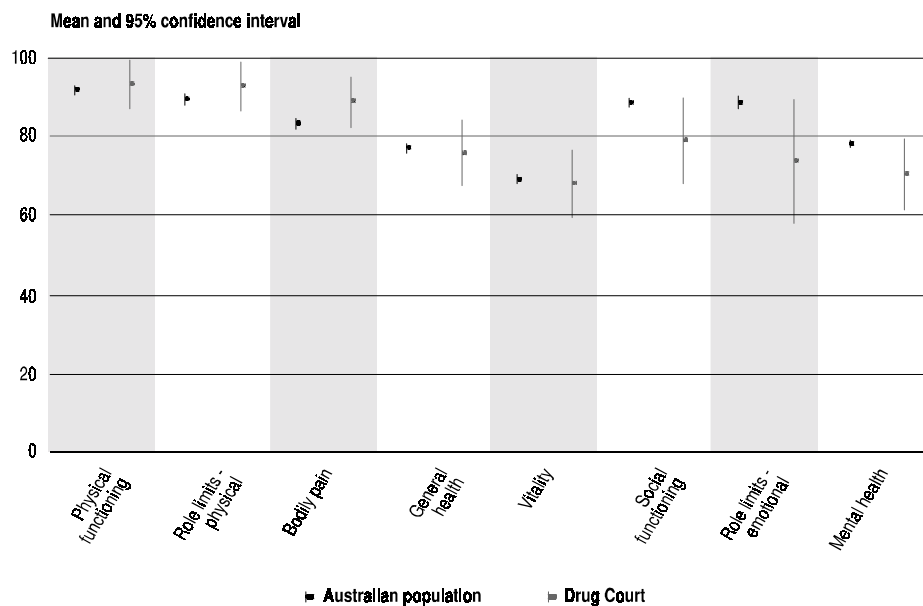
While caution is needed in the interpretation of these results due to the small sample size of NSW Drug Court participants the results suggest that, at the twelve-month mark, the mean scores of male NSW Drug Court participants on the physical health dimensions were either within the normal range for Australian males of the same age or were higher. No significant differences could be detected between the mean twelve-month scores of male NSW Drug Court participants and the male Australian population on the SF-36 dimensions more closely related to emotional well-being.

Figure 8(a) shows that there was no overlap between mean scores of the NSW Drug Court participants and the Australian population norms at the 95 per cent confidence interval on the physical functioning dimension for males aged 18-24 years. Moreover, it appears that the mean score of the Drug Court sample is actually higher than the Australian population norm.

Overlapping scores at the 95 per cent confidence interval on the other seven SF-36 dimensions suggest no significant difference between male NSW Drug Court participants aged 18-25 and the population on these dimensions.

Figure 8(b) shows an overlap of SF-36 scores at the 95 per cent confidence interval level between NSW Drug Court participants and the Australian population norms for males aged 24 to 35 years, on all eight dimensions. This finding suggest that there were no statistically significant differences in SF-36 scores between groups on any dimension.

Figure 8(b): Mean 12-month SF-36 scores of NSW Drug Court participants and Australian population for males, aged 25-34 years



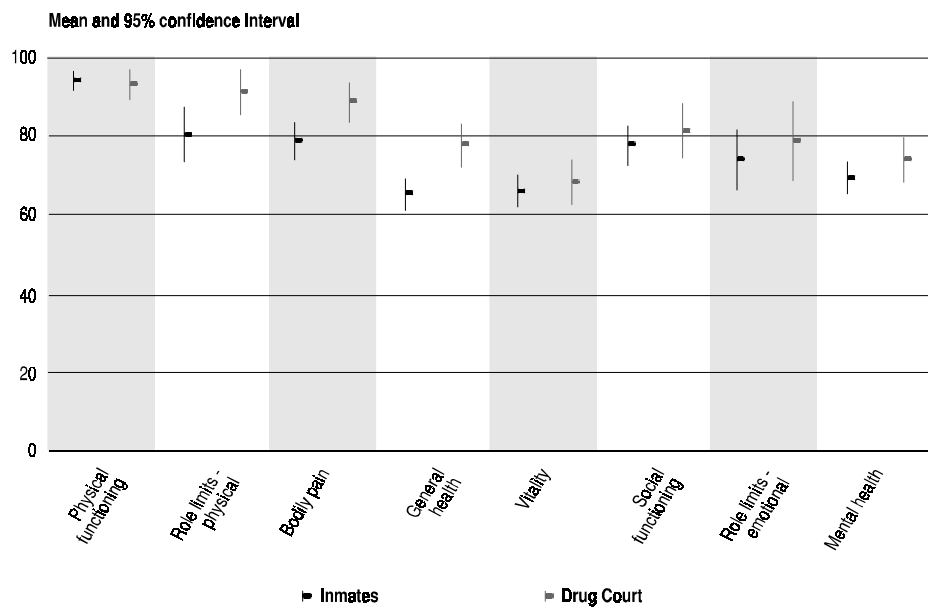
Note: NSW Drug Court mean scores $n=28$, Australian population mean scores $n=1956$.

Comparison of twelve-month scores with NSW inmates

While there is substantial evidence of improvements to the health and well-being of NSW Drug Court participants who remain on the program, a comparison with the mainstream sentencing option is needed to assess the relative success of the program in meeting the therapeutic goals of the program. Because there was no control group for the study, it was not possible to assess changes in health and well-being that would have been gained by participants had they followed the mainstream criminal justice path. Given that eligibility for the NSW Drug Court program requires participants to be highly likely to be sentenced to full-time prison, a comparison of NSW Drug Court participants' SF-36 scores was made with offenders in full-time custody. Data from the 1996 NSW Inmate Health Survey (Butler 1997) was used to compare the SF-36 scores of 104 male inmates who identified as injecting drug users, and who had been in custody between three and twelve months, with the twelve-month SF-36 scores for the 52 male NSW Drug Court participants who completed the twelve-month interview.

