
**Best Practices in Children's Mental
Health:**

A Series of Reports Summarizing
the Empirical Research on Selected Topics

Report #2
**"Inpatient Treatment for Adolescent
Substance Abuse"**
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Author: Kirsten Oelklaus LMSW

Project Coordinator: Chris Petr, Ph.D., LCSW

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Outcome Studies of Inpatient Treatment for Adolescents with Substance Abuse Issues

While concepts around the treatment of individuals with substance abuse issues have been examined for years, the bulk of the literature collectively examines adults and adolescents, rather than investigating the unique issues that adolescents with substance abuse issues have. Clearly substance abuse is a major issue for adolescents:

- 90% of adolescents in the U.S. report trying alcohol before they reach adulthood (Bukstein, 1998).
- 30% of 12th graders, 26% of 10th graders and 14% of 8th graders reported binge drinking in the previous 2 weeks (HHS Fact Sheet, 2000).
- (54%) of all adolescents have tried illicit drugs, and over one-third have tried an illicit drug other than marijuana (NIDA Fact Sheet, 2000).

Methodology

The research that is available examining substance abusing adolescents examines demographics and antecedent factors which generate these addictions, while very few studies focus on treatment. The present literature review attempted to explore outcomes studies for in-patient treatment programs for adolescents with substance abuse issues in order to reach conclusions about best practices for this population. It was important to establish a benchmark by which treatment outcomes could be compared and treatment could be established as "effective". According to Kennedy and Minami (1993), there are no clear guidelines for success for adolescent substance abuse treatment. However, based on the adult literature, an expected rate of success is 28% (5). Thus, programs with abstinence rates higher than 28% on post-treatment measures were considered successful, and included in the present review.

Results

Through the course of this investigation, it was clear that there is a dearth of information around efficacy of inpatient substance abuse treatment for adolescents. Of the studies that were found which measured treatment outcomes during the last 10 years, no studies were conducted using controlled experimental design. Instead, recent studies have compared two or three types of treatment, or utilized one group pretest/post-test design. With the absence of a control group, it is difficult to establish external validity and make generalizations.

For the purpose of this investigation, as previously mentioned, the criteria for inclusion of studies was a success rate of at least 28%, or a statistically significant difference in the measures prior to, and following treatment. Table 1 presents the information and results on 9 studies included in this review.

Pertinent Findings from Individual Studies

- Treatment completion has as a positive impact on abstinence rates following discharge (2).
- Longer term treatment (6-8 weeks) was found to be significantly related to lower marijuana, alcohol or other drug use (4).
- Residential, Inpatient and Outpatient (Intensive day) Treatment appears to be equally effective in reducing use of alcohol and marijuana (3,4)
- Residential and Inpatient Treatment were more effective in treatment for use of hallucinogens and stimulants (3,4)
- Usage of hallucinogens, stimulants and illicit drug use (other than marijuana) increased in outpatient treatment settings (3,4).
- No treatment was found to be effective in treating adolescents who use cocaine (3).
- Adolescents are 4 times more likely to relapse if they do not attend AA/NA groups following discharge (5).
- Treatment had significant positive effects on reducing legal and school issues and increasing familial functioning (5,9).
- Treatment also seemed to impact symptoms of co-morbid psychiatric issues as there were significant decreases in symptoms of depression, conduct disorder and ADHD (8).
- Over half of adolescents in treatment have co-morbid psychiatric disorders (3).
- Adolescents with co-morbid psychiatric disorders reported more severe levels of substance use (3).
- In studies examining the effectiveness of an AA/NA based treatment program, female participants who completed the program did significantly better than their male counterparts, and other females who dropped out of treatment prematurely (7).
- When adolescents relapsed after treatment, they were more likely to use alcohol and marijuana, and then progress to other substances (8).
- Many adolescents believed they could use alcohol and marijuana following inpatient treatment without problem, however outcomes show otherwise (8).
- Nicotine use actually increased in usage by adolescents (9).

Conclusions

Based on the empirically based studies listed in this literature review, current successful inpatient treatment protocol for adolescents with substance abuse issues have included the following:

- Intense and structured milieu-based interventions including:
 - Individual therapy
 - Family therapy and
 - Group therapy
 - Utilization of the AA/NA model
 - Aftercare services
 - outpatient therapy
 - follow- up with AA/NA groups (at least one meeting per week)
- Educational and Vocational Services
 - i.e. groups, specialized school and vocational training
- Well-trained, experienced clinicians to:
 - facilitate groups
 - provide clear structure
 - encourage healthy peer relationships
 - maintain a recovery-focused milieu
 - confront maladaptive behaviors
- length of stay
 - mean hospitalizations of at least 6 weeks yielded significantly higher levels of success

As more treatment programs emerge which directly address the needs of adolescents, empirical studies must be done to examine the efficacy of these age-specific interventions.

