

Criminal Activity and Substance Abuse Study

Central City Concern: Mentor and ADFC Housing
Programs

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Executive Summary

The Regional Research Institute for Human Services at Portland State University conducted a study investigating the link between drug abuse and crime and the impact of successful completion of drug treatment on these two related behaviors. 87 recipients of drug treatment services enrolled in the Mentor Program and the Alcohol Drug Free Communities (ADFC) Program through Central City Concern (CCC) participated in this study. Approximately half of the sample, 54% came from the Mentor Program and 46% from the ADFC program. Two cohorts were interviewed, those still involved in treatment (52%) and those who had graduated from these two programs (48%). This study compared drug use and criminal activity in the year prior to entering the CCC programs to drug use and criminal activity post-CCC program entry.

Study participants

Most study participants were male (70%), mean age was 42 years with 65% of all participants between the age of 30 and 49 years. This cohort was predominantly White (60%), and African American (29%). Almost half, 47% of participants lived on the street or in a shelter in the year prior to entering CCC programs and 61% were unemployed. Approximately one-quarter (26%) had dependent children age 18 or younger.

History of drug use

Drug use in the year prior to entering CCC programs was high. Most study participants (97%) were polysubstance users. The interview asked about drug use regarding 13 classes of drugs. The average number of different types of drugs used was 4.7 including nicotine and 3.7 excluding nicotine. In the year prior to entering the CCC programs, 59% drank alcohol daily, 39% used crack/cocaine on a daily basis, 26% used methamphetamine/ amphetamine and 26% used heroin daily.

Money spent on drugs

In the year prior to entering the CCC Mentor and ADFC programs, participants spent an average of \$206 a day on drugs (\$6180 a month). The annual cost of drugs for this cohort of 87 participants was estimated at \$6.5 million dollars per year. The estimated total dollars spent on drugs for this cohort over the time span of peak drug use (7.4 years) was \$48.6 million dollars.

Criminal activity

Most CCC clients had committed crime, 81 out of 87 (93%). This interview asked about 15 types of crime. Clients on average committed 5.1 categories of crime. The most common offenses were buying and selling illegal drugs (89% and 61%), stealing and shoplifting (54% and 61%) and assault or threatening violence (47% and 47%). Almost half of this sample bought and sold illegal drugs on a daily basis in the year prior to entering CCC programs, and one-third bought or sold stolen goods on a daily basis.

Money earned from criminal activity

The average monthly illegal income generated from criminal activity per client was \$1978. Annual loss to the Portland area community from criminal activity for this cohort of 87 individuals was estimated to be at least \$2 million a year. This estimate of community loss was calculated using estimates of income generated from stolen goods not actual worth of stolen goods and is therefore likely to be a low estimate. The income producing potential of stolen goods or “street worth” is likely to only be approximately one-third of the actual worth or replacement cost to the community or victim of crime.

In addition to the high levels of theft, and trading in stolen goods to gain money for drugs, the acquisition of drugs was often traded for sex. 29% of this cohort of clients regularly exchanged sex for drugs and 22% exchanged sex for money.

Temporal order of drug use, offending and gender

Previous research shows that for women more than men, drug use precedes criminal activity. Age of first drug use and first criminal activity was analyzed by gender to determine if this pattern holds true for these CCC participants. For each class of drug (13 classes in all) and for each category of crime (15 categories in all), respondents were asked, at what age they first tried each drug or committed each criminal act. Results of this study found that drug use preceded criminal activity for BOTH men and women. The average age of first drug use across all classes of drugs for women was 17.6 and their first criminal act was at age 21.2 across all crime categories measured. For men, the average age of first drug use was 18.7 and average age of first criminal act was 23.3. There were no statistically significant differences between men and women in age of first drug use or age of first criminal act. This finding indicates that drug use started at approximately age 18 and criminal activity started approximately 3-5 years after drug use.

Perception of the effect of drug use or alcohol on criminal activity

Participants in this study were asked to what extent drug use played a role in criminal activity. Sixteen clients said that they were committing crimes prior to their drug use and they would have committed crimes even if they did not use drugs. An additional 5 individuals said they probably would not have committed crime, but were uncertain. The remaining 66 (76%) participants stated that their criminal activity was solely to support their drug use.

Risk factors for drug use and offending

Research literature has found that history of family problems, sexual and physical abuse, and mental health conditions are prevalent among individuals with both drug abuse and criminal activity. This study supports these findings. Most participants (70%) had a family history of drug abuse. Over half of study participants (55%) reported that they have a co-occurring mental health diagnosis. Most common mental disorders were bipolar disorder, depression, schizophrenia, and PTSD. An additional 22 clients (25%) reported that they struggle with emotional problems or issues for which they have not sought treatment. These issues included trauma from abuse, depression, shame, grief,

problems with social interaction, stress, and social isolation from disconnection with family.

Consistent with previous literature, more women were victims of both physical and sexual abuse as children and adults compared to men in this study. 62% of women were victims of childhood sexual abuse while 31% of men were victims of sexual abuse. 65% of women were victims of childhood physical abuse compared to 12% of men. In adulthood, 89% of women were physically abused compared to 13% of men and 54% of women were sexually abused while no men in this study reported sexual abuse as an adult.

Impact of drug treatment on drug use and criminal activity

All but one CCC participant in this study were actively enrolled in drug treatment while in the Mentor and ADFC programs. Only one individual of the 87 did not have a clean date as that individual was still using illegal drugs on a daily basis. All others stated a clean date. The average number of days “clean” was 325 for all participants. Graduates had 589 average clean days and those still enrolled in treatment had 84 average clean days. After entering the Mentor and ADFC programs, participants in this study had a drastic reduction in drug use. Post-entry only 4 (5%) individuals in this cohort used ANY illegal drugs. This represents a 95% reduction in the number of individuals who used illegal drugs, and no one used drugs on a daily basis post-treatment.