Figure 9 shows the 95 per cent confidence interval ranges and the mean SF-36 scores for this sample of male inmates who identified as injecting drug users, and had been custody between three and twelve months compared with male NSW Drug Court participants at twelve months.

Figure 9: SF-36 scores of male NSW Drug Court participants at 12 months and male, drug using, prison inmates, 3 to 12 months after entering custody



Note: NSW Drug Court mean scores n=52, Inmate population mean scores n=104.

Overlapping confidence interval on six of the eight SF-36 health dimensions suggests that, overall, the health status of the two groups was similar. While the mean scores for NSW Drug Court participants were generally higher than the scores for the inmate group, significant differences were detected in relation to the bodily pain and general health dimensions, with the NSW Drug Court participants experiencing significantly higher scores on these dimensions.

PREDICTING RETENTION ON PROGRAM

Of the 202 NSW Drug Court participants involved in this study, 126 (62%) were no longer participating in the program at the time of the twelve-month interview because their program had been terminated.¹⁴ These participants (referred to as 'short-stay participants') were compared with participants who were still participating on the program or had graduated at the time of their twelve-month interview (referred to as 'long-stay participants'). One participant died immediately after commencing the Drug Court program and has been excluded from the analysis on retention on the program. The comparison between the long-stay and short-stay groups on a range of socio-demographic and criminal history variables is shown in Table 3.

Table 3: Retention on program by socio-demographic and criminal history variables

	<i>Long-stay group</i>		<i>Short-stay group</i>		<i>Chi square test</i>		
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>	χ^2	<i>df</i>	<i>p</i>
Gender							
Male	60	80.0	105	83.3	0.36	1	0.551
Female	15	20.0	21	16.7			
Age							
18-24	31	41.3	52	41.3	2.94	2	0.230
25-34	31	41.3	62	49.2			
35 and over	13	17.3	12	9.5			
Drug of choice							
Heroin	60	80.0	104	82.5	0.20	1	0.653
Other	15	20.0	22	17.5			
Relationship status							
Married/de facto	30	40.0	48	38.1	0.07	1	0.789
Single	45	60.0	78	61.9			
Ethnicity							
Caucasian/European	55	73.3	101	80.2	1.26	1	0.262
Other	20	26.7	25	19.8			
Highest level of school achieved ^a							
Year 6-9	35	47.3	67	54.5	0.95	1	0.329
Year 10-12	39	52.7	56	45.5			
Prior convictions							
Under 15	40	53.3	76	60.3	0.94	1	0.332
15 and over	35	46.7	50	39.7			
Suspended sentence							
Under 6 mths	22	29.3	67	53.2	10.83	1	0.001**
6 mths and over	53	70.7	59	46.8			

Note: ** $p < 0.01$ ^a $n = 72$ for long-stay group and $n = 123$ for short-stay group

Table 3 shows that only the length of suspended sentence was a significant predictor of a participant staying at least twelve months on the program or graduating within twelve months. One hundred and twelve (56%) of the baseline sample were given a suspended sentence of six months or greater when they commenced the NSW Drug Court program. Of these 112 participants, 53 participants (47%) remained on the program or had graduated at the twelve-month mark. This compares with only 22 of the 89 participants (25%) who were given a suspended sentence of less than six months.

PARTICIPANT SATISFACTION

The results of the client feedback questions from the four-month, eight-month and twelve-month interviews show that participant satisfaction with the NSW Drug Court program was high and remained so throughout participation on the program. Table 4 shows the level of participant satisfaction with the NSW Drug Court program at each interview round.

Table 4: Percentage of NSW Drug Court participants' satisfaction with program at each interview for all participants who completed the interview round

<i>Interview round</i>	<i>Very dissatisfied</i>			<i>Dissatisfied</i>			<i>Neither satisfied nor dissatisfied</i>			<i>Satisfied</i>			<i>Very satisfied</i>		
	<i>4 months</i>	<i>8 months</i>	<i>12 months</i>	<i>4 months</i>	<i>8 months</i>	<i>12 months</i>	<i>4 months</i>	<i>8 months</i>	<i>12 months</i>	<i>4 months</i>	<i>8 months</i>	<i>12 months</i>	<i>4 months</i>	<i>8 months</i>	<i>12 months</i>
Satisfaction with treatment	4	1	2	4	6	2	10	7	14	37	35	36	45	51	47
Satisfaction with Probation & Parole ^a	5	9	3	4	6	11	10	7	10	34	38	33	48	40	43
Satisfaction with Legal Aid ^b	2	1	0	1	4	2	11	4	10	39	40	42	47	51	47

Note: Four-month interview *n* = 110 participants, eight-month interview *n* = 86, twelve-month interview *n* = 64.

^a data missing for one person at the four-month interview and the twelve-month interview.

^b Legal Aid response not applicable for eight persons at the four-month interview, one person at the eight-month interview and three persons at the twelve-month interview, as they had not used Legal Aid during the reference period.