References:

- Bukstein, O. (1998) Summary of the practice parameters for the assessment and treatment of children and adolescents with substance use disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, 37, 1: 122127.
- Kennedy B.P., Minami M. (1993). The beech hill hospital/outward bound adolescent chemical dependency treatment program. *Journal of substance abuse treatment*, 10: 395-406.
- National Institute on Drug Abuse (2000). *High school and youth trends*. NIDA Fact Sheet # 13565. <<http://www.nida.nih.gov/Infobox/HSYouthtrends.html>>.
- U.S. Department of Health and Human Services (2000). *Substance abuse- A national challenge, Prevention, treatment and research at HHS*. HHS Fact Sheet, December 14. <<http://www.hhs.gov/news/press/2000pres/00fsmf.html>>.

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Citation	Type of Study	Treatment Model	Pertinent Findings
1) Norbert R., McMenamy C. (1996) Treatment outcomes in an adolescent chemical dependency program. <u>Adolescence</u> (31) 121, 91-107	Examination of treatment outcomes for adolescents admitted to a 45-day inpatient adolescent chemical dependency unit. (n=172)	Treatment utilized token economy within an intensive "milieu level program". Therapy groups, CD education, AA/NA groups, aftercare and family work interventions were utilized. Length of stay (LOS)- 45 days	At 6-month follow up, adolescents showed a statistically significant decrease in drug and alcohol use, 56% had not used since discharge and 82.7% had not used in the last month.
2) Jainchill N., Hawke J., De Leon G., Yagelka J. (2000). Adolescents in therapeutic communities: one-year posttreatment outcomes. <u>Journal of Psychoactive Drugs</u> 32(1) 81-94.	Study comparing treatment outcomes for completers and non-completers at 6 different residential treatment settings for adolescents with substance abuse issues. (n=485)	Tx model focused on correction of maladaptive behaviors; and social, educational and vocational training. Treatment was designed in stages based on behavioral, developmental and emotional dimensions. No LOS reported.	There were significant reductions in prevalence and frequency of adolescents reporting drug and alcohol use, with larger reductions reported for those who completed treatment. The length of hospitalization also had a positive impact on posttest substance abuse involvement.
3) Grella C.E., Hser Y., Joshi V., Rounds-Bryant J. (2001). Drug treatment outcomes for adolescents with comorbid mental and substance use disorders. <u>J Nerv. Ment. Dis</u> 189: 384-392.	Study comparing treatment outcomes of adolescents in residential, inpatient and intensive outpatient treatment with substance abuse and mental health issues, using data obtained from <u>DATOS-A</u> (multisite tx outcome survey by NIDA) (n=992)	Treatment was provided at several sites and included: Residential- therapeutic community programs focusing on education and counseling, utilizing group, individual and family therapy. Median length of stay- 5 months. Inpatient- counseling, 12-Step sessions, group, individual and family therapy. Median length of stay- 18 days.	Across treatment modalities, over half of the adolescents with substance abuse issues had at least one comorbid psychiatric disorder; typically conduct disorder, depression or ADHD. Comorbid adolescents had more severe substance use prior to, and following treatment. All 3 treatments appeared to be effective in reducing use of alcohol, marijuana, hallucinogens, stimulants, suicidal thoughts, hostility, school and legal problems during 12-month follow up. No treatments proved effective for cocaine use. There was no statistically significant difference in the effectiveness of the 3 types of treatment.
4) Hser Y., Grella C.E., Hubbard R.L., Hsieh S.C., Fletcher B.W., Brown B.S., Anglin D. (in press). An evaluation of drug treatments for adolescents in 4 US cities. <u>Archives of General Psychiatry</u> 58: 7.	Naturalistic, nonexperimental evaluation of treatment outcomes for residential, inpatient and intensive outpatient treatment for substance abusing adolescents using data from <u>DATOS-A</u> . (n=1167)	Outpatient- Intensive day tx focusing on education and skills training; individual, group and family therapy. Median length of stay- 1.6 months	Overall, all treatments showed significant improvements in drug and alcohol use, psychological adjustment, school performance, and criminal behavior during 12-month follow-up. Residential and Inpatient treatment proved more effective in reducing use of hallucinogens and stimulants, while usage patterns in the Outpatient treatment group actually increased as did illicit drug use (other than marijuana) and arrest rates. In all 3 treatments, longer-term treatment was found to be significantly related to lower marijuana, alcohol or other drug use.

