FINAL REPORT

MOHICAN YOUTH CENTER

RSAT OUTCOME EVALUATION

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

APPENDICES

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EXECUTIVE SUMMARY

The Mohican Youth Center, located in Loudenville, Ohio, has been in operation for 30 years and is operated by the Ohio Department of Youth Service (DYS). Since 1998, the facility has been a residential substance abuse treatment facility for felony adjudicated males in the last six months of their sentence. This evaluation compared those who participated in the Mohican therapeutic community residential substance abuse treatment program (RSAT) to the youth who participated in (RSAT) at Mohican before it was a therapeutic community (participants from January 1998 to August 1999), and a sample of males from the Department of Youth Services to determine whether participation in Mohican's TC was associated with differences in outcome.

A non-equivalent comparison group design was used to conduct the outcome evaluation. The specific research questions that were addressed included:

What are the characteristics of the youth being served by Mohican's therapeutic community RSAT program? What, if any differences, exist between the treatment and comparison groups with regards to background characteristics?

- The treatment and comparison groups were very similar with regards to race, age at intake, highest grade completed, and enrollment in school prior to arrest. The typical youth in each group was white, 16 years of age, had completed the 8th grade, and had been enrolled in school.

- Members in the treatment and pre-TC group differed only in terms of employment status and living arrangement prior to commitment to Mohican (data was not available for the DYS group). Youth in the pre-TC group was more likely to be unemployed and living in a secure environment prior to admission.

- Concerning criminal history, the typical offender was a property offender with a felony level 2 offense (except for DYS where the level of offense was a misdemeanor). There were significant differences between the groups in regards to the criminal history. For example, the pre-TC was more likely to have committed a personal offense whereas the treatment group was more likely to have committed a property offense. The DYS group was the least serious group when examining the level of adjudication. The majority of DYS youth had a

misdemeanor or felony 5 adjudication. The age at first arrest was approximately 12 years of age for the treatment and pre-TC group.

- The age of first drug and alcohol use was approximately 12 years of age for both the treatment and pre-TC group (data was not available for the DYS group). In addition, the drug of choice for these two groups was marijuana.

- Results of the Juvenile Automated Substance Abuse Evaluation (JASAE) instrument indicated that the youth in all three groups have significant substance abuse problems along with ingrained patterns and attitudes supporting this problem. The majority of youth in all groups had a score of 21 indicating a need for intensive substance abuse treatment.

- The results of the Youthful Level of Service Inventory (Y-LSI) report that the majority of youth in the treatment group (66.6%) and the pre-TC group (69.5 %) were assessed as a high or very high risk of recidivating whereas the majority of the DYS group (56.9%) were assessed as a moderate risk of recidivating.

- Data pertaining to psychological and social factors as measured by the Client Self-Rating are available for the treatment group and the pre-TC group. T-tests showed that the pre-TC group was a higher risk than the treatment group on the following scales: anxiety, depression, risk-taking, and hostility. However, the treatment group had higher levels of self-esteem than the pre-TC group.

- The treatment group's cognitive distortions were measured using the How I Think Questionnaire. The results indicate the majority of youth were classified as borderline clinical or clinical in the following scales: self-centeredness, blaming others, minimizing, opposition, physical aggression, lying, and stealing; thus, indicating high levels of cognitive distortions.

What were the specific groups that youth participated in while at Mohican? What were the rates of phase advancement and individual counseling? How many youth tested positive for drugs while in the program? How many program violations did youth experience while in the program?

- Once placed into Mohican, youth receive the same services regardless of risk level or need level. Some specific groups included: orientation of the therapeutic community model, identifying thinking errors, personal recovery, chemical dependency, and relapse prevention. In addition, youth attend school throughout the day.

- Mohican has four different treatment phases for youth to advance through. The orientation phase is for eight sessions. Phase one and phase two lasts for seven weeks and phase three is eight weeks. The average amount of days spent in each phase varied. On average, there were 36 days spent in orientation, 59 days spent in phase one, 56 days spent in phase two, and 54 days spent in phase three. In

addition, not all participants successfully completed phase three before being terminated from Mohican.

- The average amount of time spent in individual counseling for 173 youth across 34 different sessions was 318 minutes (5.3 hours).

- There were 269 different drug tests administered to 198 youth while at Mohican. There were no positive drug tests reported.

- Mohican incorporates three types of program violations. The house violation is the least serious followed by a major violation and then the cardinal violation is the most serious. The average number of house violations was 42 for 289 youth. The average number of cardinal violations was 1.87 and the average number of major violations was 7.03.

What are the changes in the youths' level of psychological and social functioning? What are the changes in the youths' cognitive distortions? What are the completion rates among RSAT participants?

- Paired sample t-tests revealed a significant difference between the time 1 and time 2 score for the following Client Self-Rating scales: depression, self-esteem, decision-making, and hostility. Participation in Mohican's therapeutic community RSAT program resulted in a significant increase in youths' levels of self-esteem, decision-making ability and hostility and a reduction in their depression. In addition, regression analyses revealed that the longer the youth spent in treatment, the more likely he was to be hostile.

- Paired sample t-tests revealed no significant differences between the time 1 and time 2 measures of cognitive distortions when examining cases that may be considered suspect.[1] However, when looking at the cases that were not considered suspect, participation in treatment resulted in a significant decrease in the youths' self-centeredness, lying, covert and overt behaviors, and the overall *How I Think* scale.

- The majority of youth in all groups were discharged at the time of termination. In addition, the majority of youth in the treatment group (82.1%) and the pre-TC group (100%) were successfully discharged. Forty-seven percent of the DYS group was successfully discharged. However, there were some significant differences in discharge types. The DYS group was more likely to be unsuccessfully discharged.

[1] A case is considered suspect when the anomalous response scale (scale used to determine if the youth was lying or randomly marking answers) was 4.0 to 4.25.

- The average length of time spent in treatment was 188 days for the treatment group and 181 days for the pre-TC group.

- A logistic regression model was calculated to determine which factors predict successful completion of treatment for Mohican's therapeutic community RSAT program. There were no significant predictors of successful completion, which is not surprising given that completion is largely based on the sentence length of the youth and not on the acquisition of prosocial skills.

What are the rates of new arrests and incarcerations after termination? What factors are associated with post-release performance?

- Approximately 17 percent of the treatment group was incarcerated after termination whereas 37.5 percent of the pre-TC and 37 percent of the DYS group obtained a new period of incarceration.

- When all youth were included in the model predicting incarceration, younger youth, youth who had completed a higher grade level, youth with a less serious offense, youth with a more serious substance abuse problem, and youth in the comparison groups were more likely to be incarcerated. After controlling for differences between the groups, the probability of incarceration for the treatment group was 16 percent versus 34 percent for the comparison group.

- When only the treatment group and the pre-TC group are included in the model, younger youth and youth in the pre-TC group were more likely to be incarcerated. Accordingly, there was a 19-point reduction in the probability of incarceration when youth participated in the treatment group.

- Finally, when youth in the treatment group and DYS group are included to the model, younger youth, youth with a less serious offense, youth with a more serious substance abuse problem, and youth in the comparison group were more likely to be incarcerated. Thus, the probability of incarceration for the treatment group was 18 percent versus 33 percent for the DYS group.

Overall, the outcome evaluation results are promising. The findings consistently reveal that participation in Mohican's therapeutic community resulted in a significant decrease in the probability of incarceration after termination. In addition, the significant effect was found when controlling for other factors such as race, age, grade level, and risk level. Thus, it can be argued that participation in the therapeutic community RSAT program greatly reduced the probability of incarceration for high-risk youth.

We must offer a word of caution when interpreting these results because little was known about the types of services these youth received once they left the institution. Research has shown that aftercare is an integral part of treating offenders. Thus, the youth that did not recidivate may have taken part in other services upon termination from Mohican or DYS. In addition, there was a limited follow-up period for the youth. The current study only tracked the youth for a period up to 21 months. Therefore, a longer follow-up period is needed to determine if the long-term effects of treatment.

Another limitation of the study was that random assignment was not possible. Random assignment would have allowed to the groups to be very similar with regard to characteristics that may influence outcome and would have strengthened any findings of a treatment effect.

Lastly, there were large amounts of missing data[2] for the pre-TC and the DYS groups. For example, we were not able to examine the type of services participated in by the pre-TC or the DYS groups because the data was not available. In addition, information on the number of prior arrests was not available for the pre-TC and the DYS group. Thus, we were not able to control for these differences when predicting the outcome.

Based on these findings, and in order to further increase the effectiveness of Mohican's therapeutic community RSAT program, the following recommendations are offered:

1. Mohican should continue the therapeutic community approach. The significant findings for treatment indicated that Mohican's TC treatment substantially reduced the probability of being incarcerated. In addition, it appears that the treatment modality is appropriate for the high-risk juvenile population.

[2] In some instances, the data was simply not available to collect.

2. Research has shown that aftercare is an important component of therapeutic communities (Knight, Simpson, and Hiller, 1999; Wexler, Melnick, Lowe, and Peters, 1999). Accordingly, Mohican should strengthen the aftercare component. It is important that youth released from Mohican receive quality aftercare services that address their needs.

3. Mohican should continue to collect data that would enable the outcome study to continue. The current study was limited in the amount of follow-up time to track the youth. However, if Mohican continues the study, research can further examine the long-term effects of the therapeutic community RSAT program.

OHIO RSAT OUTCOME EVALUATION

STATEMENT OF THE PROBLEM

The prevalence of drug and alcohol use among juvenile offenders creates many challenges for the already overburdened juvenile justice system. Drug testing conducted in twelve cities during 1997 revealed that 42 to 66 percent of male youths tested positive for at least one drug at the time of arrest (National Institute of Justice, 1998). Additionally, juvenile arrests for drug abuse violations increased 86 percent over the past decade (Snyder, 1999). Recognizing the link between continued drug use and recidivism, state and local agencies are searching for the most effective way of treating this challenging correctional population. The Residential Substance Abuse Treatment programs funded by Subtitle U of the Violent Crime Control and Law Enforcement Act of 1994 offers a promising avenue for treating drug offenders.

Residential substance abuse treatment has its roots in the therapeutic community movement of the 1950s. Synanon, the first therapeutic community, was established by Dederich in 1958 and emerged out of the self-help movement (Brook and Whitehead, 1980). It is estimated that nearly one-third of all therapeutic communities today are based upon the traditional Synanon programs (DeLeon, 1990a). These traditional programs are highly structured and organized, and treatment lasts from one to three years (Sandhu, 1981). Because drug use is seen as a symptom of a larger personality disorder, traditional TCs are designed to restructure the personality of the offender through encounter group therapy and a focus on occupational improvements. The "community" of drug offenders is seen as the primary agent of change (DeLeon and Ziegenfuss, 1986). Recently modified versions of the traditional TC have emerged which combine the self-help approach and cognitive-

behavioral approaches (e.g., relapse prevention) commonly used by mental health professionals.

Research has been mixed concerning the effectiveness of community-based and prison-based TCs. Several studies of community-based TCs have demonstrated a reduction in criminal behavior and substance abuse and an improvement in employment and other prosocial behaviors (Knight, Simpson, and Hiller, 1999; Wexler, Melnick, Lowe, and Peters, 1999; and Wexler, 1995). Overall, the research on therapeutic communities suggests that program completion and length of stay in treatment are the most significant factors in predicting success (usually measured as no involvement in criminal activity and abstinence from drugs) (Simpson, 1984; DeLeon and Rosenthal, 1979; Faupel, 1981; DeLeon, 1990b).

The research on TCs is not without criticisms. Inciardi, Martin, Butzin, Hooper, and Harrison (1997) identified four criticisms of TC research. First, a lack of multivariate designs makes it difficult to disentangle the effects of individual characteristic and the effects of treatment, leaving us with little information about factors that are predictors of relapse or recidivism. Second, most studies have not incorporated multiple outcome criteria to measure program success. Third, as with most correctional research, the follow-up time frames have been inadequate. Fourth, the comparison groups used often fail to account for important differences between groups that are likely to influence program outcome. Relatedly, the use of treatment comparison groups is often misleading since members of these groups are likely to have received some kind of treatment. Another common shortcoming in TC research is the insufficient attention that is given to the measurement of program quality (Faupel, 1981; Moon and Latessa, 1994). In addition most of the research

on the effectiveness of the TC has examined adults, research on the effectiveness of the therapeutic community for juveniles has been scarce.

In addition, this study attempted to explore the "black box" of treatment in order to identify those factors that are most associated with success and to facilitate the replication of effective residential substance abuse treatment programs.

SITE DESCRIPTION

This report contains data from an outcome evaluation conducted on the Mohican Youth Center. The Mohican Youth Center, located in Loudenville, Ohio, has been in operation for 30 years. Since 1998, the facility has been a residential substance abuse treatment facility for felony adjudicated males in the last six months of their sentence. This evaluation compared those who participated in the Mohican therapeutic community to the youth who participated in Mohican before it was a TC, and a sample of males from the Department of Youth Services to determine whether participation in Mohican's TC was associated with differences in outcome.

METHODS

Research Design

This project used a non-equivalent comparison group design in order to estimate the impact of Mohican's Residential Substance Abuse Treatment (RSAT) program on future criminal involvement. Random assignment to groups was not possible; however, comparison group cases were matched by race, age, sex, risk level, and severity of substance abuse problems. Because of programmatic changes that occurred at Mohican, two comparison groups were used in this study. The first comparison group was those who

participated in Mohican Youth Center from March 1998 to March 1999. During this time, the treatment modalities at Mohican included a combined 12-step and cognitive model of treatment. The second comparison group used for this project was a group of youth from the Department of Youth Services. A total of 448 participants were in the treatment group and 793 cases were in the comparison groups. The Mohican pre-TC group was comprised of 343 participants and the DYS group was comprised of 450 participants[3].

Treatment Group

In March 1999, Mohican shifted treatment from a residential-based substance abuse program to a therapeutic community model. Mohican has also adopted much of the language of a therapeutic community. With the TC model the youth have a greater role in conducting groups and confronting behavior. For example, youth participate in encounter groups in which youth are confronted about behavior in front of his peers. The encounter group is designed to make the youth see how his behavior affects the community and how his attitudes, thoughts, and value systems affect his behavior. Youth also participate in groups based on the phase they are in. Mohican has four phases in which youth learn about the therapeutic community, identify thinking errors, focus on personal recovery, and practice relapse prevention. These groups utilize some cognitive behavioral techniques such as identifying thinking error and teaching prosocial alternatives to behavior. In addition to group therapy, youth attend school during the year and participate in morning and evening meetings.