Satisfaction with treatment services offered, the support provided by Probation and Parole, and the representation provided by Legal Aid was found to be consistently high. Over three quarters of participants reported being 'satisfied' or 'very satisfied' at each round of interviews with Legal Aid, treatment services, and Probation and Parole. A relatively small proportion of participants at each interview round indicated any dissatisfaction with the three aspects of the program they were questioned about: 5 per cent or less for Legal Aid; 7 per cent or less for treatment services; and 15 per cent or less for Probation and Parole.

Table 5 shows the perceived level of fairness of the NSW Drug Court at each interview round.

Table 5: Percentage of NSW Drug Court participants' perception of fairness of the program at each interview for all participants who completed the interview round

<i>Interview round</i>	<i>Very unfair</i>			<i>Unfair</i>			<i>Neither fair nor unfair</i>			<i>Fair</i>			<i>Very Fair</i>		
	<i>4 months</i>	<i>8 months</i>	<i>12 months</i>	<i>4 months</i>	<i>8 months</i>	<i>12 months</i>	<i>4 months</i>	<i>8 months</i>	<i>12 months</i>	<i>4 months</i>	<i>8 months</i>	<i>12 months</i>	<i>4 months</i>	<i>8 months</i>	<i>12 months</i>
Perceived fairness of the Court	0	1	2	4	7	0	13	3	11	27	40	44	56	49	44

Note: Four-month interview *n* = 110 participants, eight-month interview *n* = 86, twelve-month interview *n* = 64.

^a data missing for one person at the four-month interview and the twelve-month interview.

^b Legal Aid response not applicable for eight persons at the four-month interview, one person at the eight-month interview and three persons at the twelve-month interview, as they had not used Legal Aid during the reference period.

While over 80 per cent of respondents perceived the NSW Drug Court to be 'fair' or 'very fair', at each interview round, the proportion of respondents who perceived it to be 'very fair' fell from 56 per cent at the four-month interview to 44 per cent at the twelve-month interview.

Table 6 shows participant’s rating of ease of program at each interview round.

Table 6: Percentage of NSW Drug Court participants’ perception of ease of program at each interview for all participants who completed the interview round

Interview round	Very difficult			Difficult			Neither difficult nor easy			Easy			Very easy		
	4	8	12	4	8	12	4	8	12	4	8	12	4	8	12
	months			months			months			months			months		
Ease of program	4	7	14	28	28	22	33	35	39	22	21	17	14	9	8

Note: Four-month interview *n* = 110 participants, eight-month interview *n* = 86, twelve-month interview *n* = 64.

a data missing for one person at the four-month interview and the twelve-month interview.

b Legal Aid response not applicable for eight persons at the four-month interview, one person at the eight-month interview and three persons at the twelve-month interview, as they had not used Legal Aid during the reference period.

Participants were also asked to rate the ease of the program on a five-point scale from ‘very difficult’ to ‘very easy’. The most common response at each round of interviews was that the NSW Drug Court program was ‘neither easy nor difficult’, with the proportion of people citing this response increasing with each round of interviews. The proportion of people finding the program to be ‘easy’ or ‘very easy’ fell from 36 per cent in the four-month interview to 25 per cent at the twelve-month interview. The proportion of people finding the program to be ‘very difficult’ rose from 4 per cent at four months to 14 per cent at twelve months.

It also appears that participants commenced the NSW Drug Court program with a poor understanding of what the program would involve. Participants were asked how well they thought they understood the program at the baseline interview, and were asked again at the twelve-month interview how well, in retrospect, they thought they understood the program prior to commencement. While 56 of the 65 (86%) respondents who completed the twelve-month interview had stated at the baseline interview that they had a ‘good’ or ‘very good’ understanding of the program, only 17 participants (26%) thought they had a ‘good’ or ‘very good’ understanding of the program before they commenced when questioned at twelve months.

Satisfaction and well-being

The measures of satisfaction were analysed to test for any association with indicators of well-being. Kendall’s tau-b correlations were conducted between each measure of satisfaction with the program, and the twelve-month scores on the SF-36 dimensions, the OTI social functioning scores and self-reported spending for 64 persons interviewed at twelve months.¹⁵ Table 7 presents the correlations between participant satisfaction and measures of well-being.

Table 7 shows that participants’ perceptions of program ease was related to their well-being, with participants scoring more poorly on well-being measures also finding the program more difficult. The perceived degree of program difficulty increased as mean scores on four SF-36 dimensions, namely, role limits-physical, social functioning, role limits-emotional and mental health, decreased. Scores on the OTI social functioning scale also indicate that as social functioning declined, the perceived difficulty of the program increased.¹⁶

Table 7: Kendall's tau-b correlation between well-being measures at 12 months and satisfaction

<i>Dimension of well-being</i>	<i>Satisfaction with treatment</i>	<i>Satisfaction with Probation & Parole</i>	<i>Satisfaction with Legal Aid</i>	<i>Court fairness</i>	<i>Ease of program</i>
SF-36 dimensions					
Physical functioning	0.00	-0.14	0.02	0.35**	-0.06
Role limits - physical	0.09	0.05	0.02	0.17	-0.22*
Bodily pain	0.05	-0.16	-0.05	0.19	-0.16
General health	0.13	0.05	-0.02	0.25*	-0.18
Vitality	0.18	0.00	0.16	0.14	-0.17
Social functioning	0.21	0.09	0.08	0.11	-0.32**
Role limits - emotional	0.21	0.11	0.24*	0.10	-0.35**
Mental health	0.18	0.04	0.21	0.08	-0.29**
OTI - social functioning	-0.18	-0.22*	-0.23*	-0.14	0.30**
Self reported spending	0.02	-0.05	0.04	0.12	-0.03

Note: * $p < 0.05$, ** $p < 0.01$, $n = 64$ for satisfaction with treatment, court fairness and ease of program, $n = 63$ for satisfaction with Probation & Parole, $n = 60$ for satisfaction with Legal Aid.

