

Highlights

Substance abuse treatment was effective in reducing the incidence of violent behaviors among clients of both genders in all treatment settings.



## The Effectiveness of Substance Abuse Treatment in Reducing Violent Behavior



### NEDS Analytic Summary Series

The Center for Substance Abuse Treatment (CSAT) works to improve the lives of those affected by alcohol and other substance abuse, and, through treatment, to reduce the ill effects of substance abuse on individuals, families, communities, and society at large. Thus, one important CSAT mission is to expand the knowledge about effective substance abuse treatment and recovery services. In support of these efforts, CSAT established the National Evaluation Data Services (NEDS) contract to provide a wide array of secondary data analysis products to the substance abuse treatment field.

Specifically, the NEDS project is focused upon providing CSAT with an analytic capability to use existing data to address policy- and practice-relevant topics as well as future research and evaluation activities. NEDS has developed several product lines designed to provide analytic findings to substance abuse treatment policy makers, service providers, services researchers and evaluators in a format that is most useful to the end user.

The Analytic Summary is one of the NEDS product lines. The purpose of the Analytic Summary is to provide a brief summary of each technical report produced by NEDS written in non-technical language. Readers who find the Analytic Summary results of interest can contact the original NEDS technical report authors for more detailed information. Through this process, the NEDS Analytic Summaries provide information to the substance abuse treatment field and promote linkages among different areas in the field.

#### This Analytic Summary

This NEDS Analytic Summary is based on the NEDS Technical Report titled *The Effectiveness of Substance Abuse Treatment in Reducing Violent Behavior* (Orwin, R., Maranda, M., and Brady, T., February 2001). For a more thorough discussion of the analysis and findings, please obtain a copy of the complete Technical Report. Information for doing so is provided on the last page of this summary.

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# The Effectiveness of Substance Abuse Treatment in Reducing Violent Behavior

## Analytic Importance

One important function of CSAT is to expand the knowledge about, and the availability of, effective treatment and recovery services for those affected by alcohol and other substance abuse. In sponsoring these analyses of the data they have collected, CSAT is attempting to gain useful insight into the fundamental question: *What constitutes effective (and cost-effective) treatment, and for what populations?*

Crime and violence constitute a major cost of drug and alcohol abuse on society. While criminal justice statistics document increasing problems of substance abuse-related violence, less is known about non-incarcerated populations who use alcohol and drugs and also commit violent acts. Previous research indicates that use of alcohol, amphetamines, phencyclidine (PCP) and cocaine (but not marijuana and opiates) is linked to violence.

A significant number of individuals who enter treatment for substance abuse have a history of violence. There has been limited research on the effect of treatment on specific violent behaviors.

This analytic summary describes the prevalence of violence, both as perpetrators and victims, among clients who participated in the National Treatment Improvement Evaluation Study (NTIES). It further explores the impact of treatment on the reduction of violent behavior.

## Analytic Purpose

This analysis focuses on four types of violent behaviors and examines the extent to which post-treatment violence differs from that reported prior to treatment.

This analysis addresses the following questions:

- What proportion of clients had a history of violent behavior?
- What proportion had a history of victimization? How does this vary by gender and treatment setting?
- Did participation in substance abuse treatment reduce violent behavior? How do effects vary by gender, treatment setting, and whether the client was a perpetrator and/or victim of violence?

Analytic Summary 18, *Impact of Prior Physical and Sexual Victimization on Substance Abuse Treatment Outcomes*, addresses the prevalence of physical and sexual abuse experienced by clients before treatment and the association of prior victimization and substance abuse treatment outcomes.

Analytic Summary 19, *Physically and Sexually Abused Women in Substance Abuse Treatment*, compares women who experienced repeated abuse (physical, sexual, or both physical and sexual) to women who experienced a single instance of physical or sexual abuse prior to treatment.

## Analytic Approach

This analysis is based on 4,411 clients who completed baseline and follow-up (about a year after completing treatment) interviews. Information necessary for analysis of violent behaviors was missing for 15 individuals, bringing the final sample size to 4,396 individuals. Of the 4,396 clients, 3,026 were men and 1,370 were women. The median age was 32.

This analysis addresses the following questions:

- What proportion of clients had a history of violent behavior?
- What proportion had a history of victimization?
- Did participation in substance abuse treatment reduce violent behavior?



## The Effectiveness of Substance Abuse Treatment in Reducing Violent Behavior (cont.)

Comparisons across treatment settings take into account variations in treatment populations in assessing reductions in violent behavior. The five treatment settings represented in NTIES are:

- Methadone outpatient (n=421)
- Non-methadone outpatient (n=1,557)
- Short-term residential (n=869)
- Long-term residential (n=837)
- Correctional (n=709).