[3] Participation in Mohican's treatment (either the therapeutic community or the residential treatment) was not voluntary. The entire institution was a therapeutic community (treatment group) or a residential treatment facility (pre-TC group) and youth were sent to this institution by the Department of Youth Services. However, participation in the evaluation of Mohican was voluntary. There were no consequences if the youth decided not to participate.

Comparison Groups

Mohican Youth Center Pre-TC. The first comparison group included in the present study consisted of youth who were sent to Mohican from March 30, 1998 to March 31, 1999. During this time, Mohican operated a combined 12-step and cognitive-behavioral model of treating substance abuse. The 12-step model views alcoholism as a physical, mental, and spiritual disease (Van Voorhis and Hurst, 2000). The cognitive-behavioral approach used by Mohican included the Normative Culture group whereby youth identified and resolved problem behaviors and thinking errors. Thus, this cognitive component of the program sought to reduce alcohol and drug abuse by changing the thinking that supports substance abuse and by manipulating the stimuli and consequences that prompt and maintain behavior. This comparison group was chosen in order to compare treatment modalities.

The pre-TC treatment was an eclectic approach which used cognitive-behavioral techniques. The overall program was not based on an effective model of treatment as was the TC that was operated by the Mohican treatment group. In addition, the family members in the TC were more responsible for confronting anti-social thinking and behavior. In essence, the study is comparing an eclectic model (12-step with cognitive-behavioral components) with a social-learning model (therapeutic community).

DYS Participants. The other comparison group included youth in other institutions within the Department of Youth Services who received minimal or no specialized drug and alcohol services. The youth were randomly selected from an automated database maintained by DYS. Females and those youth who did not have a risk assessment score were removed from the database prior to the selection.[4]

[4] Ohio Department of Youth Services uses the Youthful Level of Service Inventory (YO-LSI) to determine risk level.

Data Collection

As part of the RSAT project, the University of Cincinnati created an automated database to assist programs with data collection and provide a mechanism for reporting results. The RSAT database was installed at Mohican Youth Center. Personnel collected and entered the data into the automated database. The data consisted of: demographics, offense and disposition, prior criminal history, drug use and history, risk level, program phases and advancement, type of treatment, program violations, drug screens, treatment outcome, and pre and post assessments. The site also provided agency-specific assessment information on each youth (e.g., Youthful Level of Service Inventory). Data forms were checked periodically to ensure the quality of the data. Recidivism data were collected by UC staff through written surveys of parole officers and youth during December 2001 and January 2002.

In addition to quantitative data for measuring program processes, the Correctional Program Assessment Inventory (CPAI) was used as a measure of program integrity. The CPAI provides a standardized, objective way for assessing the quality of correctional programming against empirically based standards. The CPAI is designed to ascertain how well the program is meeting the principles of effective intervention. There are six primary sections of the CPAI: program implementation, client pre-service assessment, program characteristics, staff characteristics, evaluation, and other. Each section of the CPAI consists of 6 to 26 items with a total of 77 items. Each of these items is scored as "0" or "1." For an item to be scored "1", the program must demonstrate that it has meet the specified criteria. Each section is scored as either "very satisfactory" (70% to 100%); "satisfactory" (69% to 60%); "needs improvement" (59% to 50%); or "unsatisfactory" (less than 50%). The overall

total and score is summed across the six sections and the same scale is used in determining the overall assessment. Data for the CPAI are gathered through structured interviews with program staff. Other sources of information include examination of program documentation, review of case files, and observation of program activities. Upon conclusion of the assessment, a report is written which details the program strengths and areas that need improvement.

Research using the CPAI has shown it to be a significant predictor of arrest and incarceration (Holsinger, 1999). Offenders who participate in programs where there is low program integrity (as measured by the CPAI) are significantly more likely to recidivate (e.g., be arrested and/or incarcerated). Furthermore, other researchers have found support for the concepts that comprise the CPAI (Antonowicz & Ross, 1994).

Process Variables Examined

There were four main categories of process variables examined including offender characteristics, nature of services provided, termination data, and post-release treatment and supervision.

Offender characteristics. The standardized intake form (see Appendix B) was used to collect basic demographic information such as age, gender, race, marital status, number of dependents, years of education, and employment status prior to arrest. Additional information was also collected which included: school problems experienced by the youth, criminal history and substance abuse history.

Supplemental information that was collected on youth characteristics included: the youths' level of psychological and social functioning as measured by the Client Self-Rating Form (see Appendix A); their level of cognitive distortions as measured by the *How I Think*

questionnaire (see Appendix A); their risk of recidivism and major problem areas as measured by the Youthful Level of Service Inventory; and their severity of substance abuse problem as measured by the Juvenile Automated Substance Abuse Evaluation (JASAE).

Nature of services provided. The service tracking form (see Appendix A) was used to collect information on the nature of services available at Mohican. The information collected included: length of time in each phase, number of encounters, length of individual counseling sessions, and number and type of program violations. Additional information from the CPAI[5] and the schedule of activities were used as indicators of the services provided. ***Termination data.*** The information collected regarding the youths' termination from Mohican included type of termination (successful or unsuccessful) and criminal justice placement and residency upon termination (See Appendix A).

Post release treatment and supervision. Data collection instruments were developed to gather general information from parole officers regarding each youth's treatment and supervision activities during the period of supervision after release from the program.[6] The Department of Youth Services gathered additional information such as length of time spent on parole, type of termination from parole, and new charges while on parole.

Outcome Variables Examined

There were two main categories of outcome variables examined including intermediate outcomes and longer-term outcomes.

Intermediate outcomes. Intermediate outcomes that were examined included changes in youth psychological and social functioning as measured by the re-administration

[5] Information from the CPAI included the specific groups and interventions that were being offered to everyone.

[6] A data collection instrument was sent to youth to gather information on educational progress, employment, and family situation, peer groups, and criminal involvement and drug usage after release from the program. These data were not used since only 10 questionnaires were returned.

of the Client Self-Rating form and changes in the youths' level of cognitive distortions as measured by the re-administration of the *How I Think* questionnaire.

Long-term outcomes. The current evaluation tracked the youth for 21 months (636 days) after they were released from Mohican. The outcome variables that were examined included several measures of substance abuse relapse and recidivism. Relapse was measured as new substance use (yes or no), and as the type and frequency of use throughout the follow-up period.[7] Recidivism was defined as a new incarceration in the Ohio Department of Youth Services (DYS) or the Ohio Department of Rehabilitation and Corrections (DRC). Information regarding the case status at the end of the follow-up period and status in employment/school for the treatment group was also collected by the probation officers.

Analysis

This study examines the differences among the RSAT participants and comparison group members along a variety of measures. In some instances, data for the comparison groups were not available. When this was the case, only the treatment data was presented. This study will examine multiple outcome measures for the RSAT participants and comparison cases. Chi-square, t-tests, and analysis of variance tests were conducted to examine the differences between groups.

Logistic regression was used to estimate the probability of arrest and new incarceration after incarceration. The purpose of the logistic regression is two-fold. First, a logistic regression model identifies the significant predictors of the outcome – new incarceration. Second, logistic regression controls for differences between the groups. Accordingly, variables that are significantly different will be included into the model in order to control for these differences. The variables chosen for the logistic regression

[7] Information reported by the probation officer and available for the treatment group only.

included: race, age, highest grade completed, felony degree, Y-LSI total, JASAE score, and the group variable. These variables were chosen for three reasons: 1) they were correlated at the bivariate level with the outcomes; 2) they were included as control variables because there were significant differences between the groups; or 3) previous research has shown that the variable was a significant predictor of outcome.

RESULTS

Social demographic data were collected in order to describe the RSAT participants and comparison groups and to investigate whether differences in outcome were related to differences within the three samples. By knowing the types of offender Mohican serves, we can determine whether outcome was influenced by any of these demographic factors. This section profiles the groups based on demographic characteristics such as age, race, educational level and performance, employment and criminal history. Specifically, this section will address the following questions:

- **What are the characteristics of the offenders served by the Mohican Youth Center TC?**
- **What differences exist between the treatment and comparison groups with regards to background characteristics?**

Social Demographic Information

Table 1 compares the three groups on race, age, and number of dependents. With regard to race, the majority of youth in all groups were white. Analysis of variance test reveal

Table 1: Demographic Characteristics

Characteristics	Treatment (N= 448)		Pre-TC (N=343)		DYS (N=450)	
	N	%	N	%	N	%
Race:						
White	232	51.8	162	47.2	222	49.3
Black	180	40.2	157	45.8	205	45.6
Other	36	8.0	24	7.0	23	5.1
Age at Intake:						
12	0	0.0	0	0.0	3	0.7
13	4	0.9	6	1.8	15	3.5
14	19	4.4	18	5.4	47	11.0
15	52	12.1	50	15.0	71	16.7
16	97	22.6	89	26.6	133	31.2
17	152	35.4	113	33.8	134	31.5
18	89	20.7	55	16.5	23	5.4
19	11	2.6	3	0.9	0	0.0
20	5	1.2	0	0.0	0	0.0
Mean	16.66		16.38		15.90	
F= 40.429; p = .000						
Number of Dependents:						
0	369	82.4	283	83.7	NA	
1	56	12.5	40	11.8	NA	
2	22	4.9	14	4.1	NA	
3	1	0.2	0	0.0	NA	
4	0	0.0	1	0.3	NA	

Mohican Pre-TC participants January 1998 – August 1999
NA = Information not reported
N's may not equal total due to missing data

that there were statistically significant differences regarding the average age of the participants in all three groups: treatment group ($\bar{x}$ =16.66), pre-TC comparison group ($\bar{x}$ =16.38), DYS group ($\bar{x}$ =15.90). While these differences were statistically significant, the actual difference appears to be minimal. Similarities existed with regard to the number of dependents. The majority of the youth did not have any dependents (data concerning the number of dependents were not available for the DYS individuals).

Table 2 shows the groups educational level and performance, employment status and living arrangement. Concerning educational level and school performance, the treatment group and the pre-TC group were very similar. The average grade level that had been completed was 8.79 and 8.76 respectively. However, when the treatment group was compared to the DYS group, the treatment group was significantly more likely to have completed nearly a full grade level above the DYS group (8.79 vs. 8.04). In addition, there was a significant difference between the pre-TC group and the DYS group with regard to educational level (8.76 vs. 8.04).

Pertaining to school performance prior to arrest, there was no difference between the three groups with regards to enrollment. The majority of youth in all three groups were enrolled in school prior to arrest. However, differences were found between the treatment group and the pre-TC comparison group when examining school performance (data were not available for the DYS comparison group). Specifically, youth in the pre-TC group were more likely to report problems with being truant (71.4% vs. 59%) and low achievement (61.8% vs. 53.8%). With regard to youths being expelled or suspended, the majority of youths within all three groups reported to being suspended or expelled. However, it appears that youth in the

Table 2: Social History

Characteristics	Treatment (N= 448)		Pre-TC (N=343)		DYS (N = 450)	
	N	%	N	%	N	%
Highest Grade Completed:						
6th grade or less	10	2.3	13	3.9	38	9.8
7th - 9th grade	322	72.7	236	70.0	309	80.1
10th grade	86	19.4	57	16.9	29	7.5
11th grade	16	3.6	22	6.5	11	2.8
12th grade or higher	9	2.0	9	2.7	0	0.0
Mean	8.79		8.76		8.04	
F= 45.907; p = .000						
School Performance Prior to Commitment:						
Enrolled	319	71.4	254	74.1	320	71.1
Truant $?^2$ = 23.815; p = .000	263	59.0	245	71.4	NA	
Low achievement $?^2$ = 12.303; p = .000	240	53.8	212	61.8	NA	
Disruptive behavior $?^2$ = 52.046; p = .000	390	87.4	213	62.1	NA	
Suspensions/expulsions $?^2$ = 22.184; p = .000	397	89.4	267	77.8	248	76.8
Employment Status Prior to Arrest:						
Employed full-time	68	15.2	20	6.0	NA	
Employed part-time	159	35.5	67	20.1	NA	
Unemployed	221	49.3	246	73.9	NA	
$?^2$ = 49.103; p = .000						
Living Arrangements:						
With parents/guardians	405	94.4	295	87.2	NA	
Foster care	13	3.0	5	1.5	NA	
Group home	9	2.1	5	1.5	NA	
Secure placement	2	0.5	33	9.8	NA	
$?^2$ = 39.196; p = .000						
Number with History of Runaway:	109	25.4	114	33.2	NA	
$?^2$ = 6.624; p = .010						

treatment group were more likely to report a history of being suspended or expelled when compared to the pre-TC and the DYS group (89.4% vs. 77.8% and 76.8%).

The majority of youth in both the treatment group and the pre-TC group were unemployed prior to being arrested. However, individuals in the treatment group were more likely to be employed either part-time or full-time prior to arrest (50.7% vs. 26.1%) whereas individuals in the pre-TC were more likely to be unemployed prior to arrest (73.9% vs. 49.3%). Even though the majority of youth in both the treatment and the pre-TC groups were living with a parent or guardian, participants in the treatment group were significantly more likely to be living in a parent's or guardian's home (94.4% vs. 87.2%), whereas the youth from the pre-TC group were more likely to be living in a secure placement prior to arrest (9.8% vs. 0.5%). Employment and living arrangement data were not available for the DYS group.

Finally, the majority of youth in the treatment and pre-TC groups did not have a history of running away. However, the treatment group was significantly less likely to have a history of running when compared to the pre-TC group.

Current Offense and Criminal History

As illustrated by Table 3, the majority of youth within each sample were arrested for a property crime – 52.9 percent (treatment group), 46.0 percent (pre-TC group), and 46.1 percent (DYS group). However, the treatment group was more likely to be arrested for a property offense (52.9%), and the pre-TC comparison group for a personal crime (35.1%). Regarding the level of adjudication, the treatment group and the pre-TC comparison group were more likely to be adjudicated for more serious offenses (Felony level 1 and 2) than the DYS group (45.5% and 46.1% vs. 24.7%).