In this study, CCC Mentor and AFDC program graduates credited their success first and foremost to the safe housing they received, second to the peer support, third to structured drug treatment and fourth to the validation and compassion they felt from others. These data provide support that CCC is fulfilling its mission to create a culture of recovery.

Money NOT spent on drugs during clean time

Money not spent on drugs for the 86 clean CCC clients for the average 325 days clean was \$5,729,750 saved.

Criminal activity post CCC

Post enrollment in drug treatment and CCC programs, only 5 individuals committed any crime; this represents a 93% reduction in the number of individuals who committed crimes.

Conclusion

Results from this study of 87 CCC clients demonstrated profound reductions in both drug use and criminal activity post-treatment relative to pre-treatment levels. These 87 CCC clients were older (average age was 42) and had on average 7.6 years of peak drug use. In the year prior to entering CCC programs more than half used drugs on a daily basis. All clients in both cohorts (those still in treatment and those who successfully graduated treatment) showed marked reductions in both drug use and criminal activity. This study illustrated a 95% reduction in drug use and a 93% reduction in criminal activity. For the cohort of graduates the average number of clean days was 589, and there was virtually no

drug use or criminal activity over that time, equivalent to the results of those still in treatment; illustrating both immediate and long-term benefits of CCC treatment.

Limitations to this study include the small sample size and limited duration of follow-up. This sample of 87 CCC participants of the Mentor and ADFC programs represented a small sample of individuals currently being served in these programs as well as those who successfully completed treatment. It does not represent those who did not successfully complete treatment. Those who agreed to participate were likely the program participants who were doing well and had not relapsed, returned to the street or were incarcerated.

Self report studies in general have a number of limitations related to accuracy of memory recall, willingness to report sensitive or private experiences, and fear of social stigma. In addition, respondents in this study who were still participating in treatment (48%) may have felt uneasy about sharing information regarding drug use or illegal activity post-treatment for fear of losing access to their drug free housing. Therefore, post-treatment outcomes may be skewed in a positive direction.

Policy implications

The magnitude of the economic returns that can be realized from effective drug treatment is enormous. If effective drug treatment reduces drug use, then recipients are no longer spending large sums of money on drugs each day. If effective drug treatment also reduces crime, then the community and victims save millions of dollars each year. In this CCC study of 87 chronic drug users, 54 clients (62%) were committing some type of crime on a daily basis. The estimated cost per year to the Portland community prior to entering CCC treatment resulting from criminal activity was estimated to be at least \$2 million a year. Effective drug treatment may also improve the employability and productivity of clients, decreasing their need to rely on public support programs. The drug abuse treatment system is also the major resource available to help contain the spread of HIV among intravenous drug users. For this reason, it is a sound financial investment for federal, state and local governments to fund treatment modalities that demonstrate effectiveness in reducing drug use and criminal activity.

Introduction: Overview of Link Between Drug Use and Crime

Research consistently finds high association of drug abuse and crime (Best, et al, 2003). Drugs are linked to crime in a variety of ways. The use, selling and production of illegal drugs is in itself a crime. Some drug users, as their dependence grows, are increasingly incapable of maintaining legitimate employment and resort to commit income-generating property crimes in order to support their drug habit. Violence and threats may be a by-product of drug distribution systems and are often used by drug dealers to enforce payment of debts or assert control over drug markets. Some crimes are committed while under the influence of drugs (White & Gorman 2000).

The temporal ordering of the drug-crime link is unclear. It has been argued that drug use leads to crime; it has also been asserted that crime leads to drug use. Alternatively, it is possible that drug use and crime are not causally related but are the result of a third factor. Studies of male offenders generally find that criminal activity, particularly property crime, predates first drug use, and offending escalates following regular drug use. However, research suggests the reverse is true for women; drug use predates criminal activity and as drug use escalates so does the nature and severity of crime (Pollock 1999). For example, in the Drug Use Careers of Offenders (DUCO) study conducted in Australia, women were more likely to begin drug use prior to offending and attribute their offending to drugs, more often than men in the DUCO study; 35% of women used illegal drugs prior to offending compared to only 17% of men who used drugs prior to committing any crime (Johnson, 2004).

A number of factors are also associated with both drug abuse and criminal activity. Many researchers provide strong evidence of a link between drug or alcohol abuse and physical and sexual abuse (Jarvis, Copeland & Walton; Sargent & Chong Ho 1994). These studies suggest that the connection between drug and alcohol abuse and criminal offending may be mediated by factors associated with early experiences of abuse. Substances may be used to cope with negative emotions resulting from abuse, or to adapt to ongoing abuse (Jarvis, Copeland & Walton, 1995; Wisdom, 2000). Economic disadvantage and inability to access legitimate work have also been identified as factors influencing drug use and criminal offending. For example, Maher and colleagues (2002) studied African American women involved in selling crack cocaine and other drugs in a low-income community in New York City. They found that these women were from unemployed, low wage earners, or had histories of drug abuse. The lack of viable economic alternatives in the paid labor force (due to racism, sexism, low education, limited job access) led these women to see drug dealing in the informal economy as more lucrative. The choices were often between drug dealing and menial labor. Women's participation in the informal economy and drug market was influenced by family and community networks and opportunity structures. Participation in an informal economy was seen as critical for survival since participation in the formal labor market was limited.

The major goal of drug treatment programs is to reduce or eliminate drug use among abusers and addicts. A further aim of many programs is to lessen criminal activity that supports addiction. In fact, reductions in criminal activity has been one of the major justifications for public support of drug treatment programs (Musto, 1987). There have been numerous studies that have demonstrated the effectiveness of several different treatment modalities (detoxification, residential, outpatient drug-free programs, and outpatient methadone) and models (such as the Matrix model) in reducing both drug abuse and criminal activity (Simpson, 1984; Hubbard, 1989; Rawson et al. 2004). Numerous studies indicate that even more important than treatment modality is length of time spent in treatment as a predictor of positive outcomes (Hubbard, 1989).