Perceptions of fairness of the court were significantly associated with respondents' level of physical functioning and general health at twelve months, with participants rating more highly on these dimensions more likely to perceive the court as fair. In addition, satisfaction with Probation and Parole and Legal Aid were significantly correlated with the scores on the OTI social functioning scale, indicating greater satisfaction for people with a higher degree of social functioning. Table 7 also shows that satisfaction with Legal Aid was significantly correlated with the SF-36 role limits-emotional dimension, with people experiencing a higher level of functioning on this dimension also having higher rates of satisfaction with Legal Aid.

Program issues identified by participants

Best and worst aspects of the program

At the four-month and eight-month interviews participants were invited to nominate the best and worst aspects of the NSW Drug Court program via open-ended questions allowing for multiple responses. Answers were coded into common themes of responses with only answers that related directly to program delivery being included. Therefore, any responses relating to personal outcomes, such as, 'the best thing is that I am drug-free', were not included in the analysis. The results are summarised in Table 8.

Of the 112 people interviewed at four months, two did not complete this section, 84 persons cited one or more element of the NSW Drug Court program as 'the best aspects' and 54 persons provided one or more elements as 'the worst aspects'. Of the 86 participants interviewed at eight months, 78 persons identified at least one 'best aspect', while only 38 persons identified a 'worst aspect' of the NSW Drug Court program. The remaining persons interviewed could not identify specific aspects of the program as best or worst.

Table 8: Best and worst aspects of the NSW Drug Court program at four-month and eight-month interviews

<i>Best aspect of program</i>	<i>No. of responses</i>		<i>% of respondents</i>	
	<i>4 months</i>	<i>8 months</i>	<i>4 months</i>	<i>8 months</i>
Treatment	62	44	56.4	51.2
General support	17	13	15.5	15.1
Probation & Parole	12	13	10.9	15.1
Regular court appearances	6	3	5.5	3.5
Regular urine testing	5	7	4.5	8.1
Legal Aid	3	0	2.7	0.0
Total	105	82		

<i>Worst aspect of program</i>	<i>No. of responses</i>		<i>% of respondents</i>	
	<i>4 months</i>	<i>8 months</i>	<i>4 months</i>	<i>8 months</i>
Treatment	15	8	13.6	9.3
Regular court appearances	12	7	10.9	8.1
Sanctions	11	9	10.0	10.5
Probation & Parole	7	7	6.4	8.1
Regular urine testing	2	5	1.8	5.8
Expenses	2	0	1.8	0.0
Other	9	6	8.2	7.0
Total	58	42		

Note: $n=110$ participants at four-month interview and $n=86$ participants at eight-month interview. Percentages do not add to 100 because respondents could nominate more than one aspect.

Table 8 shows a similar pattern of responses identifying the best aspects of the NSW Drug Court program at the four-month and eight-month marks. Treatment was most commonly reported as the 'best aspect' of the NSW Drug Court program (56% of respondents at four months and 51% of respondents at eight months). The category 'treatment' includes responses referring to pharmacotherapy treatment, counselling, relapse prevention programs and rehabilitation programs. The support received from the NSW Drug Court Team and services providers was also frequently cited as the 'best aspect' of the program (over 15% of four-month and eight-month respondents). Support and services offered by the Probation and Parole Service was given as one of the best aspects of the program by 11 per cent of respondents at four months, and 15 per cent of respondents at eight months.

Less than half of the respondents at both the four-month and eight-month interviews identified a 'worst aspect' of the program. Furthermore, there was not any particular aspect of the program that was cited as 'worst' by more than 14 per cent of respondents. Of those participants who identified a negative aspect of the program at the four-month interview, treatment was the most frequently given response (15 responses, 14% of respondents). This was followed by the regularity of court appearances (12 responses, 11% of respondents) and sanctions (11 responses, 10% of respondents). Nine responses referred to other aspects of the NSW Drug Court program such as a perception of

inconsistency in the way the Court dealt with people and an overly demanding number of commitments while on the program. At the eight-month interview the most commonly cited 'worst aspect' of program related to sanctions (11%) followed by treatment (9%).

Participants were also asked for their comments and suggestions regarding the NSW Drug Court at the baseline, four-month and eight month interviews. A range of issues consistently raised from the responses is presented.

Eligibility criteria

One of the strongest themes to arise from comments from participants was in regards to the eligibility criteria for the program. These comments, usually made by older participants, focused on making the program eligibility criteria narrower by restricting it to older offenders, and persons facing substantial custodial penalties for their referring offences.

Several of these respondents thought that many of the younger participants were not sufficiently motivated or ready to address their substance abuse issues and were using the program as means to delay their imprisonment.

Treatment

Participants had mixed and often opposing comments regarding treatment. Several participants requested the 'day program' to be extended, partly to reduce boredom once it had finished. Some participants requested greater frequency in counselling sessions while others suggested that counselling was too frequent for people who had been on the program for several months. Participants on abstinence-based programs suggested the Court develop closer ties with the Narcotics Anonymous movement and found it inappropriate to be placed in group treatment programs with people on pharmacotherapy treatment.

Housing needs were seen as interlinked with treatment opportunities. Several participants identified the need for housing to accommodate participants on abstinence-based programs who did not wish to be placed on a residential rehabilitation program.