Table 3: Current Offense and Criminal History

Variable	Treatment (N= 448)		Pre-TC (N=343)		DYS (N=450)	
	N	%	N	%	N	%
Crime Type:						
Personal	125	29.1	116	35.1	147	33.7
Property	227	52.9	152	46.0	201	46.1
Drug	40	9.3	41	12.4	52	11.9
Other	37	8.6	21	6.4	36	8.3
$?^2$ = 31.984; p = .000						
Level of Adjudication:						
Felony 1	43	10.1	41	12.2	57	12.8
Felony 2	151	35.4	114	33.9	53	11.9
Felony 3	52	12.2	56	16.7	72	16.1
Felony 4	97	22.7	83	24.7	123	27.5
Felony 5	84	19.7	42	12.5	135	30.2
Misdemeanor	0	0.0	0	0.0	7	1.6
$?^2$ = 103.419; p = .000						
Age at First Arrest:*						
9 or younger	35	8.2	7	5.5	NA	
10 – 12	159	37.3	41	37.4	NA	
13 – 15	195	45.8	64	49.8	NA	
16 or older	36	8.4	17	13.2	NA	
Mean	12.68		13.12		NA	
Prior Drug Charge:						
Yes	215	50.4	148	44.0	NA	
No	212	49.6	188	56.0	NA	

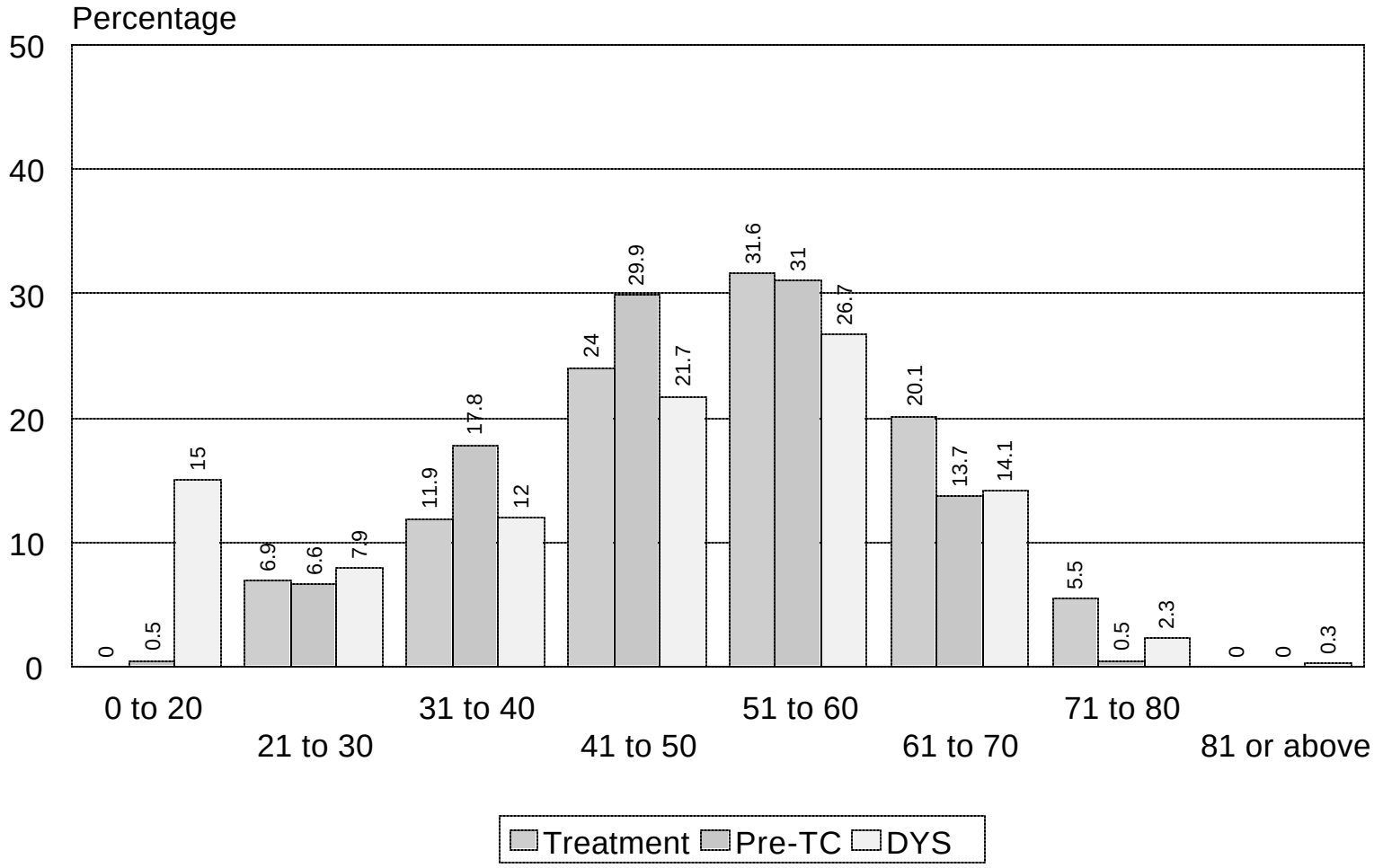
Mohican Pre-TC participants January 1999 - August 1999
* p <.05

Additionally, the majority of the youth in both the treatment group and the pre-TC comparison group had their first arrest before the age of fifteen. The pre-TC group was older than the treatment group at the time of their first arrest ($p < .05$). Concerning prior drug charges, a slight majority of the treatment group had a prior drug charge while the majority of the pre-TC group did not have a prior drug charge. These differences were not statistically significant (data for age of first arrest and prior drug charge were not available for the DYS comparison group.)

Drug & Alcohol History

Youth entering the Department of Youth Services are assessed using the Juvenile Automated Substance Abuse Evaluation (JASAE) (ADE Incorporated, 1997). The JASAE provides a summary score indicating the level of care required. As the summary score increases, the need for more intensive intervention increases. A score of 21 or above indicated the need for intensive treatment and possibly residential care because youth at this level "indicate a severe substance abuse problem along with ingrained patterns and attitudes supporting this problem." (ADE Incorporated, 1997, p.6). Thus, Mohican's target population was youth with a JASAE score of 21 or above. Scores were available for 437 youth in the treatment group, 197 youth in the pre-TC group, and 341 youth in the DYS comparison group. Figure 1 shows the distribution of the JASAE scores. The majority of the scores fall within the middle ranges. As indicated by Table 4, the means for each group ranges from 43.75 to 51.35. An ANOVA test indicated that there were significant differences between the groups regard to the JASAE score. More specifically, the youth in the treatment group had significantly higher JASAE scores ($\bar{x} = 51.35$) than either the pre- TC ($\bar{x} = 48.02$) or the

Figure 1: JASAE Scores



Mean scores: Treatment (51.35); pre-TC (48.02); DYS (43.75)

DYS youth ($\bar{x}$ = 43.75). In addition, the pre-TC group had significantly higher JASAE scores than the DYS youth.

Participants in the RSAT study were also asked a variety of questions related to their drug and alcohol use (data concerning drug and alcohol use were not available for the DYS group). With regard to age at first use, the average age of first alcohol use for the treatment group was 12.17 and whereas the average age for first alcohol use for the pre-TC group was 11.56 (Table 4). Even though this difference is statistically significant, it does not appear to be substantively different. The mean age for first drug use for the treatment group was 11.99 compared to 12.17 for the pre-TC group. This difference was not statistically significant.

With regard to primary drug of choice, chi-square analysis reveals no significant differences between the two groups as to their drug of choice. Marijuana was clearly the drug of choice for the youth in both the treatment and pre-TC groups followed by alcohol. In addition to having a substance abuse problem, some youth also have been diagnosed with a mental health problem. It appears that youth in the treatment group were more likely to have been dual diagnosed (41.1%) than youth in the pre-TC group (26.7%) even though the majority in treatment and pre-TC groups reported no such diagnosis (58.9% and 73.3%, respectively). Youth in both groups reported having a family member with a substance abuse problem. However, youth in the pre-TC group were more likely to have a family member with a substance abuse problem (61.8% vs. 52.1%).

The youth who participated in Mohican also had a history of prior treatment. The majority of youth in both the treatment group and the pre-TC group reported having participated in prior treatment prior to their stay at Mohican. Nevertheless, youth in the treatment group were more likely to have participated in previous treatment (68.2% vs.

Table 4: Drug History

Variable	Treatment (N= 448)		Pre-TC (N=343)		DYS (N=450)	
	N	%	N	%	N	%
Age at First Alcohol Use:*						
9 and under	63	14.8	74	22.8	NA	
10 to 12	143	33.6	99	30.6	NA	
13 to 15	192	45.2	134	41.4	NA	
16 and over	27	6.4	17	5.1	NA	
Mean	12.17		11.56		NA	
Age at First Drug Use:						
9 and under	63	14.2	46	13.6	NA	
10 to 12	177	39.9	126	37.4	NA	
13 to 15	181	40.7	152	45.1	NA	
16 and over	23	5.2	13	3.9	NA	
Mean	11.99		12.17		NA	
First Drug of Choice:						
Heroin	7	1.6	1	0.3	NA	
Crack or Cocaine	7	1.6	4	1.2	NA	
Marijuana	323	76.0	262	78.7	NA	
Alcohol	67	15.8	49	14.7	NA	
Other	21	4.9	14	4.2	NA	
$?^2$= 7.821; p = .166						

Mohican participants January 1998 – August 1999
* p <.05

Table 4: Drug History (continued)

Variable	Treatment (N= 448)		Pre-TC (N=343)		DYS (N=450)	
	N	%	N	%	N	%
Dual Diagnosis:						
Yes	183	41.1	85	26.7	NA	
No	262	58.9	233	73.3	NA	
$?^2$= 16.673; p = .000						
History of Family Substance Abuse:						
Yes	232	52.1	209	61.8	NA	
No	213	47.9	129	38.2	NA	
$?^2$= 7.346; p = .007						
History of Prior Treatment:						
Yes	305	68.2	181	53.6	NA	
No	142	31.8	157	46.4	NA	
$?^2$= 17.595; p = .000						
Type of Prior Treatment:						
Detoxification*	0	0.0	7	3.9	NA	
Methadone Maintenance	0	0.0	4	2.2	NA	
Outpatient	184	60.3	106	59.6	NA	
Short-term inpatient	25	8.2	44	24.3	NA	
Long-term residential*	132	43.3	69	38.1	NA	

	Treatment (N= 437)				Pre-TC (N=197)				DYS (N=341)			
	Min.	Max.	Mean	SD	Min.	Max.	Mean	SD	Min.	Max.	Mean	SD
JASAE Score	21.00	76.00	51.35	12.58	17.00	74.00	48.02	11.32	1.00	88.00	43.75	18.45
F= 25.597; p = .000												

NA = Information not available
* p = .05

53.6%). When examining what types of treatment the youth have participated in, it is clear that the majority in both groups have participated in outpatient treatment followed by long-term (more than 30 days) residential treatment. Based on t-tests, the only significant differences between the groups were found in the number of times the youth went to detox and long-term residential treatment. More youth in the pre-TC participated in detox treatment (3.9% vs. 0%) whereas more youth in the treatment group participated in long-term residential treatment (43.3% vs. 38.1%).

Risk Level

Upon admission to the Department of Youth Services, a youth's risk level is assessed with the Youthful Level of Service Inventory (YO-LSI). The YO-LSI is an objective and quantifiable assessment instrument that examines both static and dynamic risk factors that are associated with recidivism. These factors include: criminal history, family circumstance, employment/education achievements, peer relationships, substance abuse, leisure/recreation, personality characteristics, and antisocial attitudes. Depending on their scores, youth are classified as "low", "moderate", or "high" risk for each of the subcomponents. A total score is also provided that indicates the overall level of risk of recidivism.

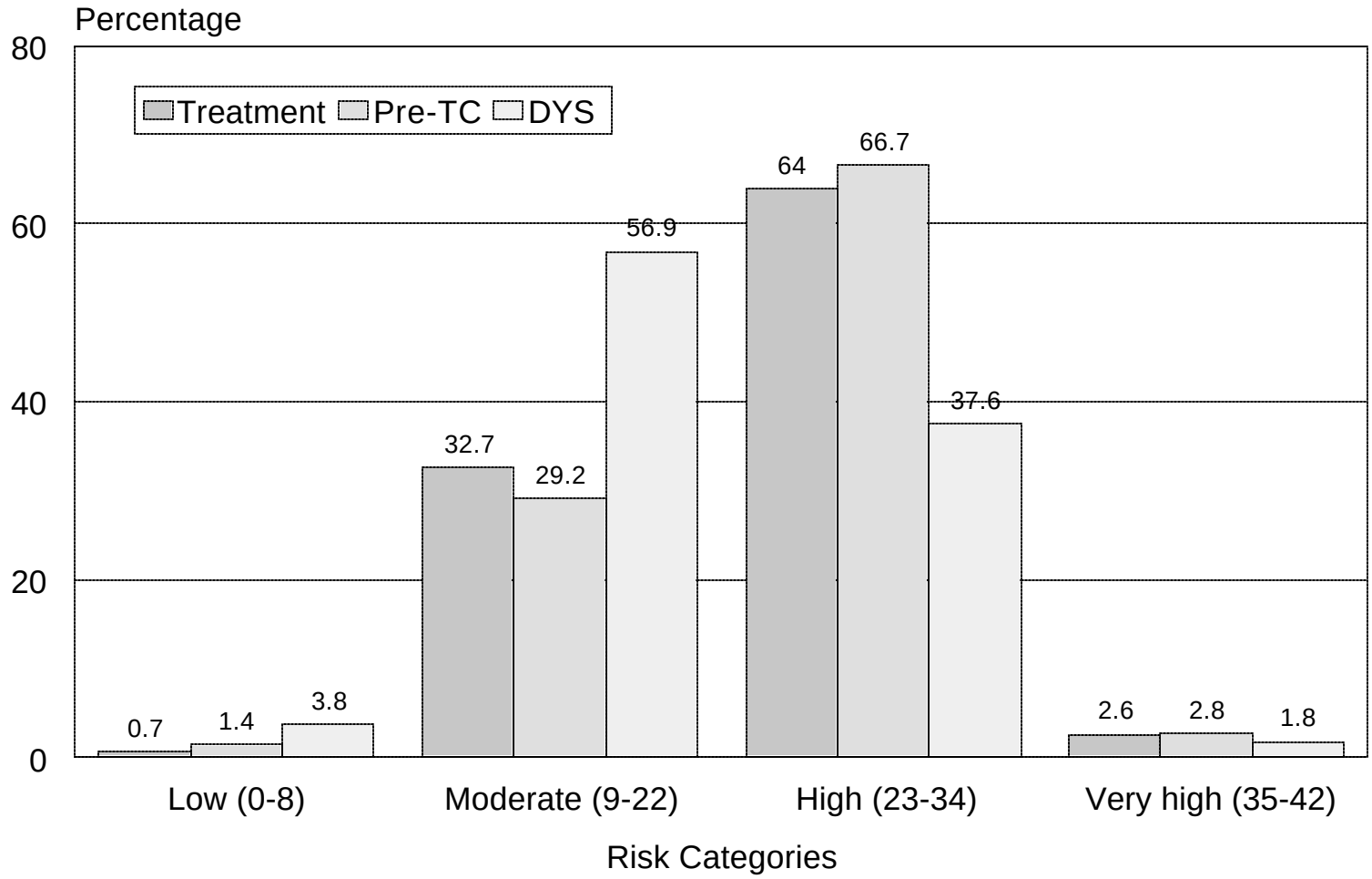
YO-LSI data were available for all three groups. However, due to the implementation of the instrument by the Department of Youth Services in 1998, there were only 72 cases for the pre-TC group. Data were available for 425 youth in the treatment group and 450 youth in DYS comparison group. Total YO-LSI scores of 35-42 are considered very high for recidivism; scores of 23-34 are considered high risk for recidivism; scores of 9-22 are considered moderate risk of recidivism; and scores of 0-8 are considered low risk of

recidivism. When examining the overall score, the majority of the youth in all groups scored as either “moderate” or “high” risk for recidivism (Figure 2).