Clients in methadone outpatient settings, for example, have used opiates, and opiate users tend to be less prone to violence than users of other types of substances.

### Outcome measures of violence.

Outcome measures consisted of difference scores on four types of self-reported violent behaviors derived from baseline and follow-up interviews. The four types of behaviors were:

- Use of a weapon or physical force against someone to steal money or property from them (robbery)
- Attacked or threatened someone with a weapon (armed assault)
- Beat someone up (unarmed assault)
- Severely hurt someone in some other way.

At admission and at 12 months after treatment exit, clients were asked to report the frequency of each violent behavior (none, once, 2-5 times, 6-20 times, and more than 20 times) in the 12 months before treatment and in the 12 months after treatment.

In addition to these four questions that served as the basis for violence outcome measures, clients were asked at admission if, in their lifetime, they had ever:

- Forced someone to have sex or do any kind of sex act against their will
- Killed someone, other than by accident.

### Perpetrators and victims of violence.

Clients who reported at admission that they had committed *any* of the six acts of violence were defined as perpetrators.

Clients were defined as victims of violence if, at admission to treatment, they reported that in their lifetime they had ever:

- Been attacked with a weapon such a knife or gun
- Been hit or beaten seriously enough to require medical attention
- Been made to have vaginal, oral, or anal sex when they did not want to by the use of force or threatens to harm them or someone else.

Based on reported violent behaviors and victimization, clients were grouped into four mutually exclusive categories for analysis:

- Clients who had committed but had not been the victim of serious violent acts (Perpetrator Only group)
- Clients who had been the victim of, but had not committed, serious violent acts (Victim Only group)
- Clients who had committed and been the victim of serious violent acts (Both Perpetrator and Victim group)

Outcome measures of violence included four types of behaviors:

- Robbery
- Armed assault
- Unarmed assault
- Severely hurting someone in some other way.



# The Effectiveness of Substance Abuse Treatment in Reducing Violent Behavior (cont.)

## The analysis showed that:

- Nearly two-thirds of clients reported committing at least one violent act in their lifetime
- About one-third of clients reported committing a violent act in the 12 months before treatment
- Most perpetrators were also victims
- More clients were crime victims than perpetrators.



- Clients who had neither committed nor been the victim of serious violent acts (Neither Perpetrator nor Victim group).

Responses from the full cohort of 4,396 clients were included in assessing the prevalence of violence and victim experiences. The outcomes analysis was limited to those clients who reported committing violent behaviors in the 12 months preceding treatment (n=1,407). For the outcome analysis a behavioral change occurred if the client's post-treatment violent behavior fell into a different frequency category than his or her pre-treatment behavior for each violent act (i.e., none, once, 2-5 times, 6-20 times, more than 20 times).

## Findings

Substance abuse treatment was effective in reducing the incidence of violent behavior among clients of both genders in all treatment settings.

The data show reductions in violence among those clients actively violent in the 12 months before treatment, with virtually no increase in violence among clients not actively violent in that same time period.

## History of Violence Among Clients Entering Treatment

**Overall rates of violence.** Among all clients seeking treatment, 85 percent had either committed violent acts or been victims of violent acts before entering substance abuse treatment (see Exhibit 1).

- Nearly two-thirds (65%) of the clients reported having committed at least one of the violent acts in their lifetime, and almost three-fourths (74%) reported being a victim of violence.
- Most perpetrators were also victims; only 11 percent of clients reported perpetrating violence without having ever been a victim, while 20 percent reported having been a victim without ever committing a violent act.

**Rates of violence in 12 months prior to treatment.** About a third (32%) of the clients reported committing at least one violent act in the 12 months prior to treatment, in contrast to 65 percent who reported violent behaviors in their lifetime.

Exhibit 1						
Client Perpetrator/Victim Group by Gender - Full Cohort (N=4,396) <sup>1</sup>						
Group	Men		Women		Total	
	n	%	n	%	n	%
Perpetrator only	391	13	112	8	503	11
Victim only	445	15	423	31	868	20
Both perpetrator and victim	1,789	59	572	42	2,361	54
Not perpetrator nor victim	401	13	263	19	664	15
All perpetrators	2,180	72	684	50	2,864	65
All victims	2,234	74	995	73	3,229	74
All clients	3,026	100	1,370	100	4,396	100

<sup>1</sup>Missing relevant information, n=15.