The purpose of this study was to explore the relationship between drug use and criminal activity among participants of the Mentor Program and the Alcohol Drug Free Communities Program at Central City Concern and determine the impact of these treatment programs on both drug use and criminal activity. This study was designed to answer the following questions:

- 1) Is criminal activity associated with level of substance use? It is expected that higher substance use will be associated with higher criminal activity.
- 2) Are both the level of criminal activity and level of substance use reduced after receiving treatment? It is hypothesized that clients who are actively engaged in treatment and are still clean post-treatment will have lower criminal activity and substance use relative to pre-treatment levels. An estimated cost of criminal activity will be ascertained and reported pre-treatment and post treatment. It is expected that the cost of criminal activity will be lower post-treatment.
- 3) What are other factors associated with criminal activity? It is expected that criminal activity may be associated with other factors, such as family history of drug abuse and criminal activity, age of first drug use, employment status and employment history, access to legal sources of income, level of engagement in personal relationships, and commitment to recovery. This study will examine the relationship among these factors and as well as for demographic variables such as race, gender and age, presence of co-morbid mental health or physical health conditions, drug of choice and criminal history.

Method

This study was conducted by the Regional Research Institute at Portland State University. This study conducted one time interviews with 87 CCC program participants and asked each individual to report their drug use and criminal activity in the one year prior to entering treatment with CCC and their criminal activity and drug use post-entering the CCC programs. Questions were also asked to ascertain each individuals period of peak drug use to determine whether the year prior to entering CCC programs was representative of individuals most problematic drug use. Drug use was measured by

asking participants about 13 specific drugs, the number of drugs used concurrently, the frequency of use, and age of first use. Drug abuse is described primarily in terms of regular use (daily use) of specific drugs during the year prior to entering CCC and post treatment entry.

Study participants were asked about their criminal activity for 15 types of crime including drug-related crimes, property crimes and violent crimes. Age of first time each category of criminal activity was committed, frequency of criminal activity, whether the individual was under the influence while committing the offense, and number of arrests for each type of criminal activity is self-reported. Self report provided the most accurate picture of criminal activity since the majority of offenses do not come to the attention of the police and were not captured in arrest data or police records. Additional interview questions asked about family history of drug and alcohol use, family history of criminal behavior, employment, income and debt, gambling behavior, and sociodemographic characteristics.

Two research interviewers from the Regional Research Institute conducted all study interviews under the direction of the lead evaluator. The research interviewers were trusted consumers in recovery for at least 5 years, and active in the recovery community in Portland. Both were also drug treatment counselors, so knew about drug use and criminal activity, and recovery from both personal and professional experience. Peer interviewers as with peer treatment providers, possess an ability to establish rapport with study participants and establish a level of trust and understanding that interviewers who have not had the experience of overcoming drug addiction and criminal life style may not be able to establish. Duration of interviews was generally one hour to 1.5 hours. All interview questions and study protocols were reviewed and approved by the Regional Research Institute's Human Subjects Research Review Committee.

Analysis was primarily descriptive in nature comparing clients' behaviors before and after treatment entry, to ascertain the magnitude of changes. Multivariate analyses were planned to explain differences in outcomes across clients and across the two treatment outcomes. However, there was so little variability in outcomes, multivariate analyses were not possible.

Program Description

The Recovery Mentor Program was implemented in 1999 specifically to provide intensive support to opiate addicted individuals exiting the Hooper Detoxification Center. The program utilizes the experience and knowledge of individuals in recovery to assist, support and offer guidance to those new to the recovery process. Mentees move into the 50 units of CCC's ADFC Mentor housing and enter outpatient treatment at the CCC Recovery Center as the mentors help them access all the resources they need to stabilize in early recovery. The program has three Recovery Mentors who help client access basic needs such as food and clothing, transport them to appointment and community

resources, and link them with primary healthcare and employment services. CCC's Old Town Clinic and WorkSource Portland Metro – Old Town employment program are main resources for clients. After moving on from the Mentor Program housing, clients can access permanent housing through CCC or other community resources.

The Recovery Mentor Program was developed specifically to target opiate users and to address the low successful treatment engagement rates for opiate addicts. An external evaluation of the Recovery Mentor Program found that the total number of opiate mentees referred from detoxification at Hooper who subsequently engaged in outpatient treatment at CCCRC increased from 51.6 percent to 85.2 percent and outpatient treatment completion rates increased from 16.1 percent to 45.2 percent (Moore, 2001).

The Alcohol and Drug Free transitional housing program provides subsidized housing for program participants, all of whom are homeless/chronically homeless, low/no-income single adults, who are early in their recovery from chemical dependency. The purpose of the ADFC housing program is to support the chemical dependency treatment and early recovery efforts of the participants with focus on becoming self sufficient and obtaining permanent housing placements. The program is designed to support the development of positive peer networks, financial stability, and promote active involvement in other necessary services towards the attainment of permanent housing placement, employment and benefits acquisition.

Demographics: Characteristics of Study Participants

Most study participants were male (70%), mean age was 42 years with 65% of all participants between the age of 30 and 49 years. This cohort was predominantly White (60%), and African American (29%). Seventy-five percent of participants lived on the street, in a shelter or someone else's home, meeting HUD's definition of homeless in the year prior to entering CCC programs and 61% were unemployed. Approximately one-quarter (26%) had dependent children age 18 or younger (See Table 1).

The participants in this study were from the ADFC Housing program (40, 46%) and the Mentor program (47, 54%). 45 of study participants graduated "successfully" from treatment and 42 were still enrolled in treatment. These clients entered CCC treatment between June 2005 and October 2007.