Youth in all three groups scored as “high risk” in prior and current offenses, education/employment, substance abuse, leisure and recreation, and “moderate risk” in family circumstance, peer relations, personality and behavior, and attitudes and orientations (Table 5). Table 5 also indicates the differences between the groups based on chi-square analyses of the YO-LSI categories. As evident by the chi-square values, all categories experienced significant differences between the groups; however, the differences between the groups were not the same for each category. For example, the treatment group was more likely to score as “high” risk in the following categories: offense, family, substance abuse, leisure, personality, and attitudes, whereas the DYS comparison group was more likely to score as “high” risk in the education and peers categories. Concerning the overall risk score, youth in the pre-TC group were more likely to score as “low” to “moderate” risk whereas youth in the DYS comparison group were more likely to score in the “high” to “very high” category.

An analysis of variance test was conducted to compare the means of the groups. The treatment group had the highest mean ($\bar{x}$= 24.76), followed by the pre-TC group ($\bar{x}$= 24.06) and the DYS group ($\bar{x}$= 20.47). There were no difference between the risk level for the treatment group and the pre-TC group. However, the treatment group and the pre-TC group had a statistically higher YO-LSI risk score than the DYS group (see Table B1 in Appendix B for details).

Figure 2. YO-LSI Risk Categories by Group



Mean Scores: Treatment (24.76), Pre-TC (24.06), DYS (20.47)

Table 5: Youthful Level of Service Inventory (YO-LSI) Risk Categories

Component	Treatment (N= 425)		Pre-TC (N=72)		DYS (N=450)	
	N	%	N	%	N	%
Prior and Current Offenses, Adjudications:						
(Possible range of 0-5)						
Low (0)	18	4.2	2	2.8	41	9.1
Moderate (1-2)	86	1.8	14	19.4	112	24.9
High (3-5)	321	75.5	56	77.8	297	66.0
$?^2$ = 15.373; p = .004						
Family Circumstances and Parenting:						
(Possible range of 0-6)						
Low (0-2)	91	21.4	28	38.9	184	40.9
Moderate (3-4)	229	53.9	31	43.1	211	46.9
High (5-6)	105	24.7	13	18.1	55	12.2
$?^2$ = 48.568; p = .000						
Education/Employment:						
(Possible range of 0-7)						
Low (0)	26	6.1	3	4.2	41	9.1
Moderate (1-3)	160	37.6	24	33.3	197	43.8
High (4-7)	239	56.2	45	62.5	212	47.1
$?^2$ = 11.709; p = .202						
Peer Relations:						
(Possible range of 0-4)						
Low (0-1)	20	4.7	2	2.8	66	14.7
Moderate (2-3)	264	62.1	31	43.1	269	59.8
High (4)	141	33.2	39	54.2	115	25.6
$?^2$ = 47.986; p = .000						

Mohican Pre-TC participants January 1998 – August 1999

Table 5: Youthful Level of Service Inventory (YO-LSI) Risk Categories (continued)

Component	Treatment (N= 425)		Pre-TC (N=72)		DYS (N=450)	
	N	%	N	%	N	%
Substance Abuse:						
(Possible range of 0-5)						
Low (0)	12	2.8	2	2.8	76	16.9
Moderate (1-2)	30	7.1	7	9.7	86	19.1
High (3-5)	383	90.1	63	87.5	288	64.0
$?^2$ = 94.532; p = .000						
Leisure/Recreation:						
(Possible range of 0-3)						
Low (0)	13	3.1	3	4.2	21	4.7
Moderate (1)	54	12.7	15	20.8	125	27.8
High (2-3)	358	84.2	54	75.0	304	67.6
$?^2$ = 33.748; p = .000						
Personality and Behavior:						
(Possible range of 0-7)						
Low (0)	16	3.8	4	5.6	31	6.9
Moderate (1-4)	266	62.6	43	59.7	313	69.6
High (5-7)	143	33.6	25	34.7	106	23.6
$?^2$ = 14.598; p= .006						
Attitudes/Orientations:						
(Possible range of 0-5)						
Low (0)	41	9.6	16	22.2	93	20.7
Moderate (1-3)	347	81.6	48	66.7	330	73.3
High (4-5)	37	8.7	8	11.1	27	6.0
$?^2$ = 25.096; p = .000						

Table 5: Youthful Level of Service Inventory (YO-LSI) Risk Categories (continued)

Component	Treatment (N= 425)		Pre-TC (N=72)		DYS (N=450)	
	N	%	N	%	N	%
Total:						
(Possible range of 0-42)						
Low (0-8)	3	0.7	1	1.4	17	3.8
Moderate (9-22)	139	32.7	21	29.2	256	56.9
High (23-34)	272	64.0	48	66.7	169	37.6
Very high (35-42)	11	2.6	2	2.8	8	1.8
$?^2$ = 75.188; p =.000						

Psychological and Social Functioning

Psychological and social factors such as depression, anxiety, risk-taking, antisocial values, and hostility have been found to be positively related to substance abusing behaviors and longevity and success in treatment while factors such as self-esteem, self-efficacy, and decision-making ability have been found to be negatively associated with substance abusing behaviors and longevity and success in treatment (Simpson and Knight, 1998). Therefore, these areas are all potential targets for treatment. Theoretically, therapy should reduce individuals' levels of anxiety, depression, risk-taking, hostility, and antisocial values, and increase their self-esteem, self-efficacy, decision-making ability, desire for help, and treatment readiness.

The Client Self-Rating form (Simpson and Knight, 1998) was used as a measure of youth's level of psychological and social functioning. Clients were to be assessed at intake and termination from Mohican. Intake information was available for 436 youth who participated in Mohican's therapeutic community and 72 youth from Mohican's pre-TC treatment. However, items constituting the desire for help and treatment readiness scales were not available for the pre-TC group. A comparison of means between the two groups indicated that there were statistically significant differences on all scales except the decision-making scale and the self-efficacy scale (Table 6). Youth in the treatment group scored significantly higher on the self-esteem scale whereas youth in the pre-TC scored higher on the anxiety, depression, risk-taking, and hostility scales.[8]

[8] Table B2 in Appendix B includes the reliabilities for all pre and post scales in the Client Self Rating. The reliabilities ranged from a low of .5987 for the self-efficacy scale to a high of .8062 for the hostility scale.

Table 6: Descriptive Statistics for Client Self Rating – Time 1

	Treatment (N= 440)			Pre-TC (N=85)		
Scale	N	Mean	SD	N	Mean	SD
Anxiety* (range 7-35)	401	17.10	5.26	72	19.35	5.18
Depression* (range 6-30)	406	12.88	4.06	72	14.15	3.92
Self-esteem* (range 6-30)	402	22.61	3.95	72	18.96	3.61
Decision-making (range 9-45)	398	31.47	5.36	72	30.40	6.48
Risk-taking* (range 7-35)	404	21.23	5.05	72	23.46	5.37
Hostility* (range 8-40)	397	20.23	6.15	72	25.79	6.70
Self-efficacy (range 7-35)	400	26.38	4.21	72	25.74	4.66
Desire for Help (range 7-35)	405	23.52	5.29	NA	NA	NA
Treatment Readiness (range 8-40)	399	26.58	5.54	NA	NA	NA

* $p < .05$

Cognitive Functioning

Cognitive distortions are inaccurate ways of attending to or conferring meaning upon experiences (Barriga, Gibbs, Potter, & Liau, 1999). Research has indicated that cognitive distortions may contribute to antisocial or criminal behavior (Yochelson and Samenow, 1976). Using the *How I Think* Questionnaire (Barriga, et al., 1999), youths' cognitive distortions were assessed. Four self-serving cognitive distortions were examined: self-

centered (according such status to one's own views that the opinions of others are not considered), blaming others (misattributing blame to outside sources), minimizing/mislabeling (believing that antisocial behavior is acceptable, admirable, or causes no real harm), and assuming the worst (assuming that improvement is impossible, or considering a worst case scenario). The *How I Think* Questionnaire also depicts four behavioral referents scales that are manifested from the cognitive distortions: opposition/defiance, physical aggression, lying, and stealing. From these subscales, three summary scores can be computed. The overt scale is computed by averaging the opposition/defiance and physical aggression means. The covert scale is computed by averaging the lying and stealing means. The overall *How I Think* score is computed by averaging the means of all eight subscales. Higher scores indicate higher levels of cognitive distortions.[9]

The ***How I Think*** Questionnaire was administered at intake and termination for the treatment group only. Data from the ***How I Think*** Questionnaire were available for 434 youth in the treatment group. The questionnaire has an anomalous responding scale that determines the truthfulness of the answers. Scores higher than 4.25 are considered invalid and should not be used in data analyses. Scores greater than 4.0 but less than or equal to 4.25 are considered "suspect" and interpreted with caution. Thus, intake data were available for 301 cases of which 79 cases were considered "suspect."

One way to analyze the scales of the ***How I Think*** Questionnaire is to determine which of the three ranges (non-clinical, borderline-clinical, clinical) the score falls into. The ranges on the eight subscales can be used to provide a fine-grained analysis of the youth. As

[9] Table B3 in Appendix B includes the reliabilities for all pre and post scales for the How I Think Questionnaire. The reliabilities ranged from a low of .5784 for the lying scale to a high of .9563 for the How I Think overall scale.

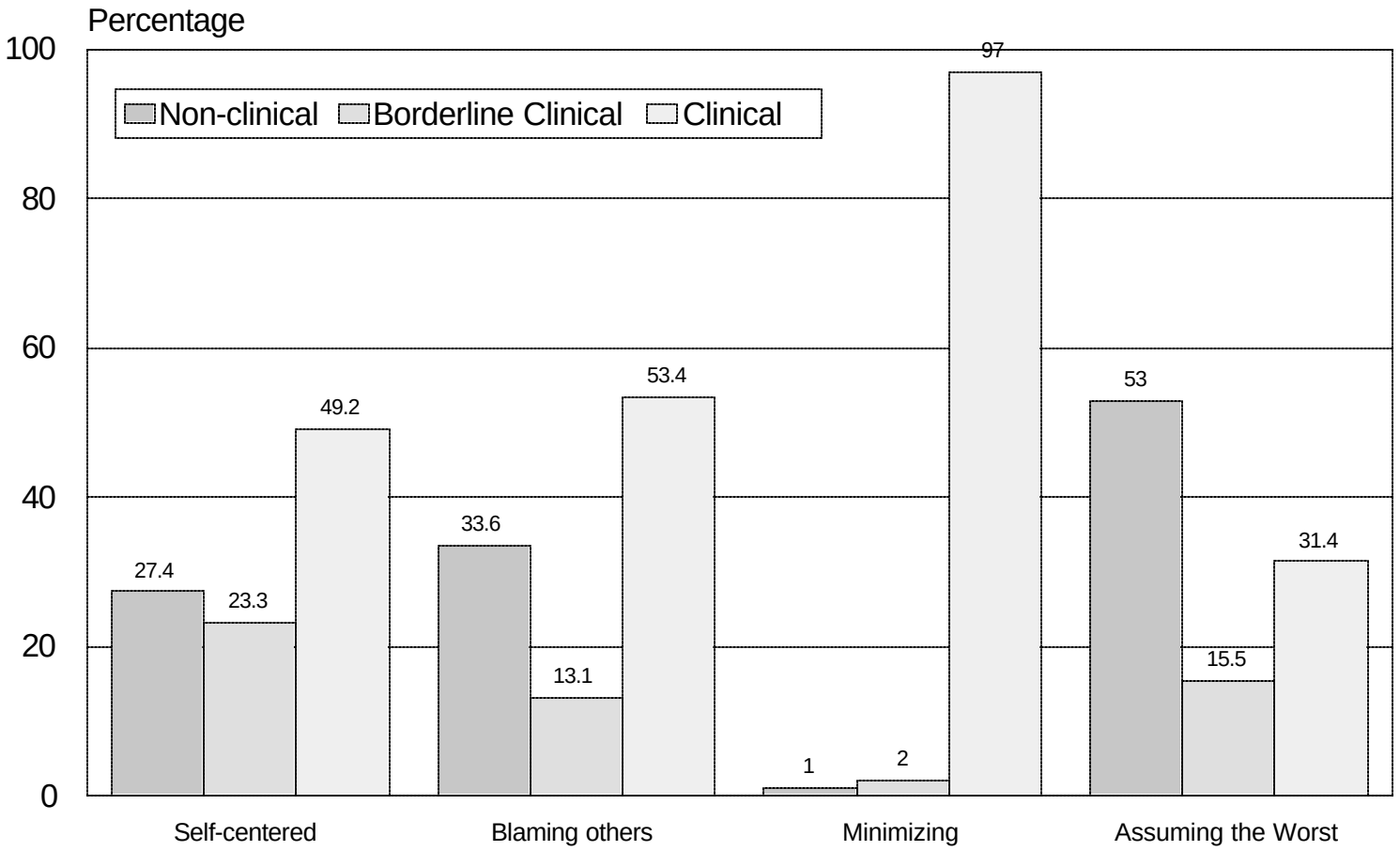
Figure 3 reveals, the majority of youth fell into the "clinical" range on the self-centered, blaming others, and minimizing/mislabeling scales, whereas the majority of youth fell into the "non-clinical" range on the assuming the worst scale. Thus, these youth can be described as having a strong egocentric bias and a need for treatment that addresses their externalization and minimizing the consequences of their actions. Figure 4 shows the behavioral referent scales. The majority of youth fell into the "clinical" range for the physical aggression, lying, and stealing behavioral referents, whereas the majority of youth scored in the "non-clinical" range for the oppositional defiance scale.