## The Effectiveness of Substance Abuse Treatment in Reducing Violent Behavior (cont.)

The violent act most frequently reported by clients before they entered treatment was beating someone up (27% of clients), followed by armed assault (13%), other violence (12%), and robbery (6%).

**Gender differences.** Compared with women, men entering treatment were much more likely to have committed violent acts and equally likely to have been a victim of violence.

- More men (72%) than women (50%) reported committing violent behaviors during their lifetime prior to treatment.
- Men were more likely than women to report committing a violent act regardless of the treatment setting in which they were seen and whether they had ever been a victim.
- Men were as likely as women to report being victims of violence (74% versus 73%).

Men were, however, less likely than women to report being a victim only (15% versus 31%).

### Impact of Substance Abuse Treatment on Violent Behavior

**Changes among full cohort.** For the full cohort, the proportion of clients committing at least one of the four types of violent acts declined from 32 percent in the 12 months before treatment to 12 percent in the year following treatment.

Given that 68 percent of the clients did not report violent behaviors in the 12 months prior to treatment, no reduction was expected among these clients. Fewer than 7 percent of these clients committed any violent act after treatment.

**Changes in clients committing violent acts in 12 months prior to treatment.** Of the 1,407 clients who did report committing violent acts in the 12 months before treatment, the great majority (87% to 93%, depending on type of behavior) reported a decreased frequency of violent behaviors following treatment (see Exhibit 2).

- The largest reduction in violent acts following treatment was among clients who had severely hurt someone (93%).
- In the year following treatment, fewer acts of violence were reported by 91 percent of clients who reported committing robberies and 92 percent of the clients who reported committing armed assaults in the 12 months before treatment.
- In addition, 87 percent of clients reported fewer instances of having beat someone up.

About 9 out of every 10 clients who had committed violent acts before substance abuse treatment reduced their involvement in violent acts in the 12 months following treatment.

**Changes in violence by gender and by prior victimization.** Following treatment, fewer clients committed violent acts regardless of their gender or prior victimization.

- Men were as likely to reduce violent acts as women, except for a slightly larger reduction among women reporting they had severely hurt someone (98% versus 92% for men).
- Clients who had been victims were similarly likely to reduce their violence as clients who had never been victims.

About 9 out of 10 clients who reported committing violent acts in the 12 months before treatment reported a decreased frequency of violent behavior following treatment.

Following substance abuse treatment:

- Men were as likely to reduce violent acts as women
- No modality showed consistently greater reductions across all four past-year behaviors.



# The Effectiveness of Substance Abuse Treatment in Reducing Violent Behavior (cont.)

## Implications for research:

- Examine relationship of violence and primary problem substances
- Use multiple follow-ups over longer time periods
- Identify client and treatment characteristics associated with post-treatment reductions in violence.

### Changes in violence by modality.

There were few differences across modalities in reduced violence.

- No modality showed consistently greater reductions across all four past year behaviors.
- After treatment, clients in all modalities reported reductions in all violent behaviors; non-methadone outpatient and long-term residential clients reduced their frequency of robberies more than clients in other modalities.

### Implications

Increased knowledge about the association between violence and substance abuse and the capability to use this information to enhance treatment outcomes can be strengthened by further study, increased support for treating substance abusers who have a history of violence, and better tools and training to assist providers in identifying and treating such clients.

### Implications for Research

Further research and analysis would shed light on the relationship between violence and substance abuse.

- Continue to explore the relationship between violence and substance abuse. Violence can be a risk factor for substance abuse; substance abuse can contribute to an individual's propensity toward violence. A better understanding of what triggers each behavior can lead to more effective intervention strategies.
- Examine the relationship between violent behaviors and primary problem substances. While research suggests that the abuse of alcohol, amphetamines, PCP and cocaine is associated with violent behavior, the effects of marijuana use are not clear.
- Conduct studies with multiple follow-up periods. Comparing substance use and violence committed before treatment and at 12 month, 18 month, and longer follow-up periods would help illuminate the lasting effects of treatment on reducing substance use and violent behavior.
- Identify client and treatment characteristics associated with a reduction in violent behavior. Further analysis is needed to

Exhibit 2			
Changes in Reported Violent Acts by Clients Committing this Act During the 12 Months Before Treatment (N=1,407)			
Violent Acts	No Change <sup>1</sup>	Increased Activity	Decreased Activity
Robbery (n=258)	4%	5%	91%
Attacked or threatened someone with a weapon (n=582)	6%	3%	92%
"Beat up" someone (n=1,186)	9%	4%	87%
Severely hurt someone on purpose in any other way (n=532)	5%	2%	93%

<sup>1</sup>Because frequencies were grouped at the time of the interview, "no change" means that the individual did not change category rather than no change in the number of violent incidents. For example, a client who reduced the frequency of a behavior from 20 times to 6 times would still register a "no change" outcome because he or she would still be assigned to the same category.