Sanctions

A range of suggestions were made in relation to sanctions for program breaches. Interestingly, several participants believed that sanctions imposed by the Court were too lenient and should be harsher, and that people should have their program terminated after a pre-determined number of sanctions. Participants also commented on the inconsistency with which people were given sanctions, the severity of the sanctions and the number of times people could breach the program, or have a 'termination discussion' before having their program terminated.

Some participants believed that custodial sanctions were not the most effective means to penalise people for program breaches. Suggestions for alternatives to custodial sanctions were made, including using community service orders, suspending custodial sanctions until people had been on the program for a determined period at which time they would be reviewed, and adding sanctions on to the end of the suspended sentence to be reviewed at completion of the program or termination from the program.

Custodial sanctions were seen by some participants as disruptive to treatment and their general progress on the NSW Drug Court program. Some participants experienced

difficulty obtaining their prescribed methadone while serving short custodial sanctions. Others criticised the practice of imposing immediate custodial sanctions because of the impact it had on their employment. Several participants who were engaged in legitimate, often casual employment, reported losing their jobs when they had to serve a custodial sanction without notice.

Rewards

There appeared to be some disappointment experienced by participants in regards to rewards. Participants commented that rewards (such as football tickets) promised by the Court to participants were not delivered, that the allocation of rewards was not consistent, and that participants who were most compliant with the program were being overlooked for receiving rewards. Several participants also suggested the Court should recognise the progress made by participants more regularly. Participants felt that reducing drug use from several times a day to once a fortnight was a significant achievement for them, yet only program breaches were acknowledged by the Court.

Supervision

Oposing views were held regarding the supervision of Drug Court participants. Although several respondents commented that the urine testing was invasive and could be inaccurate, other participants called for the Court to increase supervision of participants. Those respondents calling for more frequent urine testing believed that it was too easy to avoid detection through urine tests by regulating drug use or substituting urine samples.

A couple of participants objected to the testing of cannabis use and suggested that participants be allowed to use cannabis while on the program.

Court

Several participants found the frequency of Court appearances to be excessive and suggested participants only be directed into Court when they had breached their program. A number of women commented on the difficulty of meeting their frequent Drug Court requirements, such as the regular court appearance, due to childcare issues. These women believed that the Court did not adequately recognise the difficulties faced by parents with dependent children while participating on the program.

Employment

There were several comments regarding a preference for participants to be able to engage in employment in the early stages of the program. It was suggested that employment provided structure and stimulation that guarded against boredom, one of the factors associated with relapse into drug use. In addition, several participants cited a need for employment in order to have sufficient funds for expenses, such as transport costs, associated with their program. Other respondents suggested the Drug Court provide more assistance to participants seeking employment in terms of job seeking skills and contacts.

Greater flexibility in the program requirements was seen as necessary for participants to maintain employment. Evening 'report back' Court sessions and counselling sessions were requested to avoid clashes with regular employment hours.

Corrective Services accommodation

Both men and women commented on the conditions of the Correctional institutions they were placed in while in the detoxification stage of referral to the NSW Drug Court. While men predominantly remarked on the poor level of communication they received in regards to their status on the program, women were more concerned with the harshness of the physical environment they were held in. Women reported that the conditions for NSW Drug Court participants were harsher than for other inmates. They complained of a lack of exercise (only being allowed out of their cell for one hour per day) and the lack of contact with other inmates.

Other comments

The vast majority of other comments consisted of gratitude for the opportunity to have participated in the NSW Drug Court program, and support for the concept of treatment for drug-dependent offenders as an alternative to incarceration.

Several participants also commented on their feelings of personal success at being able to remain abstinent from illicit drugs and to regain control of their lives. In addition, being able to restore family relationships was viewed as one of the most rewarding aspects of being on the program.

DISCUSSION

This report has examined the well-being of NSW Drug Court participants prior to commencing the NSW Drug Court program and throughout twelve months of program participation. This is the first reported evaluation study of drug court participants that examines health and well-being outcomes of participants. In addition, factors predicting length of retention on the program were investigated and participants' satisfaction with the program was examined.

BASELINE HEALTH AND WELL-BEING

The baseline data revealed that the NSW Drug Court participants included in the study were predominately daily heroin users, well entrenched in the criminal justice system. As expected, the baseline health measures indicate that NSW Drug Court participants were in significantly poorer health than the general Australian population. Male participants were in very poor health on a range of physical and psychological dimensions of well-being prior to commencing the program, yet did not report suffering significant impairment in their ability to perform physical activities. Likewise, female participants were in significantly poorer health on a range of health and well-being dimensions compared with the Australian population including general health, social functioning, mental health, and emotional problems.

Participants who had a higher level of heroin use prior to commencing the program were found to have significantly poorer social functioning and experience greater problems due to their physical health. Similarly, participants with a higher level of tranquilliser use were found to experience greater physical pain than those using lesser amounts of tranquillisers.

The results also showed that NSW Drug Court participants who used a combination of heroin and tranquillisers prior to commencing the program were in significantly poorer health on a range of dimensions compared with heroin users who did not use tranquillisers. This finding has implications for the expectations the NSW Drug Court may place on participants. Those whose pattern of drug use includes heroin and tranquillisers may be expected to commence the program with more severe health and well-being issues than other participants.

Furthermore, the results show that a large proportion of NSW Drug Court participants suffer from chronic illness, with female participants more likely to have a chronic illness than male participants. This finding indicates that participants may have significant ongoing health issues even once their drug-dependence has been addressed.