Concerning the summary scores for the covert, overt and overall ***How I Think,*** the majority of youth fell into the "clinical" range (Figure 5). According to Barriga et al. (1999), youth falling into the borderline-clinical and clinical range for the ***How I Think*** scale may exhibit externalizing psychopathology. Youth in the "borderline clinical" and "clinical" ranges in the overt scale may exhibit antisocial behavior that typically involves confrontation with the victims, whereas these ranges for the covert scale indicate non-confrontational antisocial behavior (see Table B4 in Appendix B).

Treatment Considerations

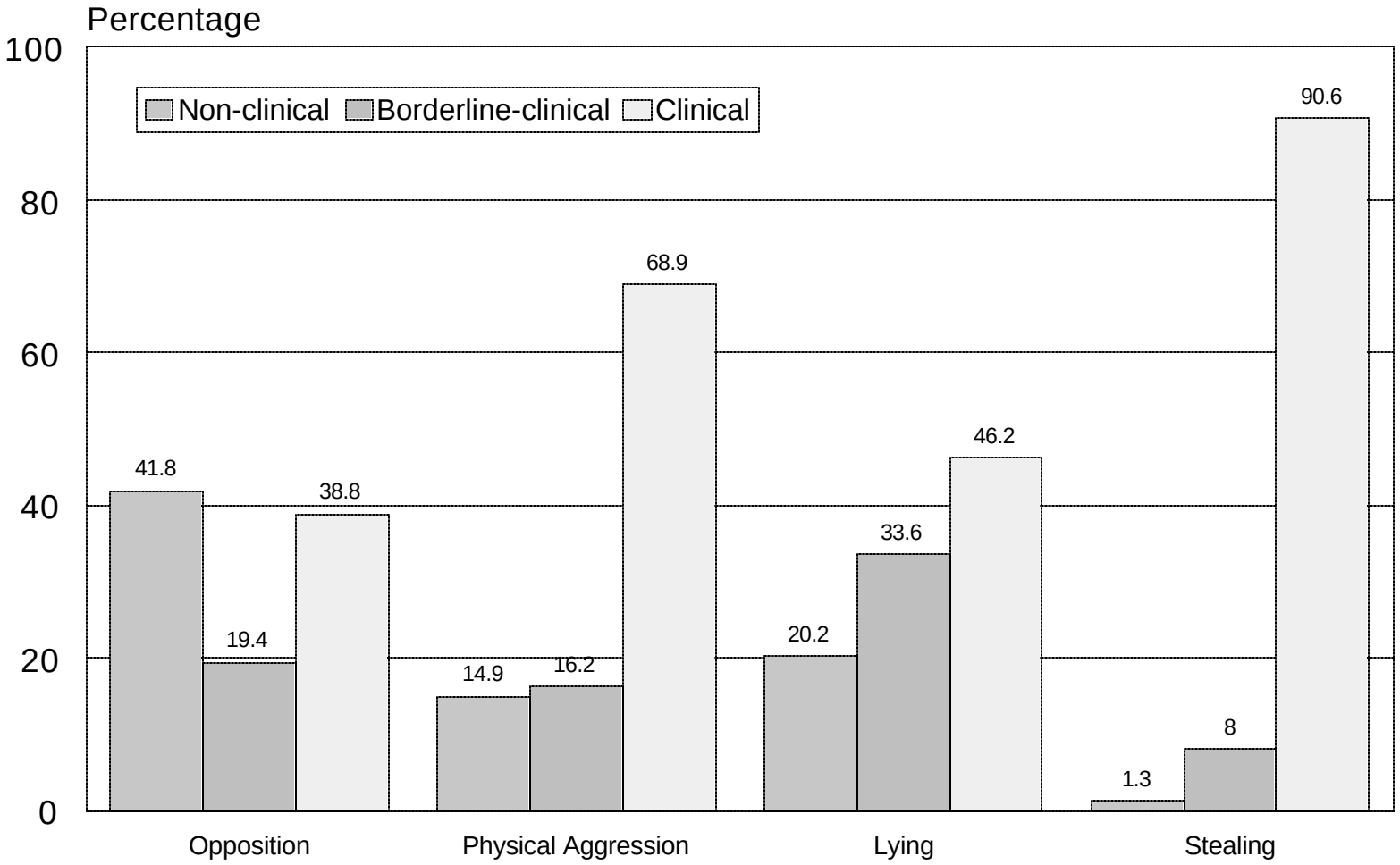
Outcome evaluations are enhanced when the researcher is able to determine what happened to the client while under supervision. This may include documenting whether a participant moved to different phases based on progress and the outcome of treatment. The purpose of this section is to identify the general services provided by Mohican and the rates of phase advancement. In addition, this section will address behavior while in the RSAT program. In-program behavior, as measured by violations and drug testing, can have a significant impact on behavioral change. The specific research questions addressed where:

Figure 3. Cognitive Distortion Scales for the Treatment Group*



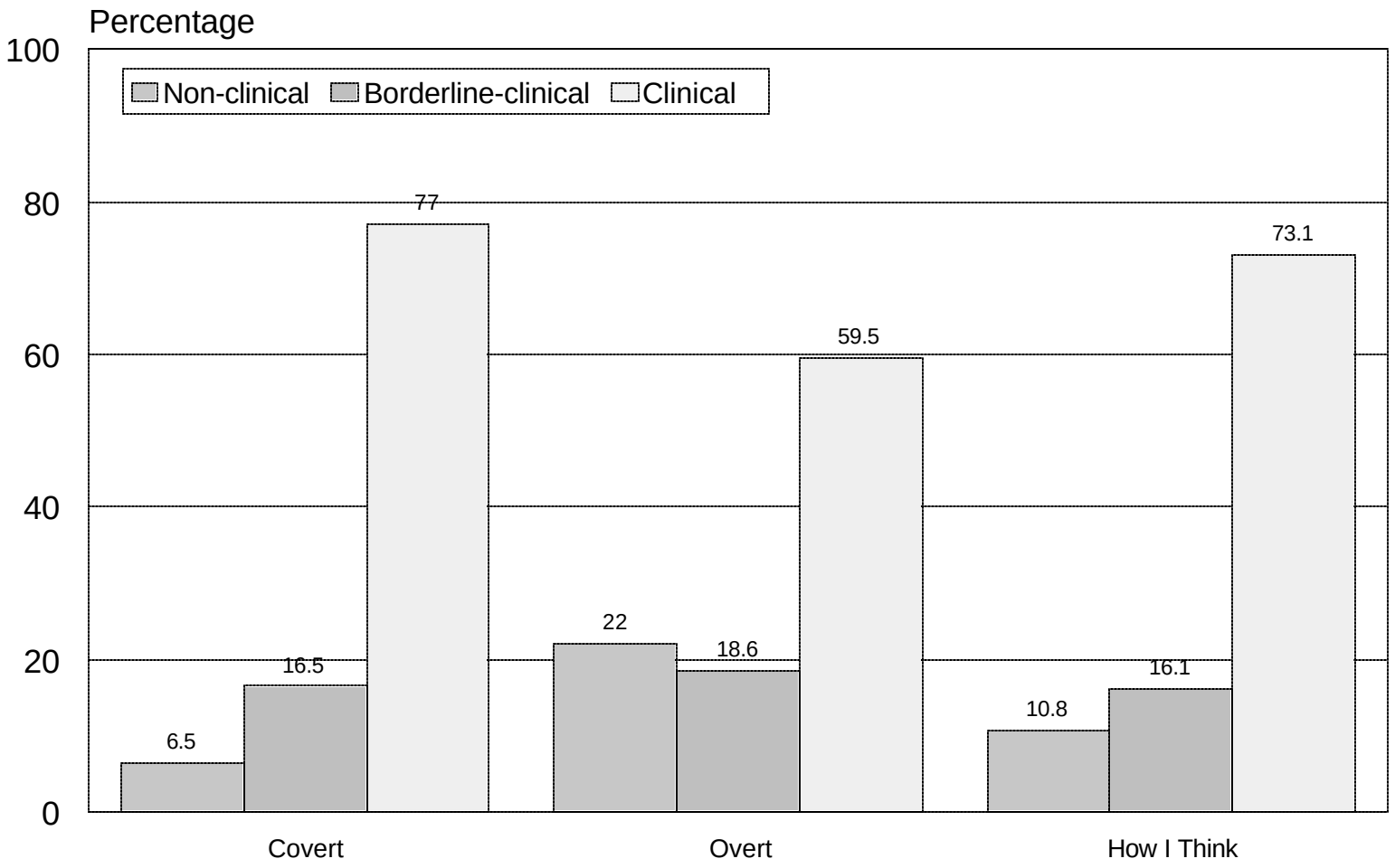
*Youth scoring 4.25 or lower on the Anomolous Response Scale. Youth were placed in the classifications based on which third of the scale their scores fell within. Higher scores indicate a problem in the cognitive distortion measured.

Figure 4. Behavioral Referents for the Treatment Group*



*Youth scoring 4.25 or lower on the Anomolous Response Scale. Youth were placed in the classifications based on which third of the scale their scores fell within. Higher scores indicate a problem in the behavioral referent measured.

Figure 5. Summary Score for How I Think for the Treatment Group



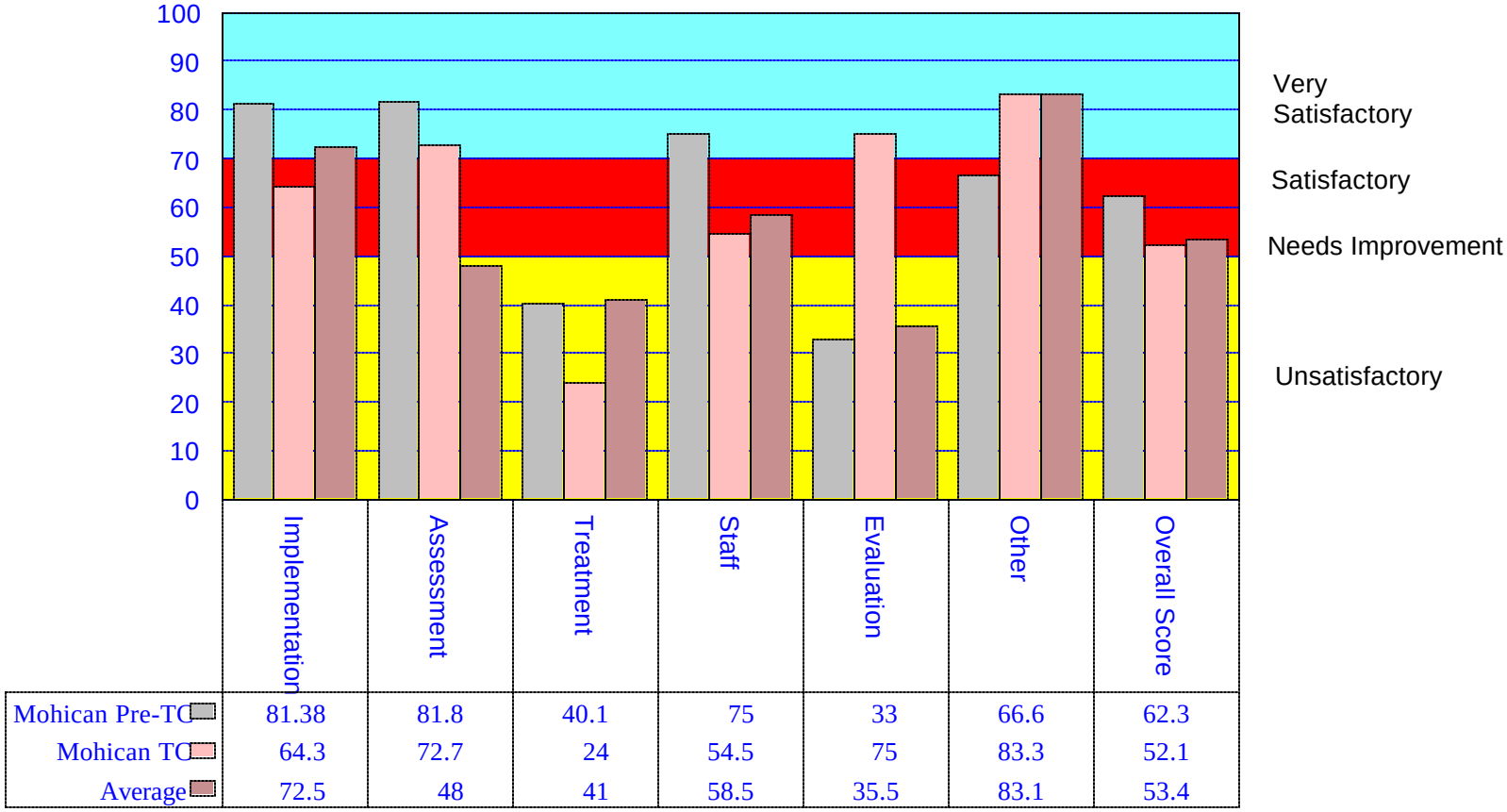
*Youth scoring 4.25 or lower on the Anomolous Response Scale Youth were placed in the classifications based on which third of the scale their scores fell within. Higher scores indicate a problem in the summary score measured.

- **What were the specific groups that youth participated in while at Mohican?**
- **What were the rates of phase advancements?**
- **What were the rates of individual counseling?**
- **How many youth tested positive for drugs while in the program?**
- **How many program violations did youth experience while in the program?**

General Services Provided. Mohican Youth Center changed curriculums from a combined 12-step and cognitive model of treatment to a therapeutic community during the course of this evaluation. The Correctional Program Assessment Inventory (CPAI) was conducted on Mohican during both modalities of treatment. As indicated in the first section of this report, the CPAI is a tool designed to ascertain how well a program is meeting certain principles of effective intervention. Programs receive an overall score and a score for each of the six sections of the CPAI with less than 50 percent considered "unsatisfactory," 50 to 59 percent considered "needs improvement," 60 to 69 percent considered "satisfactory," and 70 to 100 percent considered "very satisfactory." The average overall CPAI score for over 245 programs across the United States is 53.4 percent. Mohican's combined 12-step and cognitive model (pre-TC) scored 62.3 percent, whereas Mohican's therapeutic community program scored 52.1 percent (Figure 6).