Table 1: Sociodemographic Characteristics

	N (%)
<u>Gender</u>	
Male	61 (70%)
Female	26 (30%)
<u>Age</u>	
<30	10 (11%)
30-39	28 (32%)
40-49	29 (33%)
50-59	18 (21%)
60+	2 (3%)
<u>Mean Age</u>	42
<u>Race</u>	
Black/African American	29 (33%)
Hispanic	3 (3%)
Pacific Islander	1 (1%)
White	52 (60%)
American Indian	2 (2%)
<u>Education</u>	
<12 years	27 (31%)
12 years/high school	35 (40%)
>high school	25 (29%)
<u>Housing Status</u>	
Street	23 (26%)
Shelter/temporary housing	18 (21%)
Someone else's apartment, room, house	24 (28%)
Own house or apartment	22 (25%)
<u>Employment</u>	
Full-time	18 (21%)
Part-time	9 (10%)
Unemployed, looking	14 (16%)
Unemployed, not looking	39 (45%)
Disabled	7 (8%)
<u>CCC program</u>	
ADFC	40 (46%)
Mentor	47 (54%)
With children < 18 years old	23 (26%)

History of Drug Use

Primary drugs of choice. The number one drug of choice for CCC participants in this study was not an illegal drug but alcohol (30, 34%). The second most prevalent drug of choice was heroin (19, 22%), methamphetamine was third (17, 20%), and cocaine was fourth (15, 17%). Study participants also identified marijuana (3%), hallucinogens (2%), and opiates (2%) as their primary drug of choice. However, most participants (97%) were polysubstance users prior to entering the CCC programs. The interview asked about drug use regarding 13 classes of drugs (See Table 2), the average number of different types of drugs used was 4.7 including nicotine and 3.7 classes of drugs excluding nicotine.

Prevalence and frequency of drug use. Table 2 provides data from CCC clients related to whether they had ever tried 13 different classes of drugs, the age of first use, the number and percent who used this class of drug DAILY in the year prior to entering CCC. In the year prior to entering the CCC programs, 59% drank alcohol on a daily basis, 39% used crack/cocaine on a daily basis, and tied for third was methamphetamine/amphetamine (26%) and heroin (26%) on a daily basis. The first drugs that participants tried were alcohol at age 12.5, marijuana at age 13.1 and cigarettes at age 13.6.

Table 2: Pre-treatment Drug Use

Drug	Ever	Average Age First Time	DAILY use in year prior to CCC
Cigarettes	83 (95%)	13.6	72 (83%)
Alcohol	72 (83%)	12.5	51 (59%)
Marijuana	55 (63%)	13.1	21 (24%)
Amphetamine or methamphetamine	41 (47%)	21.6	23 (26%)
Heroin	31 (36%)	23.8	23 (26%)
Cocaine/Crack	58 (67%)	22.6	35 (39%)
Hallucinogens	15 (17%)	14.9	2 (2%)
Ecstasy	9 (10)	26.2	0
Morphine	14 (16%)	26.8	4 (5%)
Methadone	13 (15%)	31.2	6 (7%)
Benzodiazepines	9 (10%)	25.6	3 (4%)
Inhalants	3 (4%)	11.7	1 (1%)
Other drugs	5 (6%)	31.8	1 (1%)

Money spent on drugs. In the year prior to entering the CCC Mentor and ADFC programs, participants in this study spent an average of \$206 a day on drugs (\$6180 a month). The annual cost of drugs for this cohort was estimated at \$6.5 million dollars per year. Peak use for individuals in this study averaged 2714 days (7.4 years). The estimated amount of money spent on drugs during peak use was \$559,084 per person.

The estimated total dollars spent on drugs for this cohort over the time span of peak drug use was \$48.6 million dollars.

Criminal activity. Most CCC clients had committed crime, 81 out of 87 (93%). This interview asked about 15 types of crime. Clients on average committed 5.1 categories of crime. Table 3 provides the number of individuals ever arrested by category of crime, the age of first offense, the number and percent who engaged in this activity daily in the year prior to CCC and the number ever arrested. The most common offenses were buying and selling illegal drugs (89% and 61%), stealing and shoplifting (54% and 61%) and assault or threatening violence (47% and 47%). Almost half of this sample bought and sold illegal drugs on a daily basis in the year prior to entering CCC programs, and one-third bought or sold stolen goods on a daily basis. The first types of crimes committed by this cohort were shoplifting from a store at age 15.1, threatening violence at age 15.7, physical assault at age 18.3 and buying illegal drugs at age 18.3.

Table 3: Pre-treatment Criminal Activity

Type of crime	Ever	Average Age First Time	DAILY activity in year prior to CCC	Ever Arrested
Stole property from someone's house car yard	47 (54%)	16.9	13 (15%)	17 (19%)
Shoplifted from a store	54 (61%)	15.1	22 (25%)	25 (28%)
Sold stolen goods/traded for money drugs/boosting	46 (53%)	21.6	27 (31%)	6 (7%)
Passed bad checks	25 (29%)	28.3	5 (7%)	4 (5%)
Used unauthorized prescriptions	34 (39%)	22.3	7 (8%)	2 (2.5%)
Stole ID or used false ID	14 (16%)	27.2	4 (5%)	5 (6%)
Physically assaulted someone	41 (47%)	18.3	0*	19 (22%)
Robbed someone <i>not</i> using a weapon	24 (28%)	21.7	2 (2%) *	7 (8%)
Robbed someone using a weapon	13 (15%)	20.3	1 (1%)	6 (7%)
Threatened violence	41 (47%)	15.7	8 (9%)	3 (4%)
Buying illegal drugs	77 (89%)	18.3	41 (47%)	12 (14%)
Sold illegal drugs	53 (61%)	20.5	41 (47%)	12 (14%)
Manufactured Drugs	8 (9%)	19.4	4 (5%)	1 (1%)
Exchanged sex for drugs	25 (29%)	27.1	5 (6%)	2 (3%)
Exchanged sex for money	19 (22%)	27.0	4 (5%)	4 (5%)

Overall, 54 clients (62%) were committing some type of crime on a daily basis in the year prior to coming into CCC programs. Of the 54 individuals who committed crime on

a daily basis, 39 (72%) were arrested at least once. An additional 11 clients who did not commit crime on a daily basis had been arrested; Overall 50 clients (57%) were arrested. Most study participants were arrested for shoplifting from a store (28%), physically assaulting someone (22%), and stealing property from someone's house, car or yard (19%).