The finding of impairments in both physical and emotional aspects of participants' health prior to commencing the NSW Drug Court program provides support for the Court's holistic approach to treating participants' health needs. While participants commence the program with a significant degree of physical impairment and many with chronic physical illnesses, the emotional and mental health needs of participants also need to be addressed in the recovery process.

Although NSW Drug Court participants were in poorer health than the general population, they commenced the program in a superior state of health compared with a group of voluntary methadone maintenance patients entering treatment.¹⁷ Studies

identify a range of issues which lead persons to commence treatment, and for many people a range of factors are important. While pressure from the law has been found to be a significant influence on the decision to enter voluntary treatment, factors to do with lifestyle, relationships and 'hitting rock bottom' also impact on this decision (Weatherburn, Lind & Forsythe 1999; Bammer & Weekes 1993). It is possible that the lower health and well-being levels found among voluntary methadone maintenance patients contribute to their disenchantment with their lifestyle and influence their decision to enter treatment.

Even though the majority of Drug Court participants had sought treatment voluntarily in the past, only a quarter were currently on voluntary drug treatment at the time of their referral to the NSW Drug Court. The superior health and well-being of NSW Drug Court participants may indicate that, although most NSW Drug Court participants experienced significant impairment in their health, they had not hit 'rock bottom' at the time they commenced the NSW Drug Court program.

Alternatively, the results may reflect improvements in health and well-being experienced by potential NSW Drug Court participants while being held in custody prior to commencing their NSW Drug Court program.

CHANGES IN MEASURES OF WELL-BEING

The results provide strong evidence of improvements to health and well-being of participants' after being placed on the NSW Drug Court program which are maintained throughout participation on the program, at least among participants who remained on the program. This was shown by significant improvements on all but one of the SF-36 health dimensions and significant improvements in the OTI social functioning scale from baseline to the first four-months of program participation. While only scores on the OTI social functioning scale continued to significantly improve over time, the benefits to health and well-being gained in the first four months of program participation were maintained throughout the twelve-month period examined.

Supporting the finding of a significant change in health and well-being over the twelve-month period was the reduction in spending from baseline to four months, which is consistent with a reduction in spending on illicit drugs. This finding from the self-report spending data is supported by urinalysis results. Furthermore, the reduced level of spending was maintained throughout the twelve-month study period.

While it is to be expected that drug-dependent offenders would reduce their drug use while in custody (the traditional sentencing option for NSW Drug Court participants), these findings indicate a reduction in drug use even though accessibility to illicit drugs remained unchanged. The reduction in illicit drug use while on the program is an important finding as it relates directly to one of the objectives of establishing the NSW Drug Court: to eliminate, or at least reduce, participants' dependency on drugs (*Drug Court Act 1998* NSW).

While significant improvements were gained for participants who remain on the program, it is unknown if the 79 persons (39% of the baseline sample) who absconded or had their program terminated within four months of being placed on the program experienced any improvements to their health and well-being during their time on the program.

When the twelve-month mean SF-36 health scores for men were compared with Australian population norms the only significant differences between groups was for the physical functioning dimension, with male NSW Drug Court participants aged 18-24 years reporting significantly higher scores than the population norm. As the SF-36 relies on a person's perception of their own health, the high mean score at twelve months on the physical functioning dimensions may reflect respondents' perceptions of their health in relation to their drug-dependent peers, or their past physical condition, rather than any real superiority on these dimensions compared with the average Australian male of the same age.

When the male NSW Drug Court program participants' twelve-month SF-36 scores were compared with male injecting drug users who had been in custody for at least three months, the NSW Drug Court participants had significantly higher scores on only two of the eight health dimensions examined; bodily pain and general health. This finding indicates that the improvements to health and well-being experienced by NSW Drug Court participants may not be an outcome unique to the NSW Drug Court. As SF-36 scores prior to entering custody were not available for the inmate sample, the degree of change to health and well-being since inmates were incarcerated can not be accurately determined. However, given that only inmates who identified as injecting drug users were selected for analysis, it is reasonable to speculate that they were in poor health at the time they entered custody. Furthermore, given the poor health of NSW Drug Court participants prior to their commencement on the program, and that three quarters of the participants had served custodial sentences prior to their referral to the NSW Drug Court, it can be argued that the health of inmates deteriorates after release from custody. In contrast, the improvements to health and well-being experienced on the NSW Drug Court program were made over a period in which participants were living in the community and therefore had greater access to illicit drugs than persons serving a full-time custodial sentence.

PREDICTING RETENTION ON PROGRAM

Just over one third of the participants included in this study had either graduated or were still on the program twelve months after completing the baseline interview. While attrition from the program appears high, it should be remembered that the program was designed for, and consists of, recidivist offenders with significant criminal and drug use histories. Only modest changes in behaviour can be expected from this group of entrenched offenders.

An examination of factors that may be associated with retention on the program showed that the only significant predictor of participants remaining on the program for twelve months (or graduating within this time period) was the length of suspended sentence handed down at the commencement of the NSW Drug Court program. The length of suspended sentences varied considerably among the participants involved in this study, ranging from 21 days to over 3.5 years. The finding of an association between length of suspended sentence and retention on the program may suggest that the prospect of facing a substantial custodial sentence provides significant motivation to remain on the program. However, a key informant from the NSW Drug Court has suggested that the finding may reflect a greater willingness on behalf of the Court to persevere with participants who are facing longer custodial penalties.

PARTICIPANT SATISFACTION

The overall level of participant satisfaction with the services provided by the NSW Drug Court and perceived fairness of the Court was consistently found to be high. Participants perception of the ease of the NSW Drug Court program varied, with the most common response being that the program was neither easy nor difficult. However, as the length of time on the program increased a larger proportion of people rated the program as very difficult, while a smaller proportion perceived it to be very easy. This may reflect difficulties many participants were finding progressing through the phases of the NSW Drug Court program or a lack of understanding of the program early on.