The most recent CPAI score for Mohican reveals that the there were changes within the six components of the assessment. Mohican's score decreased in four areas: implementation, assessment, treatment, and staff. However, the scores increased in the evaluation and other section partly because of participation in the process and outcome evaluation currently taking place. In addition, the overall score for Mohican decreased from 62.3 percent (pre-TC model) to 52.1 percent (TC) model. The change in the score is partly

Figure 6. Mohican Youth Center CPAI Scores Compared to Average Scores*



	Implementation	Assessment	Treatment	Staff	Evaluation	Other	Overall Score
Mohican Pre-TC	81.38	81.8	40.1	75	33	66.6	62.3
Mohican TC	64.3	72.7	24	54.5	75	83.3	52.1
Average	72.5	48	41	58.5	35.5	83.1	53.4

*The average scores are based on 245 CPAI results across a wide range of programs. Very Satisfactory=70% or higher; Satisfactory=60-69%; Needs Improvement=50-59%; Unsatisfactory=less than 50%.

the result of changes to the scoring criteria of the CPAI. The previous version was based on 65 items, whereas the current version has 77 items.

The following are areas in which improvement was made from the first CPAI to the second CPAI:

- Punishers are used to stop behavior in the present and to change behavior in the future.
- The hiring of new staff is based on personal qualities relevant to treatment.
- The staff at Mohican have been on the job for a period of at least 2 years.
- Quality assurance mechanisms are in place to monitor the treatment process.
- Treatment counselors are provided with clinical supervision.
- Mohican has developed a client satisfaction survey that is administered to youth upon their termination.
- The Department of Youth Services collects recidivism data for all Mohican participants.
- The filing system has improved in which the client records are kept in a confidential file and include assessment information, treatment plans, and progress notes.

The following are items in which there needed to be improvement after the second CPAI:

- The program director changed since the first CPAI was conducted. The current program director was not involved with designing the program and does not train the treatment staff.
- Not all youth are assessed on personal characteristics that may affect amenability for treatment.
- The combined model incorporated a social learning and cognitive model of treatment more consistently than the TC model. Even though Mohican currently utilize some cognitive behavioral strategies, many of the techniques and groups used by the program have not demonstrated effectiveness in reducing criminal behavior. The groups are eclectic, education-based, and/or processing.
- Youth are not consistently trained to identify and monitor problem situations throughout the program. Furthermore, youth are not taught to rehearse alternative, prosocial ways of coping with these situations.

- Punishers are more commonly used than rewards. In addition, some of the punishers used are "shaming" techniques in which the effectiveness of these types of punishers is questionable. Furthermore, staff are not trained in the administration of rewards and punishers.

- When referrals to other agencies are made, the referrals are not followed up.

- Mohican does not have an aftercare component in place.

Rates of Phase Advancement. There are four phases that youth can advance through while at Mohican. Orientation last four weeks and is designed to familiarize the youth with the TC environment. More specifically, eight sessions focus on TC perspective, concepts, philosophy, and privilege system. Youth then move into the first phase, which lasts seven weeks. Youth in this phase focus on identifying and overcoming thinking errors. The second phase is centered on personal recovery. Youth in this phase will be introduced to chemical dependency, concentrate on family issues, evaluate their criminal values and self worth, and learn how to express their feelings in a prosocial manner. The youth are in phase two for a period of seven weeks. Phase three's curriculum focuses on relapse prevention. In this phase, which lasts for eight weeks, youth are introduced to techniques to avoid relapse such as how to avoid "easy money" and the "old life." Youth must also complete a relapse prevention plan.

Due to missing information, rates of phase advancement were available for only 173 youth (47% of the youth that were discharged). As Table 7 reveals, only 136 youth finished all four phases of treatment.[10] The average length of time spent in the orientation phase was 36.08 days whereas the average length of days spent in phase one was 59.78. For phase two, the average number of days spent was 56.11, and the youth spent an average of 54.23 days in phase three.

[10] Youth may not have finished treatment due to early release or their sentence was finished before they had completed all four phases of treatment.

Table 7. Rates of Phase Advancement

Phase	Number Completing	Minimum Days in Phase	Maximum Days in Phase	Average Time in Phase
Orientation	173	3	133	36.08
Phase 1	167	19	155	59.78
Phase 2	154	1	142	56.11
Phase 3	136	5	161	54.23

Rates of Individual Counseling. Information on the number of individual counseling sessions was available for 173 cases. The number of sessions ranged from one session to thirty-four individual sessions. Of these sessions, the minimum amount of time spent with the youth was five minutes while the maximum amount of time spent during a single session was two hours. In total, the youth received an average of 318.46 minutes of individual counseling across all sessions (Table B5 in Appendix B for complete statistics).

Drug Testing. One hundred ninety-eight were drug tested 269 different times while in Mohican's RSAT program. The results of all the drug tests were negative.

Program Violations. Mohican utilizes three different types of violations: house violations, major violations, and cardinal violations. House violations are the least serious and may include such behavior as: refusing to participate in activities, being late to activities, inappropriate clothing, and being loud. Major violations may include such behavior as: being disrespectful, horse-playing, gambling, and making racial slurs or using profanity. Any major violation requires that a written pull-up be administered. A cardinal violation is the most serious and may include the following types of behavior: physical violence, stealing, drug use, gang representation, and destruction of property.

Program violation data was available for 289 youth or 78.7 percent of the terminated youth (see Table 8). The average number of house violations was 42.22 violations. The average number of cardinal violations was 1.87 and the average number of major violations

Table 8: Program Violations

Violation Type	N	Minimum	Maximum[11]	Mean	SD
House	289	0	325	42.22	46.00
Cardinal	289	0	18	1.87	3.04
Major	289	0	111	7.03	15.26
Unknown	20	0	41	6.90	9.88
Total Violations	289	1	334	51.60	52.92

was 7.03. In some instances, the type of violation was not known. There were twenty cases in which the type of violation was known. The mean number of unknown violations was 6.75. All three types of violations and the any unknown violation were added to obtain the total number of violations. Data was computed for 289 youth. The mean number of total violations was 51.60 violations per youth.

Intermediate Outcomes

Intermediate objectives are the direct effects that are attained through receiving the treatment such as reducing the youths' levels of psychological and social functioning, and cognitive distortions. The specific research questions to be addressed are:

- **What are the changes in the youths' level of psychological and social functioning?**
- **What are the changes in the youths' cognitive distortions?**
- **What were the completion rates among RSAT participants?**

***Psychological and Social Functioning*.** The Client Self-Rating form, designed to measure psychological and social factors such as depression, anxiety, risk-taking, antisocial

[11] Three youth reported 200 or more house violations while at Mohican. This obviously skewed the data.

values, and hostility, was administered at intake and termination. The instrument was administered at intake on 444 cases and administered at termination on 212 cases. Termination data is not available on the cases that are still active in Mohican. Also, some termination assessments were not conducted depending on the time the youth left the institution. For, example, it appears that one individual was responsible for administering the assessments. If the youth left the institution when this individual was not available, then termination assessments were not conducted. Due to implementation problems, reassessment data were not available for the pre-TC group. The data presented is information from the treatment group.

According to Simpson and Knight (1998), treatment should reduce anxiety, depression, risk-taking and hostility and increase self-esteem, self-efficacy, decision-making, desire for help, and treatment readiness. Paired sample t-tests between time 1 and time 2 scores on the Client Self-Rating reveal almost no changes in the anxiety, risk-taking, self-efficacy, desire for help, and treatment readiness scales (Table 9). The change in time 1 and time 2 scores on the depression, self-esteem, and decision-making scales were statistically significant and in the hypothesized direction, indicating that on average youths' levels of depression, self-esteem, and decision-making abilities increased with participation in treatment. In addition, the change in scores from time 1 to time 2 was statistically significant for the hostility scale; however, the change was in the wrong direction indicating that participation in treatment *increased* youths' level of hostility.

One reason for the null findings for anxiety, risk-taking, self-efficacy, desire for help, and treatment readiness scales may be the result that the instrument has not been validated on the juvenile offender population. Thus, the instrument may not be appropriate for the juvenile

Table 9: Paired Sample t-tests on Client Self-Rating Time 1- Time 2*

Scale	No. of Pairs	Time 1 Mean	Time 2 Mean	t-value	Sig
Anxiety (range 7-35)	176	17.23	17.93	-1.776	.077
Depression (range 6-30)	178	13.04	12.33	2.039	.043
Self-esteem (range 6-30)	173	22.52	23.68	-3.523	.001
Decision-making (range 9-45)	172	31.73	32.83	-2.406	.017
Risk-taking (range 7-35)	175	21.33	21.82	-1.376	.171
Hostility (range 8-40)	173	20.29	21.51	-2.594	.010
Self-efficacy (range 7-35)	175	25.98	26.43	-1.253	.212
Desire for Help (range 7-35)	173	23.63	23.73	-.254	.800
Treatment Readiness (range 8-40)	174	26.55	26.29	.510	.611

* includes all time

offender population. In addition, the instrument was not administered to all participants that were terminated from Mohican. If the juvenile was terminated when the data collector was not available, then the reassessment was not conducted. Thus, the time 2 scores may be biased in the fact that not all participants were reassessed.

Mohican's RSAT program is a six months program. Therefore, there should have been six months or 180 days between the time 1 and time 2 measures on the client self-rating. However, the length of time between the different measures varied with a minimum of 13 days to 544 days, with an average of 195.45 days between the administration of the instrument. To determine if amount of time affected the outcome for the time 2 score, regression analyses were conducted.[12] Time was a significant predictor for only one of the significant relationships —hostility (see Table B6 in Appendix B). As the amount of time (measured in days) increased, the score on the time 2 measure of hostility increased suggesting that longer stays in treatment contributed to more hostile feelings.

Time was also a significant predictor for the time 2 scores for risk-taking and treatment readiness. Longer times spent in treatment generated higher levels of risk-taking feelings and decreased youths' readiness for treatment. However, the relationship between time 1 and time 2 scores for these scales were not statistically significant.

Cognitive Distortions. Youths' cognitive distortions such as self-centered, blaming others, minimizing behavior, and assuming the worst were measured by the *How I Think* questionnaire. The questionnaire was administered at intake and termination from the program. The instrument was administered to 435 youths at intake and to 219 youth at termination. Assessments were administered by a staff member at Mohican. If this individual was not available when the youth left the institution, then termination assessments were not conducted. The *How I Think* Questionnaire has an anomalous response scale that indicates untruthful answering by the individual. Scores greater than 4.25 are not to be included in the analysis and were removed. Therefore, the maximum number of cases available to compare

[12] Correlations were conducted between amount of time and the differences between the time 1 and time 2 scores for all scales. There were no statistically significant correlations between time and the differences between scores.

time 1 and time 2 scores was 150. However, due to missing data, some scales may not have 150 pairs. The questionnaire was not administered to the pre-TC or the DYS group; hence, the data presented is for the treatment group only.

According to Barriga et al. (1999), higher scores on the scales indicate higher levels of cognitive distortions and are associated with criminogenic behavior. Thus, treatment programs can reduce the likelihood of antisocial/criminal behavior by reducing youths' cognitive distortions. A comparison of means tests between all (i.e., including suspect cases—anomalous response scores greater than 4.0 but less than 4.26) time 1 and time 2 scores on the *How I Think* questionnaire reveals no changes in the cognitive distortions, behavioral referents scales, or summary scores (Table 10). To determine if length of time between scores affected the outcome, regression analyses were computed[13] (see Table B7 in Appendix B). It is theorized that time spent in treatment would reduce youths' cognitive distortions. However, length of time was a significant *positive* predictor for the time 2 scores of minimizing/mislabeling, oppositional defiance, overt summary score, and the overall *How I Think* score. Thus, the results indicate that on average, the longer the time spent in treatment the greater the time 2 cognitive distortion score for these scales.

The finding of no significant reduction in youths' cognitive distortions is not surprising considering that the above analysis included cases that may be considered suspect – thus indicating that the youth may have been lying or randomly responding to the questions. When examining only the cases that are not considered suspect, significant differences are found.

[13] Correlations were conducted between amount of time and the differences between the time 1 and time 2 scores for all scales. There were no statistically significant correlations between time and the differences between scores.

Table 10: Paired Sample t-tests on How I Think Questionnaire, Time 1- Time 2*

Scale	No. of Pairs	Time 1 Mean	Time 2 Mean	t-value	Sig
Cognitive Distortions					
Self-centered (range 0-6)	111	3.29	3.19	1.506	.135
Blaming Others (range 0-6)	114	3.22	3.23	-.063	.950
Minimizing/Mislabeling (range 0-6)	111	4.19	4.20	-.141	.888
Assuming the Worst (range 0-6)	109	2.82	2.70	1.423	.158
Behavioral Referents					
Opposition-Defiance (range 0-6)	114	3.25	3.22	.374	.709
Physical Aggression (range 0-6)	113	3.40	3.34	1.052	.295
Lying (range 0-6)	104	3.51	3.44	1.035	.303
Stealing (range 0-6)	111	3.30	3.25	.944	.347
Summary Scores					
Covert (range 1-6)	104	3.41	3.34	1.190	.237
Overt (range 1-6)	112	3.33	3.27	.819	.415
How I Think (range 1-6)	101	3.38	3.31	1.166	.246

* Includes the scores that may be considered "suspect" because the AR scale is greater than 4.0 but less than 4.25.

Table 11 reports the results of the paired sample t-tests for cases that are not considered "suspect." When the suspect cases are removed from the analysis, significant relationships are found. A statistically significant relationship was found between the one cognitive distortion: self-centeredness. Participation in treatment reduced youths' self-centered thinking (p=.042). There was only one behavioral referent scale that produced a statistically significant relationship. On average, youths' lying was reduced by participating in the therapeutic community (p=.006). All three summary scores produced a significant relationship and in the expected direction. Youths' overt behavioral referents, covert cognitive distortions, and overall *How I Think* score were reduced by participation in treatment. Again, the length of time between time 1 and time 2 scores varied with a minimum of 37 days and a maximum of 316 days with an average of 192.18. To determine if amount of time spent in treatment affected the *How I Think* outcome, regression analyses were conducted on all pairs (Table B8 in Appendix B). Amount of time between scores was a significant predictor for the overt score and the overall *How I Think* score (see Appendix B). It is hypothesized that the time spent in treatment would decrease the cognitive distortion. However, the results of the regression analyses reveal that the longer the time spent in treatment the higher the score of the cognitive distortion. More specifically, on average, youths spending longer amounts of time in treatment had higher levels of cognitive distortions.