Money earned from criminal activity. The average monthly income generated from criminal activity per client was \$1978 (range was 0 to 40,000 a month). The total monthly income generated for ALL 87 clients was \$172,110 using actual monthly illegal income amounts reported by clients. Annual loss to the Portland area community from criminal activity for this cohort of 87 individuals was estimated to be at least \$2,065,320 a year. This estimate of community loss was calculated using estimates of income generated from stolen goods not actual worth of stolen goods and is therefore likely to be a low estimate. The income producing potential of stolen goods or "street worth" is likely to only be approximately one-third of the actual worth or replacement cost to the community or victim of crime.

In addition to the high levels of theft, and trading in stolen goods to gain money for drugs, the acquisition of drugs was often traded for sex. 29% of this cohort of clients regularly exchanged sex for drugs and 22% exchanged sex for money as another means to purchase drugs. Additional risks to the community and costs associated with side-effects of these behaviors such as the risk of spreading sexually transmitted diseases, HIV and AIDS are beyond the scope of this study but are important to consider in measuring the societal cost of drug use.

Link Between Drugs and Crime

Temporal order of drug use, offending and gender. Previous research shows that for women more than men, drug use precedes criminal activity. Age of first drug use and first criminal activity was analyzed by gender to determine if this pattern holds true for these CCC participants. For each class of drug (13 classes in all) and for each category of crime (15 categories in all), respondents were asked, at what age they first tried each drug or committed each criminal act. Results of this study found that drug use preceded criminal activity for BOTH men and women. The average age of first drug use across all classes of drugs for women was 17.6 and their first criminal act was at age 21.2 across all crime categories measured. For men, the average age of first drug use was 18.7 and average age of first criminal act was 23.3. There were no statistically significant differences between men and women in age of first drug use or age of first criminal act. This finding indicates that drug use started at approximately age 18 and criminal activity started approximately 3-5 years after drug use.

Perception of the effect of drug use or alcohol on criminal activity. Participants in this study were asked to what extent drug use played a role in criminal activity. Sixteen (16) clients said that they were committing crimes prior to their drug use and they would have committed crimes even if they did not use drugs. An additional 5 individuals said

they probably would not have committed crime, but were uncertain. The remaining 66 (76%) participants stated that their criminal activity was solely to support their drug use.

These were some of the clients responses to the role drugs had on their criminal activity. One client stated, "I needed money to obtain drugs and alcohol and having drugs made me feel that I was important." Another client stated, "It didn't matter what I had to do to get drugs and alcohol; I committed crime to get drugs." A third client stated, "I did whatever it took to support my drug habit." Finally, a fourth client stated, "I never committed any crime until I started using."

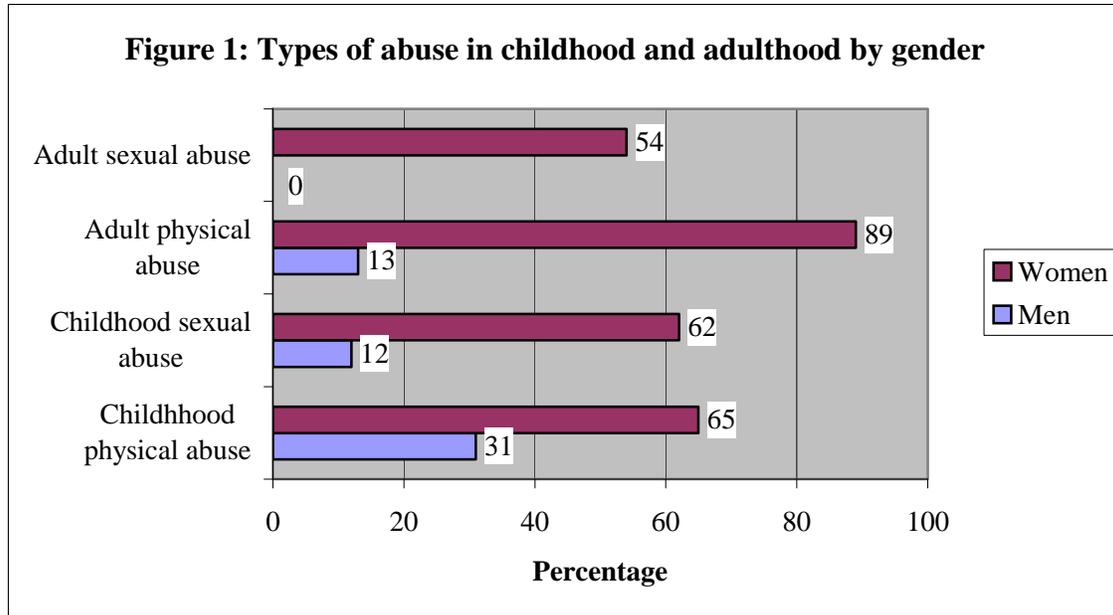
Factors Associated with Drug Use and Crime

Research literature has found that history of family problems, sexual and physical abuse, and mental health conditions are prevalent among individuals with both drug abuse and criminal activity. This study asked questions measure the presence of mental health problems, experience of sexual and physical abuse in childhood and as an adult and family history of drug use and criminal activity.

Family history of drug use and criminal activity. Most participants (70%) had a family history of drug abuse. Additionally, 30% of participants grew up in a household where someone sold or manufactured drugs. Thirty-six participants (41%) reported that when they were growing up, they resided with someone in their household who engaged in illegal activity. In addition, 33 individuals (38%) had a parent or guardian who was arrested by the police and 31% had a parent or guardian who spent time in jail or prison.