Treatment services were by far the most commonly cited 'best' aspect of the program, with over 50 per cent of respondents identifying some aspect of treatment in their answer at four and eight months. The next most commonly cited 'best' aspect of the program was the general support provided by the staff associated with the NSW Drug Court program. Interestingly, eight per cent of respondents at eight months cited some aspect of urine testing as the best aspect of the program. These responses commonly referred to the benefit of having some form of objective, regular supervision to discourage drug use while on the program.

Less than half of the persons interviewed at four and eight months identified a negative aspect of the program. The most commonly cited 'worst' aspect at the four-month interview round was treatment. Some respondents were generally dissatisfied with the treatment stream they were receiving, while others thought some aspect of the treatment they were directed to attend, such as counselling, was inappropriate for them. It is important to note that participants may change treatment streams several times while on the program with the Court's approval. At the eight-month interview the most commonly cited 'worst' aspect was sanctions.

While the levels of satisfaction with the NSW Drug Court program are surprisingly high, it may be that respondents' perceptions of the NSW Drug Court were influenced by their previous experiences with the criminal justice system. The drug court model is one of judicial support as well as supervision, with the Court having expectations that participants are likely to relapse into drug use. A participant is only terminated from the program if the Court finds that there is no highly suitable treatment plan available for the person, or if the Court finds that there is no useful purpose to be served by the participant remaining on the program. Under this model, a participant may relapse periodically into drug use and, in some cases, re-offend, and still remain on the program. In contrast, for the vast majority of participants, previous experiences with the criminal justice system had resulted in at least one custodial penalty.

It is interesting to observe that respondents' perceptions of ease of the program was related to their own health and social functioning. Those participants who experienced greater difficulties in terms of being able to perform their daily activities, social functioning, mental health, or emotional problems at twelve months, were likely to find the program more difficult than respondents in a better state of health and social functioning.

These findings suggest that, while current service provision for the majority of participants may be appropriate, those participants experiencing more severe health problems while on the program may need more support and treatment services than the program currently provides.

The results also showed a lack of understanding of the NSW Drug Court program when participants commenced the program. While over 85 per cent of participants stated prior to commencing the NSW Drug Court program that they had a good or very good understanding of the program, only 26 per cent believed they had a good or very good understanding of the program before commencing upon reflection at twelve months. As this evaluation was conducted during the period in which the NSW Drug Court was being established and procedures were still being developed, the findings may not be representative of participants who commenced the Drug Court program at a later date.

Participants also identified a range of issues in regards to improving the NSW Drug Court program. While there was diversity amongst the responses several key issues emerged. Many older participants believed the Court should be harsher in dealing with non-compliance, stating that many younger participants were not serious about rehabilitation and were using the court to delay imprisonment. The supervision of participants as part of the program was identified as a critical aspect of the program and an important motivation to cease drug use by some participants, but as overly invasive by others. The issue of inadequate housing for participants was raised as it could exclude them from certain treatment options. Furthermore, participants commented that direction to counselling services should be based on need rather than being mandatory. The processes of the Court were also seen to be in conflict with each other, as the use of immediate custodial sanctions often had detrimental impacts on other aspects of participants' progress in terms of employment and treatment.

Several of these issues, such as housing and immediate custodial sanctions have also been identified by the NSW Drug Court Team and steps have been taken to address them.

CONCLUSION

The findings reveal significant impairment in the health and well-being of NSW Drug Court participants before commencing the NSW Drug Court program, but improvements in health and well-being while participating on the program. The results also show that participants reduce their illicit drug use while on the program. In regards to retention on the program, the length of time a participant remained on the program was found to be associated with the severity of the suspended sentence they were given. Furthermore, the findings indicate a high level of participant satisfaction with the program.

The study shows that despite their poor level of health and well-being at program entry, NSW Drug Court participants experience considerable improvements in well-being within the first four months of being on the program, and that these improvements are maintained while participants remain on the program. These findings provide evidence of health and well-being benefits to participants of the NSW Drug Court program, however it is likely that offenders sentenced to prison also experience some improvement in health and well-being while they are in custody.

Evidence of a reduction in illicit drug use while participating on the program has also emerged. While the vast majority of participants were daily heroin users prior to commencing the program, with median weekly spending being \$1000 per week, only a small proportion of participants regularly tested positive to opiates use during the first four months of their program, and median weekly spending had fallen to \$175.

Although 62 per cent of participants had been terminated from the program at the twelve-month mark, the retention rate was significantly better for persons given a longer suspended sentence. Of the 112 participants given a suspended sentence of six months or longer, 53 (47%) remained on the program or had graduated at twelve months. This compares favourably to only 22 (25%) of the 89 participants given a suspended sentence of less than six months.

The findings also indicate satisfaction with the program and a perception by participants that the program is fair. Treatment services were identified as the most valued aspect of the program by participants, and participants' perception of ease of the program was related to participants' well-being.

In drawing these conclusions, it is necessary to address a couple important caveats.

Firstly, one limitation of the study was that only those participants who were actively participating on the program were re-interviewed. It is reasonable to assume that persons not interviewed due to termination or absconding from the program may have had significantly different responses in regard to their satisfaction with the program and their perceptions on the fairness of the Court and ease of the program.