<p>5) Kennedy B.P. & Minami M. (1993) The beech hill hospital/outward bound adolescent chemical dependency treatment program. <u>J. Subst. Abuse Treatment</u> 10, 395-406.</p>	<p>Outcome study for a treatment protocol involving brief inpatient detoxification and 22-day residential program. (n=91)</p>	<p>3-day hospitalization and detoxification, followed by a 22-day wilderness program based on concepts of outward bound program.</p>	<p>At one year posttreatment, 47% of adolescents had been completely abstinent from alcohol and drugs. Also, 38% of adolescents were regularly attending AA/NA, and results of this study indicate that adolescents were 4 times more likely to relapse if they were not attending AA/NA groups. There were significant decreases in the number of legal and school problems and significant increases in familial functioning.</p>																				
<p>6) Brown S.A., D'Amico E.J., McCarthy D.M., Tapert S.F. (2001). Four-year outcomes from adolescent alcohol and drug treatment. <u>J. Stud. Alcohol</u> 62: 381-388.</p>	<p>Longitudinal research project investigating substance use following treatment in several inpatient centers in San Diego, utilizing 12-step approach. (n=162)</p>	<p>12-Step, abstinence-focused treatment model. Average length of hospitalization was four weeks.</p>	<p>The 12-step model was effective in significantly reducing the frequency of marijuana use in adolescents, and while the frequency of stimulant use was lower at 4-year follow up, it was not deemed to be at a significant level. Levels of alcohol use show a significant decrease between intake and 6-month follow-up, however alcohol use returned to near intake levels over time.</p>																				
<p>7) Alford G.S., Koehler R.A., Leonard J. (1991). Alcoholics anonymous-narcotics anonymous model inpatient treatment of chemically dependent adolescents: a 2-year outcome study.</p>	<p>Study evaluating the outcome effects of an inpatient program based entirely on AA/NA model, philosophy and steps. Those who completed the program were compared with "non-completers". (n=157)</p>	<p>Program based on AA/NA model, and involved individual and group therapy, psycho-educational groups, and aftercare. Average length of stay not reported.</p>	<p>Abstinent or "essentially abstinent" rates at follow-up:</p> <table border="1" data-bbox="1220 646 1913 803"> <thead> <tr> <th></th> <th>6mo.</th> <th>1 yr</th> <th>2yr</th> </tr> </thead> <tbody> <tr> <td>male completers</td> <td>71%</td> <td>48%</td> <td>40%</td> </tr> <tr> <td>male non-completers</td> <td>37%</td> <td>44%</td> <td>39%</td> </tr> <tr> <td>female completers</td> <td>79%</td> <td>70%</td> <td>61%</td> </tr> <tr> <td>female non-completers</td> <td>30%</td> <td>28%</td> <td>27%</td> </tr> </tbody> </table> <p>Female completers seemed to do much better at follow-up than their male counterparts and female non-completers. This treatment is effective at a statistically significant level, and research using a control group needs to be done to determine clear effects from tx, as the non-completers may have benefited from treatment.</p>		6mo.	1 yr	2yr	male completers	71%	48%	40%	male non-completers	37%	44%	39%	female completers	79%	70%	61%	female non-completers	30%	28%	27%
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<p>8) Brown S.A., Taper S.F., Tate S.R., Abrantes A.M. (2000). The role of alcohol in adolescent relapse and outcome. <u>Journal of Psychoactive Drugs</u> 32(1) 107-115.</p>	<p>Longitudinal adolescent alcohol and drug abuse research project. Treatment programs were abstinence-focused with average length of stay- 6 weeks. (n=157)</p>	<p>Treatment model was abstinence-focused, and the average length of stay was four to six weeks.</p>	<p>At follow-up, 79% of adolescents had at least one substance use episode; Gateway substances of alcohol and marijuana were involved in majority of adolescent posttreatment initial use episodes (marijuana-47%, alcohol-46%). While many adolescents reported that they felt they could use alcohol non-problematically, many went on to use other substances after initial relapse with alcohol.</p>																				
<p>9) Crowley T, Mikulich S, MacDonald M., Young S, Zerbe G. (1998) Substance-dependent, conduct-disordered adolescent males: severity of diagnosis predicts 2-year outcome. <u>Drug and Alcohol Depend.</u> 49, 225.</p>	<p>Findings of study on adolescent males' 2-year outcomes for substance abuse, conduct disorder, ADHD and mood disorders in a residential treatment setting. (n=89)</p>	<p>Program offered behavior mod. system with rewards and consequences for behavior; group, family and vocational counseling, specialized school, 12-step groups, and aftercare. Length of stay was 6-12 months.</p>	<p>Two year follow up showed significant decreases in criminality, symptoms of conduct disorder, depression and ADHD, however prevalence of use for most substances remained unchanged after two years. Hallucinogens and inhalants decreased significantly, while nicotine actually increased. The severity of use slightly decreased, as daily use of substances was less frequent.</p>																				