Mental illness. Over half of study participants (55%) reported that they have a co-occurring mental health diagnosis. Most common mental disorders were bipolar disorder, depression, schizophrenia, and PTSD. This study found that equal numbers of men and women had a co-occurring mental health diagnosis. Additionally, 48% were taking prescribed medications for mental health issues. An additional 22 clients (25%) reported that they struggle with emotional problems or issues that they have not sought treatment for. These issues included trauma from abuse, depression, shame, grief, problems with social interaction, stress, and social isolation from disconnection with family.

Physical and sexual abuse. Researchers commonly find high rates of sexual and physical abuse in the personal histories of individuals in drug treatment, especially women. Consistent with previous literature, more women were victims of both physical and sexual abuse as children and adults compared to men in this study. 62% of women in this study were victims of childhood sexual abuse while 31% of men in this study were victims of sexual abuse. 65% of women were victims of childhood physical abuse compared to 12% of men. In adulthood, 89% of women were physically abused compared to 13% of men and 54% of women were sexually abused compared while no men in this study reported sexual abuse as an adult.



Impact of Drug Treatment on Drug Use and Criminal Activity

Treatment for drug problems. All but one CCC participant in this study were actively enrolled in drug treatment; 69 (79%) were enrolled in drug treatment through CCC; 20% were enrolled in drug treatment through other agencies in Portland including Cascadia, IN-ACT, NARA and DePaul. Study participants entered CCC treatment between June 2005 and October 2007. This study interviewed current recipients of treatment in the ADFC program and the Mentor program as well as graduates from these programs. Table 4 shows that 45 study participants were graduates (24 from the ADFC program and 21 from the Mentor program). Forty-two participants were still receiving treatment (16 from the ADFC program and 26 from the Mentor program).

Table 4: ADFC and Mentor program graduates and participants in treatment

	Graduates	In Treatment	
ADFC	24 (28%)	16 (18%)	40 (46%)
Mentor	21 (24%)	26 (30%)	47 (54%)
Total	45	42	87 (100%)

Clean time. Only one individual of the 87 did not have a clean date as that individual was still using illegal drugs on a daily basis. All others stated a clean date. The average number of days “clean” was 325 for all participants. Graduates had 589 average clean days and those still enrolled in treatment had 84 average clean days.

Drug use post CCC. After entering the Mentor and ADFC programs, participants in this study had a drastic reduction in drug use (See Table 5). In the year prior to entering the CCC programs, 60% drank alcohol on a daily basis, 39% used crack/cocaine on a daily basis, and 26% used methamphetamine/ amphetamine and 26% used heroin on a daily basis. Most individuals (97%) were polysubstance users, using on average 4.7 different classes of drugs including nicotine and 3.7 classes of drugs excluding nicotine. However, post entry into CCC programs only 4 (5%) individuals in this cohort used ANY illegal drugs. This represents a 95% reduction in the number of individuals who used illegal drugs, and no one used drugs on a daily basis post-treatment.

Table 5: Post-treatment Drug Use

Drug	DAILY use in year prior to CCC	ANY use Post treatment
Cigarettes*	72 (83%)	60 (69%)
Alcohol	51 (59%)	6 (7%)
Marijuana	21 (24%)	0
Amphetamine or methamphetamine	23 (26%)	1 (1%)
Heroin	23 (26%)	0
Cocaine/Crack	35 (39%)	3 (4%)
Hallucinogens	2 (2%)	0
Ecstasy	0	0
Morphine	4 (5%)	0
Methadone	6 (7%)	0
Benzodiazepines	3 (4%)	1 (1%)
Inhalants	1 (1%)	0
Other drugs	1 (1%)	0

*Frequency of cigarette use pre and post reflect both daily and occasional smokers.

Money NOT spent on drugs during clean time. All but one CCC client had clean time. The average number of days clean was 325 for this cohort of clients, however clean days ranged from 12 to 1063. To estimate the total dollars NOT spent on drugs for this cohort of CCC clients the average clean days- 325 for the 86 CCC clients clean was multiplied by \$206 a day spent and amounts to \$5,729,750 saved.

Criminal activity post CCC. Post enrollment in drug treatment and CCC programs, only 5 individuals committed any crime; this represents a 93% reduction in the number of individuals who committed crimes. Table 6 illustrates that 9 crimes were committed post treatment, however, one individual committed 5 of these crimes, and the remaining 4 clients committed one crime each. Of the 5 individuals who committed crime post-CCC, two were from the Mentor program and 3 were from the ADFC program.

Table 6: Post-treatment Criminal Activity

Type of crime	Ever	DAILY activity in year prior to CCC	Post treatment criminal activity
Stole property from someone's house car yard	47 (54%)	13 (15%)	1 (1%)
Shoplifting from a store	54 (61%)	22 (25%)	3 (4%)
Sold stolen goods/traded for money drugs/boosting	46 (53%)	27 (31%)	0
Passed bad checks	25 (29%)	5 (7%)	0
Used unauthorized prescriptions	34 (39%)	7 (8%)	0
Stole ID or used false ID	14 (16%)	4 (5%)	1 (1%)
Physically assaulted someone	41 (47%)	0*	0
Robbed someone <i>not</i> using a weapon	24 (28%)	2 (2%) *	0
Robbed someone using a weapon	13 (15%)	1 (1%)	0
Threatened violence	41 (47%)	8 (9%)	1 (1%)
Buying illegal drugs	86 (99%)	41 (47%)	1 (1%)
Sold illegal drugs	53 (61%)	41 (47%)	0
Manufactured Drugs	8 (9%)	4 (5%)	0
Exchanged sex for drugs	25 (29%)	5 (6%)	1 (1%)
Exchanged sex for money	19 (22%)	4 (5%)	1 (1%)

Employment and average income post CCC. Twenty-seven study participants (31%) were employed pre-treatment. While in treatment, CCC clients are not encouraged to return to work right away, and only 7 (17%) were employed while in treatment. Approximately half of the graduates (22, 49%) were employed. Average income from wages did not improve significantly post treatment relative to pre treatment, \$377 and \$347 respectively. However, the average income earned from illegal activity dropped significantly post treatment relative to pre treatment, \$6 on average compared to \$1978 respectively.