Termination Information

As indicated by Table 12, the majority of youth in all three samples had been discharged from Mohican (78.6% and 100% for the treatment and pre-TC groups respectively) or another DYS institution (93.6% for the DYS group) at the time of data

Table 11: Paired Sample t-tests on How I Think Questionnaire, Time 1- Time 2*

Scale	No. of Pairs	Time 1 Mean	Time 2 Mean	t-value	Sig
Cognitive Distortions					
Self-centered (range 0-6)	65	3.53	3.34	2.071	.042
Blaming Others (range 0-6)	68	3.45	3.38	.696	.489
Minimizing/Mislabeling (range 0-6)	66	4.31	4.19	1.633	.107
Assuming the Worst (range 0-6)	65	3.05	2.87	1.650	.104
Behavioral Referents					
Opposition-Defiance (range 0-6)	68	3.48	3.36	1.284	.204
Physical Aggression (range 0-6)	68	3.61	3.45	1.915	.060
Lying (range 0-6)	61	3.72	3.48	2.834	.006
Stealing (range 0-6)	65	3.51	3.39	1.518	.134
Summary Scores					
Covert (range 1-6)	61	3.62	3.43	2.480	.016
Overt (range 1-6)	67	3.55	3.40	2.002	.049
How I Think (range 1-6)	59	3.60	3.41	2.407	.019

* Does not include the suspect cases

Table 12: Termination Information

Variable	Treatment (N= 448)		Pre-TC (N=343)		DYS (N=450)	
	N	%	N	%	N	%
Termination Status at Time of Data Collection:						
Discharged	367	81.9	343	100.0	421	93.6
Still Active	81	18.1	0	0.0	29	6.4
$?^2 = 83.303$; p =.000						
Case Status at Time of Data Collection:						
Successfully discharged	289	82.1	267	100.0	120	47.4
Unsuccessfully discharged	12	3.4	0	0.0	27	10.7
Other	51	14.5	0	0.0	106	41.9
$?^2 = 213.184$; p = .000						
Parole Region:						
Akron	65	23.5	17	14.0	NA	
Athens	27	9.7	4	3.0	NA	
Cincinnati	23	8.3	13	10.0	NA	
Cleveland	66	23.8	20	16.0	NA	
Columbus	39	14.1	8	6.0	NA	
Dayton	25	9.0	9	7.0	NA	
Toledo	24	8.7	5	4.0	NA	
Other	8	2.9	76	61.0	NA	
Continued Drug Treatment:						
Yes	75	81.5	70	59.3	NA	
No	17	18.5	48	40.7	NA	

Mohican Pre-TC participants January 1998 – August 1999
NA = Information not reported
N's may not equal total due to missing data

Table 12. Termination Information (continued)

Characteristics	Treatment (N= 448)		Pre-TC (N=343)		DYS (N = 450)	
	N	%	N	%	N	%
Living Arrangements Upon Discharge:						
With family/relative	312	88.4	114	91.9	NA	
With friends	9	2.5	0	0.0	NA	
Group home / Halfway house	14	4.2	4	3.2	NA	
Foster care	6	2.2	2	1.6	NA	
Other	12	3.4	4	3.2	NA	

	Treatment (N= 351)				Pre-TC (N=341)			
	Min.	Max.	Mean	SD	Min.	Max.	Mean	SD
Average length of stay:	13	429	188.24	57.90	1	550	181.84	84.91

collection.[14] Chi-square analysis revealed that there were significant differences in the termination status of the three groups. It appears that the pre-TC group was more likely to be discharged than either the treatment group or the DYS group.

Of those discharged from Mohican's TC, 82 percent had been successfully discharged, 3 percent were unsuccessfully terminated, and 14 percent were terminated either due to early release, transfer to another institution, or discharged because of age. Termination information is available for 267 youth in the pre-TC group; all of which were successfully terminated. For the DYS group, 47.4 percent were successfully discharged, 10.7 percent were unsuccessfully terminated, and 41.9 percent were discharged for other reasons. Chi-square analysis revealed that there were significant differences between the groups. More specifically, the treatment group was more likely to be successfully discharged, whereas the DYS group was more likely to be unsuccessfully terminated. Of those youth who had been discharged from Mohican, an overwhelming majority (87.8% for the treatment group and 91.9% for the pre-TC group) was living with a family member (data concerning living arrangements upon discharge was not reported for the DYS group.)

There were no statistically significant differences between the treatment group and the pre-TC on the amount of time spent in treatment. The treatment group spent an average of 188.24 days in Mohican while the pre-TC spent an average of 181.84 days in treatment.

Post Release Information

Reporting Status. To determine what kinds of treatment the youth received after they left Mohican, surveys were sent to the agencies responsible for supervision of Mohican youth

[14] Information on type of termination (successful or unsuccessful) was missing for 74 cases for the pre-TC group. This missing data could be due to the fact that data collection was halted during the time period in between the process evaluation and the outcome evaluation. Information on type of termination was missing for 139 cases for the DYS group.

after termination. Of the 367 youth that were discharged from Mohican, only 171 (46.6%) probation officer reports are available.[15] Table 13 reports the types of services the youth received while on probation or parole. The majority of youth (79.5%) had to report to their officer at least twice a month. Eighty-three percent of the youth received some type of drug and alcohol treatment. The majority (57%) of the substance abuse treatment was the standard outpatient treatment. Youth also received other types of services besides substance abuse treatment. More specifically, the following types of treatment/services were received after the youth left Mohican: almost 51 percent of the youth received educational/vocational services; forty-five percent received employment services; 32.7 percent received some kind of mental health treatment. Additional services included: relapse prevention, cognitive skills, domestic violence, and counseling.

At the time of data collection, 94 youth (71.8%) were not actively in treatment whereas 37 youth were still actively involved in treatment services. Of the 94 youth that were inactive, the majority (52.7%) had been unsuccessfully terminated from treatment.

Drug/Alcohol Use During Probation. Table 14 reports the youths involvement in drug and alcohol use during the probation period. Thirty-nine youth (24.8%) reported or were detected using alcohol while on probation whereas fifty-two youth (33.3%) were reported or detected using drugs during the supervision time. The drug, which was detected the most, was marijuana in which 86.5 percent of the youth tested positive. Eight youth (15.4%) tested positive for cocaine whereas two youth tested positive for opiates and only one youth tested positive for hallucinogens during their probation/parole term.

[15] Agency information was collected from Mohican files at termination from the program. Surveys were sent to the probation officers to be completed. Only 171 surveys were returned to the University.

Table 13. Participation in Services During Post-Release Supervision

Variable	N	Percentage
Reporting Status:		
Once a week or more	74	54.0
Bi-weekly	35	25.5
Once a month	13	9.5
Less than once a month	15	10.9
Drug/Alcohol Services Received:		
Yes	142	83.0
No	29	17.0
Type of Service Received:		
Residential	3	2.1
Intensive Outpatient	10	7.0
Standard Outpatient	81	57.0
Other	48	33.8
Other Services Received:		
AA	46	26.9
Relapse Prevention	16	9.4
Substance Abuse Groups	23	13.5
Urine Screens	2	1.2
Educational/Vocational	87	50.9
Employment	77	45.1
Mental Health	56	32.7
Cognitive Skills	8	7.7
Domestic Violence	9	5.5
Family/Marital Counseling	8	4.7
Treatment Status:		
Active	37	28.2
Inactive	94	71.8
Type of Termination from Treatment:		
Successful	43	47.3
Unsuccessful	48	52.7

Table 14. Drug/Alcohol Use During Probation

Variable	N	Percentage
Reported/Detected Alcohol Use:		
Yes	39	24.8
No	118	75.2
Number of Times Use Alcohol:		
1	17	60.7
2	6	21.4
3	4	14.3
10	1	3.6
Reported/Detected Drug Use:		
Yes	52	33.3
No	104	66.7
Number of Times Used Drugs:		
1	21	56.8
2	10	27.0
3	4	10.8
4	2	5.4
Type of Drug Used:		
Marijuana	45	86.5
Cocaine	8	15.4
Opiates	2	3.4
Hallucinogens	1	1.9

Termination Status From Probation. At the time of termination from probation, 50 youth (33.8%) were employed either full-time or part-time whereas fifteen youth (10.1%) were enrolled in school (Table 15). However, the majority of the youth (56.1%) were unemployed at the time of termination from probation. Regarding termination status, 61 youth (36.7%) were still active at the time of termination. Of those who had been terminated, thirty-eight youth (36.2%) successfully completed probation.

Table 15: Treatment Group Status at Termination from Probation

Variable	N	Percentage
Employment Status at Termination:		
Unemployed	83	56.1
Student	15	10.1
Employed	50	33.8
Termination from Probation:		
Successful	38	22.9
Unsuccessful	67	40.4
Active	61	36.7
Type of Unsuccessful Termination		
Abscond	11	16.4
Revocation	12	17.9
Other	44	65.8

Performance After Termination from Treatment

Incarcerated After Termination[16]. Information pertaining to new periods of incarceration (either DYS or DRC) was obtained for all participants. As Table 16 revealed, the majority of participants within each group were not incarcerated upon termination. Chi-square analysis revealed that the pre-TC participants were more likely to be to an institution when compared to the treatment group. In addition, the treatment group was less likely to be incarcerated after termination when compared to the pre-TC group or the DYS group. There were significant differences between the mean lengths of time to be incarcerated. The pre-TC group had the largest average amount of time (296.03 days) to new incarceration followed by DYS (255.07 days) and then the treatment group (193.89 days).

[16] The comparison group was followed for a period of approximately 21months (636 days) because the longest amount of time that the treatment group was at risk in the community was for a period of 21 months. Thus, the outcome information only examined the time period of 21 months or less for all three groups. In addition, because the base rate for commitment to DRC was so low when only examining a 21-month follow-up, new incarceration included commitments to DYS or DRC.

Table 16: Outcome Information For Terminated Participants

Variable	Treatment (N= 367)		Pre-TC (N=341)		DYS (N=421)	
	N	%	N	%	N	%
Incarcerated After Termination:						
Yes	63	17.2	128	37.5	154	37.0
No	304	88.8	213	62.5	262	63.0
$?^2 = 46.901$; $p = .000$						
Mean Time to Commitment*:	193.89		296.03		255.07	

* $p < .05$

Model Predicting Successful Completion

A logistic regression model was computed to determine what factors predict if a youth is going to successfully complete the Mohican therapeutic community RSAT program. A logistic regression analysis reveals any significant predictors of successful completion when all other variables are held constant. Seven variables were included into the model to predict successful completion of Mohican's therapeutic community: race, highest grade completed, felony level, age at first arrest, previous treatment, JASAE score, and Y-LSI score.[17] The logistic regression model revealed that there were no significant predictors of successful completion of treatment. The insignificant findings are not surprising for two reasons. First, Mohican has a high base rate of successful completion (83% successfully completed treatment). Lastly, the CPAI results for Mohican indicated that program completion was based on the length of time of the youths' sentences and not on acquiring prosocial behavior.

[17] These variables were chosen because previous research has shown that they are related to whether an offender completes treatment.

Models Predicting Outcomes

As previously stated, the follow-up time period for the current study was 21 months. Thus, youth were followed up to 21months from the time they left Mohican or DYS. Since the follow-up time period was 21 months that restricted the chance of being placed in DRC. Accordingly, the base rate for commitment to DRC was too low to perform separate analysis. Therefore, the outcome for the models predicting commitment combines recommitment to DYS and commitment to DRC.

In order to determine what factors were significant in predicting which youth would be committed, several logistic regression analysis were calculated. For each model, the dependent variable was commitment to an institution. For example, the first model shows what factors are significant in predicting commitment examining all the groups together. The second model reveals what factors predict commitment when examining the treatment group and the pre-TC group. The last model predicts commitment when examining the treatment group and the DYS group. The variables that were entered into the model and their codings are presented in Table B10 in Appendix B.

Logistic regressions calculate beta coefficients for each predictor entered into the model, assuming all other factors in the model are being held constant. Doing this allows for the power and significant of each factor on its own to be revealed. In brief, the variables entered into each model included[18] race, age, highest grade completed, felony level, JASAE score, YO-LSI score, and which group the participants were placed in.[19] These variables were included in the model because they were correlated with the dependent variable

[18] Mean replacement was used for missing information on the Y-LSI scores, the JASAE score, and age whereas the mode was used to replace missing information for highest grade completed and felony level.

[19] Bivariate correlations were computed for type of termination and incarceration. The relationship was not significant. Thus, for a more parsimonious model, type of termination was not included in the logistic regression models.

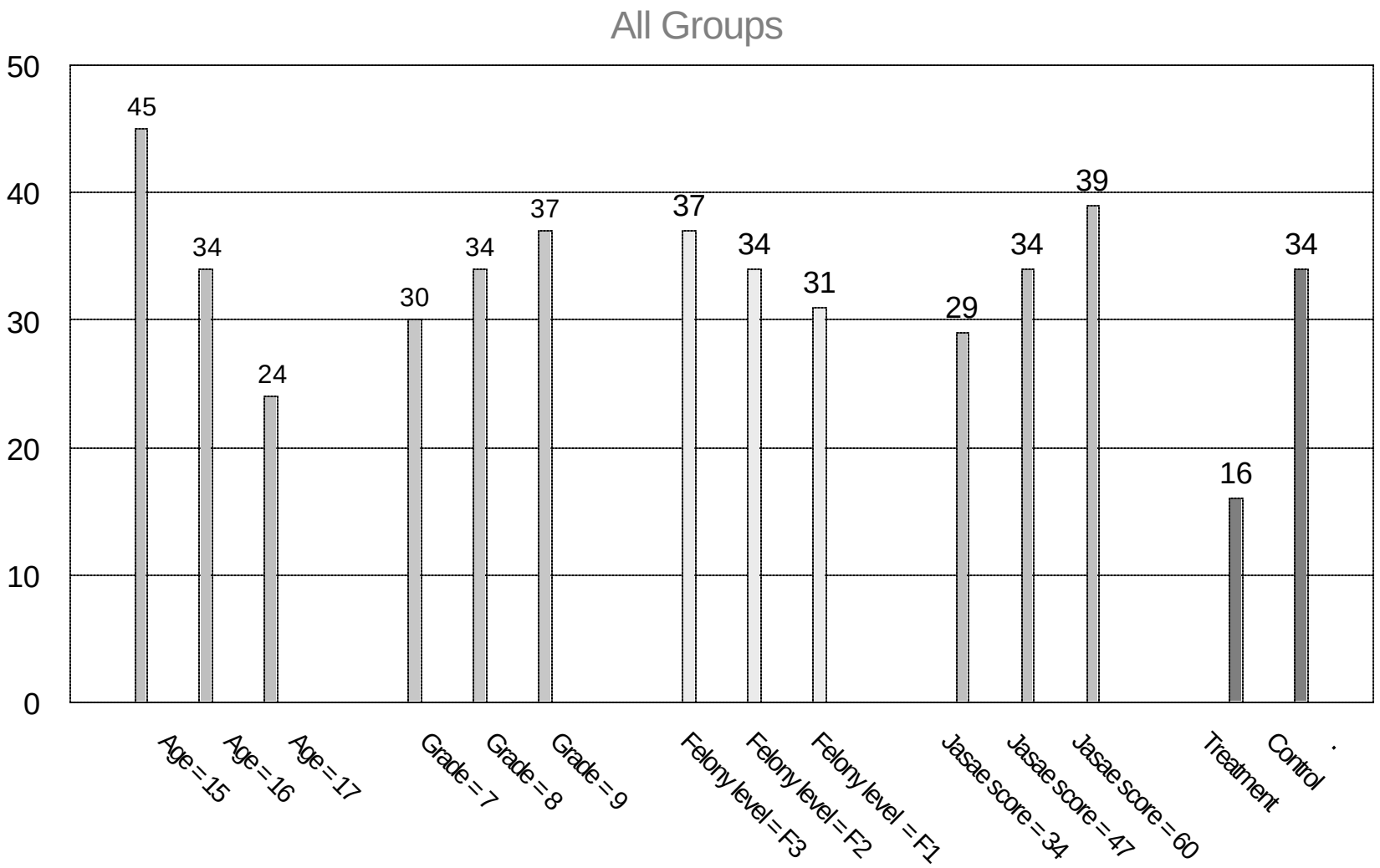
(incarceration) or there were significant differences between the groups on these characteristics. Table B11 through Table B13 (see Appendix B) show the actual coefficients with their significance levels for each regression calculated in these analyses.