Secondly, only including persons who remained actively participating on the program at each round of follow-up interviews in the analysis of change in well-being may have overestimated the positive effects of the NSW Drug Court program. However, another aspect of the study design may have worked against this bias by overestimating health at baseline, thereby underestimating improvements in health. All potential participants are required to undergo a detoxification stage in custody where they withdraw from drugs under medical supervision before commencing the program. As baseline measures

were taken after participants had been in the detoxification assessment stage for at least seven days, any improvements during the detoxification assessment stage have not been taken into account. Therefore, changes in health scores from baseline to later time periods may underestimate changes in health since being referred to the NSW Drug Court program. Nonetheless, it can be concluded with reasonable confidence that, on balance, NSW Drug Court participants experience significant improvements in their well-being while participating on the program.

In conclusion, this study has provided evidence of beneficial health outcomes associated with participation on the NSW Drug Court program, as demonstrated by improved health and well-being of participants who remain on the program, and points to benefits for the wider community through a reduction of illicit drug use among this group of offenders and presumably their rate of offending to fund their drug use. Furthermore, these improvements are obtained in an environment in which participants are largely unrestrained and therefore have the potential to access the illicit drug markets they were involved with prior to commencing the NSW Drug Court program.

NOTES

- 1 Participants may be deemed to have absconded from the program and a Bench Warrant issued for their arrest, yet still be receiving treatment associated with their NSW Drug Court program.
- 2 The original study design included a fifth round of interviews to be conducted 16 months after the baseline interview. However, the timing criteria for conducting the fifth round of interviews was changed from 16 months after the baseline interview, to four months after graduation because many participants were not eligible for graduation after twelve months of program participation. Consequently, the collection of data for the fifth round of interviews was not completed within the original study period and were not available for inclusion in this report.
- 3 This item was not included in the analysis as it did not load on to any of the eight health and well-being dimensions. Furthermore, the twelve-month reference period for the question was not appropriate as the study used four-month intervals between interviews.
- 4 One outlier was excluded from these analysis.
- 5 The number of persons who used each drug in the past four weeks may differ from previous publications due to counting differences.
- 6 The number of persons with prior treatment episodes reported in this report differs from that reported in the NSW Drug Court monitoring reports due to a difference in data sources.
- 7 This analysis excludes three extremely high tranquillisers use scores. Statistically significant correlations were also found between some other SF-36 health dimensions and level of tranquilliser use, however these differences failed to be significant once the outlying scores were excluded from the analysis.
- 8 Statistically significant correlations were also found between measures of well-being and the proxy measure for illicit drug use (spending):bodily pain $r = -0.114$, $p = 0.027$; general health $r = -0.098$, $p = 0.046$; vitality $r = -0.112$, $p = 0.024$; social functioning $r = -0.112$, $p = 0.029$; OTI social functioning $r = 0.181$, $p < 0.001$. This adds further support to the validity of using self-reported spending as a proxy measure for illicit drug use.
- 9 Confidence intervals for all SF-36 mean scores were calculated using t-values.
- 10 Results of the Wilcoxon signed ranks test used to test for statistically significant changes between baseline and four-month scores: physical functioning $Z = -2.63$, $p = 0.008$; role limits-physical $Z = -3.46$, $p = 0.001$; bodily pain $Z = -4.84$, $p < 0.001$; general health $Z = -2.31$, $p = 0.021$; vitality $Z = -2.20$, $p = 0.028$; social functioning $Z = -3.04$, $p = 0.002$; role limits-emotional $Z = -1.86$, $p = 0.063$; mental health $Z = -4.19$, $p < 0.001$.
- 11 Results of the Wilcoxon signed ranks test used to test for statistically significant changes between baseline and twelve-month scores for role limits-emotional: $Z = -2.93$, $p = 0.003$.
- 12 Results of the Wilcoxon signed ranks test used to test for statistically significant changes between baseline and twelve-month scores for physical functioning: $Z = -1.62$, $p = 0.104$.
- 13 The comparison of baseline scores for male Drug Court participants who completed the twelve-month interview with Australian population norms resulted in a similar pattern to that observed in Figure 1(a) and Figure 1(b).
- 14 This analysis includes ten participants who did not complete a twelve-month interview but were participating on the program for at least twelve months.
- 15 Data missing for one respondent to the twelve-month interview.
- 16 It should be noted that a high score on the OTI social functioning scale indicates low social functioning.
- 17 While NSW Drug Court participants' health at program entry was superior to that of the group voluntarily receiving methadone maintenance treatment, it is unknown if there were changes to participants' health from the time of their arrest to the time they commenced the NSW Drug Court program.

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APPENDIX A

A summary of SF-36 health scores for each interview round for the 51 persons who completed each follow-up interview

<i>SF-36 dimensions</i>	<i>Baseline</i>		<i>4 months</i>		<i>8 months</i>		<i>12 months</i>	
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>
Physical functioning	88.9	16.5	93.1	11.4	92.6	15.9	91.6	15.0
Role - physical	69.1	37.3	91.2	23.9	89.2	23.6	87.7	26.6
Bodily pain	63.3	27.6	85.3	23.7	81.2	23.9	83.6	23.1
General health	63.3	24.5	70.1	23.7	74.8	19.6	74.6	21.7
Vitality	54.0	24.4	63.0	23.8	64.2	18.6	64.6	24.1
Social functioning	65.7	27.8	81.4	20.8	79.7	18.2	80.6	25.2
Role - emotional	52.3	42.8	68.6	40.2	69.9	39.6	80.4	35.4
Mental health	54.7	19.7	70.5	16.5	71.5	20.3	73.8	20.2