Effect of drug treatment on personal relationships. The effect of drugs and alcohol on relationships between CCC participants and family members was measured with five questions. Respondents were asked how often did drugs and alcohol interfere with personal relationships both pre-treatment and post-treatment. Responses ranged from 1 Never, 2 Rarely, 3 Sometimes 4 Often to 5 Always. Pre-entry into CCC programs, participants reported high levels of personal relationship problems associated with their drug and alcohol use. For 4 of the 5 questions, participants felt that drug and alcohol use “ALWAYS” negatively impacted family relationships and life functioning. However, there was a significant drop in personal relationship troubles post-CCC treatment. The modal or most common category reported regarding trouble with personal relationships

caused by drugs or alcohol was “NEVER”. Table 7 provides each of the 5 questions asked; the modal and average responses pre-treatment and post-treatment.

Table 7: Effect of Drug Treatment on Family Relationships

Question	Modal category pre-treatment	Mean	Modal category-post treatment	Mean
1 How often did your drug or alcohol use contribute to arguments or fights with family members	4	3.2	1	1.2
2. How often did your drug or alcohol use have a negative impact on your friends and family	5	4	1	1.2
3. How often did your drug and alcohol use impair your ability to be a good parent to your children	5	3.9	1	1.1
4. How often did your drug and alcohol use impair your ability to perform well at school or work	5	3.8	1	1
5. How often did you feel your drug and alcohol use had a negative impact on your life as a whole	5	4.6	1	2.4

Reconnection with family members. 76 (87%) of CCC participants stated that they had reconnected with family members post-treatment. Most reported that it was “great,” “wonderful,” and “going very well.” Others reported that it was happening but it was “slow going.” A couple individuals stated that they have to avoid their family to avoid using, and a few additional individuals stated that there had been a new foundation of honesty with family members, but trust needed to be restored.

Children/parenthood/child support. 23 participants stated that they had children age 18 or younger that they were financially responsible for. In the year prior to entering the CCC programs, only 10 stated that they were able to provide financial support for them (7 directly and 3 through child support payments). After treatment, 25 participants stated that they had children age 18 years or younger that they were financially responsible for, 18 were providing financial support for them (11 directly and 7 through child support payments). Post treatment there was a 29% increase in the number of parents able to provide financial support to their dependent children, compared to pre-treatment.

How do you think CCC Mentor or ADFC program or treatment has helped you the most? Clients in the study were asked to describe in their own words: “How do you think the CCC Mentor or ADFC program has helped you the most?” Table 9 provides examples of the clients’ responses along with the four most common themes that emerged from clients responses: housing, peer support, treatment program structure, and trust/acceptance/understanding. These themes are not mutually exclusive categories and

as can be seen from the clients responses, clients stress the importance of not just one aspect of the CCC program but often measure several aspects, for example “housing and treatment,” or “peer support and a safe place to stay.”

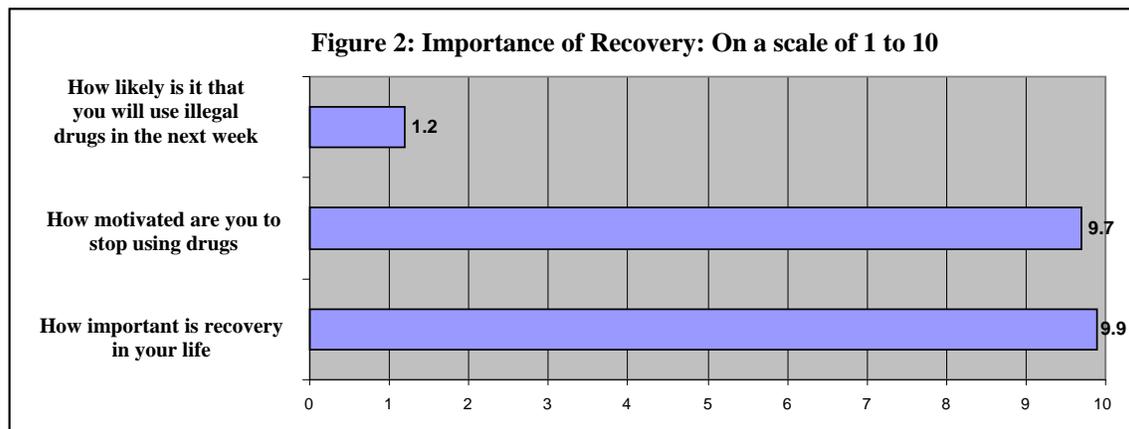
Table 8: Client Responses to ADFC / Mentor program help

Clients Responses	THEME
Clean and sober environment Clean housing, off streets Gave me a safe environment, treatment and people who understand and can teach me to deal with it She picked me up from prison and gave me a place to live free Housing and structure Housing and their approach to chronic relapses Housing and treatment Housing case managers support and detox Housing, one on one support, a place to belong	Safe Housing
Giving me a strong sober female role model, which I had never had before Giving me another option I was surrounded with people who worked on getting better Giving me the tools I need and freedom Groups, giving me the freedom to make a choice to stay clean and a safe place to stay Having people who show that they have been there - recovering addicts. Put around a bunch of other who are going through the same thing The support, encouragement, 12 step have been good for me I think CCC is a beautiful organization, and addicts helping addicts The Mentor program is changing my life CCC saved my life	Peer Support
Tools and directions Supportive services like housing, job assistance, and treatment. Providing me more understanding of disease and a place to work on my recovery There giving me a chance to change my life and giving me structure Gave me the tools and understanding to abstain from drugs and alcohol Strong support being in A&D free community the social services network are remarkable. And the safe and secure environment Given me direction, life skills, a safe environment to do it Safety, recovery setting, information support, being held accountable, structure. Being allowed to make own decisions	Treatment program structure
They had my back and I trusted them. Finding normal that I have never known in my own life. Taken me seriously, held me accountable There is someone there to guide me and let me know I'm not the bad person I thought I was Compassion People I can trust Let me stand up and have pride and dignity and self esteem and a chance.	Trust, acceptance, understanding