## The Effectiveness of Substance Abuse Treatment in Reducing Violent Behavior (cont.)

### Implications for policy:

- **Consider substance abuse treatment as a crime reduction tool**
- **Support treatment programs for violent offenders**
- **Increase recognition that substance abuse treatment may help to reduce domestic violence.**

### Implications for practice:

- **Include additional services to increase clients' coping skills**
- **Provide training to improve assessment of clients' history of violence as perpetrator and as victim.**



identify differences between clients who reduced their violent behavior after treatment and clients whose violent behavior did not change. Statistical analyses could assess how much of the change in violence is due to client factors and how much is due to program or treatment factors.

Prospective studies are needed to assess violence among treatment clients and reductions in violence stemming from treatment. Such studies should employ a rigorous comparative design and include detailed questions about type, frequency, severity and drug-relatedness of violent behavior. The findings from these studies could provide much needed information about the pharmacological, biological, economic and social causes of violence and its remediation.

### Implications for Policy

Crime constitutes a major cost to society of untreated drug abuse. This analysis of violence among clients in substance abuse treatment has the following policy implications:

- **Consider treatment as a means of reducing crime.** Substance abuse treatment can potentially be an important crime-reduction tool, particularly for reducing violent crimes such as robbery and assault.
- **Support treatment programs for violent offenders.** Individuals who are incarcerated for violent behavior and who also have a substance abuse problem may benefit from substance abuse treatment.

- **Increase recognition of treatment as a means of reducing domestic violence.** Decision makers in criminal justice and other court programs need to be made aware of the effectiveness of substance abuse treatment programs in reducing interpersonal violence, particularly in cases involving alcohol abuse and domestic violence. As appropriate, substance abuse treatment may be recommended in conjunction with sanctions and penalties.

### Implications for Practice

The finding that violent behaviors were reduced for most clients regardless of gender or treatment setting has implications for practitioners. Substance abuse treatment providers may want to:

- **Incorporate clinical components in treatment of clients with history of violence.** Components and services such as anger management, conflict resolution, relaxation, and other techniques could reduce the client's propensity toward violent behavior or help address effects of earlier trauma that may interfere with treatment success.
- **Provide training to improve assessment of client history as perpetrator and as victim of violence.** Increased understanding of client's history with violence may aid decisions about appropriate treatment settings and services utilization.

# The Effectiveness of Substance Abuse Treatment in Reducing Violent Behavior (cont.)

## Future Steps

The relationships between drugs, alcohol, and violence, including the behaviors examined in this analysis and other violent behaviors, need further research. Better understanding can come through carefully designed and executed prospective studies of treatment populations with varying histories of violence and different drugs of abuse in a wide range of treatment settings and services. Further research and analysis will help to explain the observed reductions in violence following treatment as it relates to reduced alcohol and drug consumption, improved life skills, stabilized lifestyle, or combinations of these and other factors.

Future work also needs to explore victimization and its association with drug and alcohol use, treatment, and

recovery particularly since many people who commit violent acts also are victims of violence.

Continued treatment evaluation analyses will contribute insights that will ultimately reduce the substantial cost attributed to substance abuse and substance abuse related violence.

## Reference

Orwin, R., Maranda, M., & Brady, T. (2001). *The effectiveness of Substance abuse treatment in reducing violent behavior*. Report prepared under Contract No. 270-97-7016 for the Center for Substance Abuse Treatment. Fairfax, VA: Caliber Associates.

*For more information, please contact the National Evaluation Data Services analysis team at (703) 385-3200, or visit the NEDS Web site.*

**Find more on the web  
<http://neds.calib.com>**

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## National Treatment Improvement Evaluation Study (NTIES)

This analysis was performed on data derived from the National Treatment Improvement Evaluation Study (NTIES). The NTIES was a national treatment services evaluation of the effectiveness of substance abuse treatment services delivered in comprehensive treatment demonstration programs supported by the Center for Substance Abuse Treatment (CSAT).

The NTIES project collected longitudinal data between FY 1992 and FY 1995 on a purposive sample of clients in treatment programs receiving demonstration grant funding from CSAT. Data are derived from client interviews conducted at three points in time: at treatment intake, at treatment exit, and 12 months after treatment exit.

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