CCC clients stated that the housing they received while working on their recovery was critical to their success. Clients reported that CCC housing provided them with a safe

environment off the streets, and basic shelter so they could focus on getting clean. Clients also reported that peer support and being around others who were faced with the same kinds of problems and addictions helping each other was helpful. A third theme related to the importance of a structured drug treatment program and the benefit of information and tools provided to clients to help them stop drug use. Finally, study participants stated that the CCC program helped them develop positive relationships with other clients and staff. Clients trusted CCC program staff, and felt they were respected, accepted and offered an opportunity to make significant positive changes in a supportive environment.

Commitment to recovery. CCC study participants demonstrated high commitment to their recovery as illustrated by Figure 2. On a 10 point scale, respondents averaged 9.7 for motivation to stop using drugs and 9.9 for the importance of recovery in their lives. Clients felt that they were **not** likely to use drugs in the next week, with a score of only 1.2 out of 10.



Conclusion, Discussion and Policy Implications

Findings from this study of 87 CCC clients demonstrated profound reductions in both drug use and criminal activity post-treatment relative to pre-treatment levels. These 87 CCC clients were older (average age was 42) and had on average 7.6 years of peak drug use. All clients in both cohorts (those still in treatment and those who successfully graduated treatment) showed marked reductions in both drug use and criminal activity. This study showed a 95% reduction in drug use and a 93% reduction in criminal activity post-treatment. Only 4 individuals used any illegal drugs post-treatment and only 5 individuals committed any criminal act. For the cohort of graduates, the average number of clean days was 589, and there was virtually no drug use or criminal activity over that time, equivalent to the results of those still in treatment with 84 days clean; illustrating both immediate and long-term benefits of CCC treatment. Mentor clients as well as ADFC clients had equivalent outcomes illustrating that both programs provide effective drug treatment support services.

The vast majority of study participants (76%) associated their criminal activity solely to their drug use. In support of this, average age of first drug use preceded criminal activity for this cohort. This was true for both male and female clients. In addition, the drop in BOTH drug use and criminal activity, which approaches abstinence post treatment, helps support the strong link between drug use and crime.

Other positive improvements in clients lives post treatment were improvements in family relationships. However, employment rates did not significantly improve and the average wages remained very low. While commitment to recovery remains high post treatment, risk factors for potential relapse such as economic disadvantage, high poverty rate, high unemployment and untreated mental illness still exist for many of the participants in this study.

Limitations to this study include the small sample size and limited duration of follow-up. This sample of 87 CCC participants of the Mentor and ADFC programs represented a small sample of individuals currently being served in these programs as well as those who successfully completed treatment. It does not represent those who did not successfully complete treatment. Those who agreed to participate were most likely program participants who were doing well and had not relapsed, returned to the street or were incarcerated.

Self report studies in general have a number of limitations related to accuracy of memory recall, willingness to report sensitive or private experiences, and fear of social stigma. In addition, respondents in this study who were still participating in treatment (48%) may have felt uneasy about sharing information regarding drug use or illegal activity post-treatment for fear of losing access to their drug free housing. Therefore, post-treatment outcomes may be skewed in a positive direction.

Prior research indicates that criminal activity among individuals who are regular users of drugs can result in considerable individual, social and economic costs. The National Treatment Outcome Research Study (NTORS) studied 1075 heroin and cocaine users and found that in the three months prior to starting treatment, 50% of clients had committed some form of acquisitive crime and that the estimated cost to victims per year for the NTORS cohort of clients was \$9.5 million (Duncan, Stewart et al. 2000). In this CCC study of 87 chronic drug users, 54 clients (62%) were committing some type of crime on a daily basis. The estimated cost per year to the Portland community prior to entering CCC treatment resulting from criminal activity was estimated to be at least \$2 million a year. However, this may be an underestimate of the actual income generated to support the drug consumption for this cohort considering that these 87 individuals reported spending \$206 on drugs each day, 6.5 million dollars a year on drugs and were largely unemployed.

The magnitude of the economic returns that can be realized from effective drug treatment is enormous. If effective drug treatment reduces drug use, then recipients are no longer spending large sums of money on drugs each day. If effective drug treatment also reduces crime, then the community and victims save millions of dollars each year.

Effective drug treatment may also improve the employability and productivity of clients, decreasing the need to rely on public support programs. The drug abuse treatment system is also the major resource available to help contain the spread of HIV among intravenous drug users. The loss of human life, and productivity AND high cost of long term medical care associated with HIV and AIDS can be prevented with effective early interventions. For these reasons, it is a sound financial investment for federal, state and local governments to invest in treatment modalities that demonstrate effectiveness in reducing drug use.

The mission of Central City Concern is to provide a recovery community in which an individual has access to drug free community housing, support services, and employment opportunities. Central to CCC's philosophy of a recovery community is to provide an opportunity for those entering recovery to develop strong positive relationships with others who have had common experiences and who can offer support. In this study, CCC Mentor and AFDC program graduates credited their success first and foremost to the safe housing they received, second to the peer support, third to structured drug treatment and fourth to the validation and compassion they felt from others. These responses, collected from open-ended questions in which participants stated in their own words how the CCC programs helped them most, provide support that CCC is fulfilling its mission.

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