All Groups Predicting Incarceration. The first model examined the predictive ability of treatment compared to pre-TC and DYS combined on whether a youth was recommitted. There were five significant factors in the logistic regression predicting recommitment; age, highest grade completed, felony level, the JASAE score, and the group variable. More specifically, those more likely to be incarcerated were younger youth; those who had completed higher grade levels in school, youth who committed a less serious offense, those who had a more severe substance abuse problem, and youth who did not participate in Mohican's therapeutic community were more likely to be incarcerated.

In order to present the logit coefficients in a fashion that is easily understood, each beta was converted into log-odds probabilities, for each of the significant predictors in the model. Figure 7 shows the results for the model examining the effectiveness of all groups combined to predict commitment. There is a negative linear relationship between age and incarceration. More specifically, a two-year difference in age accounted for a 21-point decrease in the probability of being incarcerated

Youth who had completed the 9th grade had a 37 percent probability in being incarcerated whereas youth who had completed the 7th grade had a 30 percent probability of being incarcerated. In addition, youth who had been sentenced to Mohican or DYS on a less serious offense such as felony 3 had a higher probability of being incarcerated (37%) than youth committed for a more serious offense such as felony 1 (31%). Youth with a JASAE

Figure 7. Significant Predictors and Probabilities of Incarceration



score of 61 had a 37 percent chance of being incarcerated whereas those with a JASAE score of 33 had a 29 percent chance of being incarcerated.

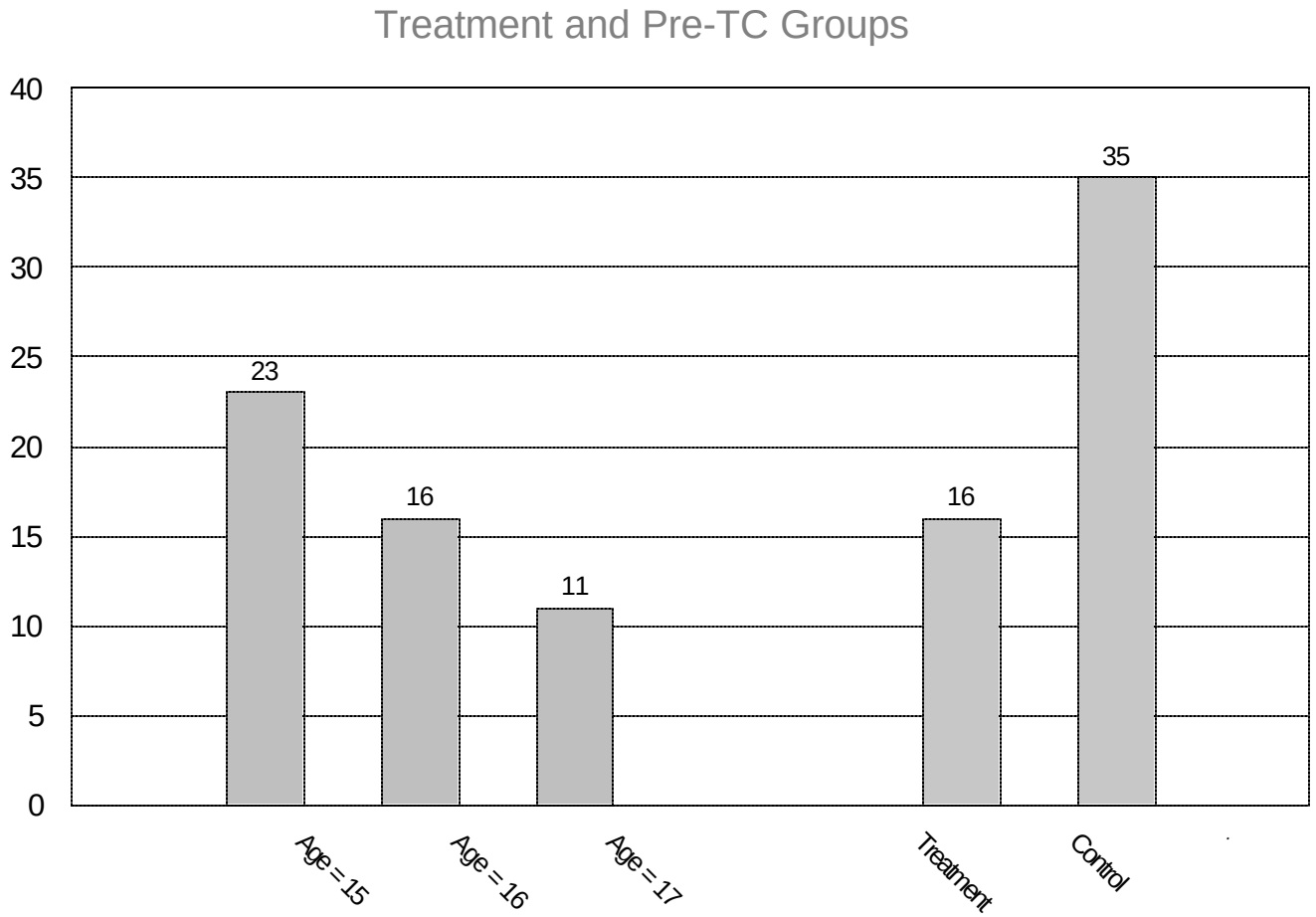
Lastly, participation in the treatment group resulted in a 15-point reduction in the probability of being incarcerated. For example, youth in the treatment group had an 18 percent chance of being incarcerated whereas youth in the comparison groups had a 33 percent chance of being incarcerated.

Treatment and Pre-TC Predicting Incarceration. The second model examined the predictive ability of treatment compared to the pre-TC group on whether a youth was recommitted. There were two significant factors in the logistic regression predicting recommitment; age and the group variable. Younger youth and those who participated in the pre-TC were more likely to be incarcerated.

The log-odds probabilities are shown in Figure 8. Again, there is a linear negative relationship between age at discharge and probability of recidivating. A two year difference in age resulted in a 12-point decrease in the probability of incarceration. When examining the effectiveness of the treatment compared to the pre-TC treatment, the results suggest that Mohican's therapeutic community was more effective in reducing recidivism than the pre-TC. For example, the treatment group had a 16 percent probability of recidivating compared to the pre-TC group, which had a 35 percent probability of recidivating. Thus, participating in the therapeutic community resulted in a 19-point decrease in the probability of having a new period of incarceration.

Treatment and DYS Group Predicting Incarceration. The third model that was analyzed examined the effectiveness of the therapeutic community treatment and DYS minimal treatment for predicting incarceration. The results reveal that four variables are

Figure 8. Significant Predictors and Probabilities of Incarceration



significant predictors of being committed to an institution – age, felony level, JASAE score, and the group variable. Again, younger youth, youth with a less serious committing offense, youth with a higher JASAE score, and youth that participated in the treatment group were more likely to be incarcerated after termination.

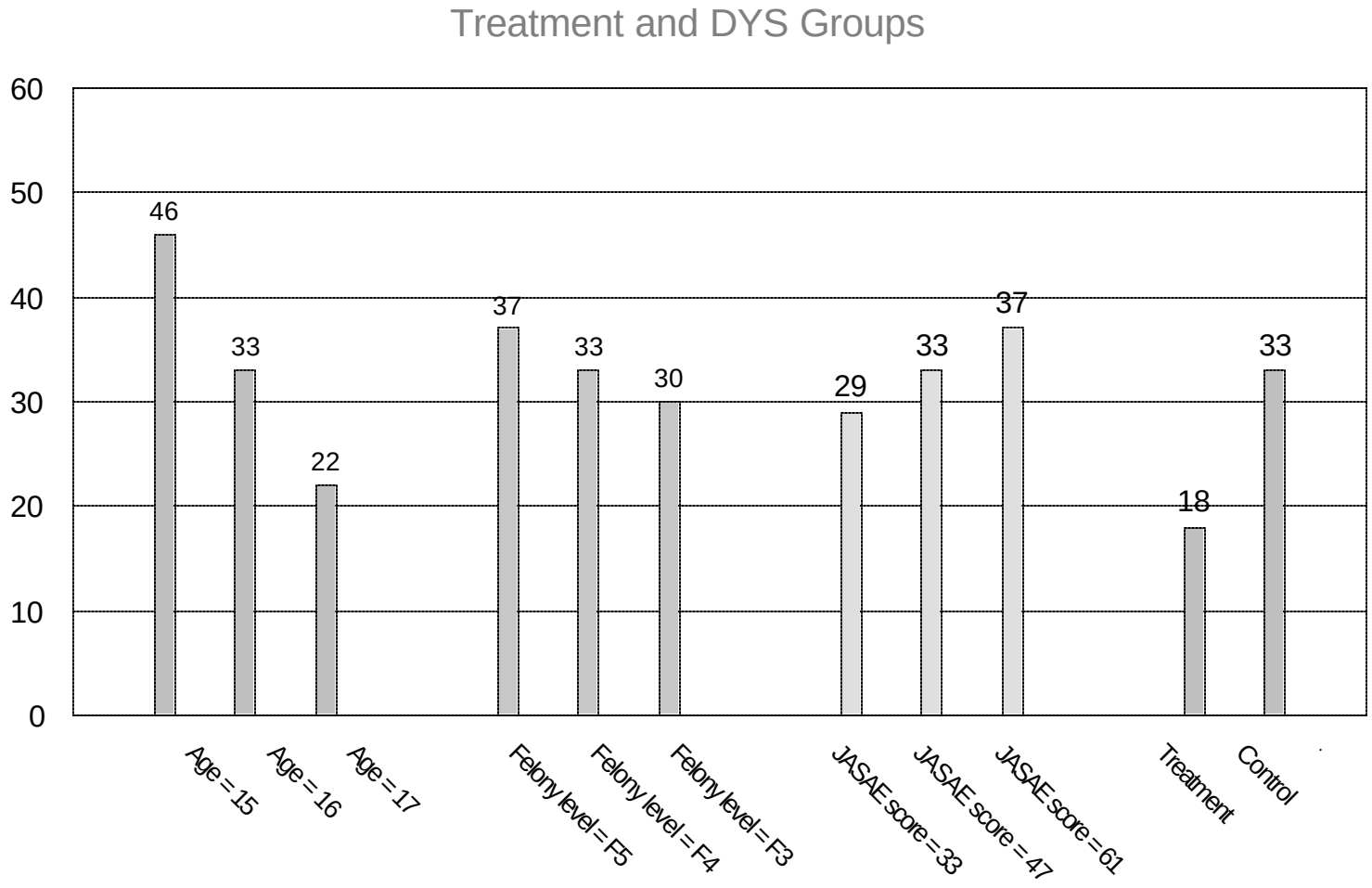
Figure 9 shows the probabilities of recidivating for the treatment group and the DYS group. Again, there was a negative linear relationship between age at discharge and commitment to an institution. A 15 year-old had a 46 percent chance of being incarcerated whereas a 17 year-old had a 22 percent chance of being incarcerated. Thus, a two-year difference in age resulted in a 24-point difference in being incarcerated after termination.

Youth who were committed to Mohican or DYS on a less serious charge (felony 5) had a 37 percent chance of being incarcerated while youth committed on a more serious charge (felony 3) had a 30 percent chance of being incarcerated. Those with a higher JASAE score (score of 61) had a 37 percent chance of being incarcerated while those with a JASAE score of 33 had a 29 percent chance of being incarcerated.

The other variable that was a significant predictor for this model was the group variable. The treatment group had an 18 percent chance of being placed in an institution and the DYS group had a 33 percent chance of being placed in an institution. Thus, Mohican's treatment resulted in a 15-point reduction in the probability of being incarcerated when compared to the DYS group.

Model Predicting Outcome for the Treatment Group Only. A logistic regression model was computed to determine what variables were significant predictors of outcome for the treatment group only. Ten variables were included in the model: race, highest grade completed, felony degree, age at first arrest, participation in previous treatment, JASAE

Figure 9. Significant Predictors and Probabilities of Incarceration



score, type of termination, Y-LSI score, length of time in treatment, and time at risk in the community. There was only one significant predictor of incarceration – time at risk. The longer amount of time the youth spent in the community, the more likely they were to be incarcerated.[20] The insignificant findings for the variables are not surprising given the fact that Mohican's population is at a high risk for recidivism. Therefore, there is little variation between the youth on these characteristics.

DISCUSSION

Limitations of the Study

The conclusions of this outcome evaluation are limited by the amount of missing data for the comparison groups on some variables. For example, the finding of a treatment effect for Mohican's therapeutic community could be strengthened if the study was able to control for services received after termination from Mohican or DYS. However, this type of information was not known for the comparison group and for less than half of the treatment group. In addition, other information such as number of prior arrests and commitments were not available for the pre-TC and the DYS. Therefore, the current study could not control for these factors.

Another limitation of the study was that random assignment to groups was not possible. Random assignment to groups would have allowed the groups to be very similar and would have strengthened any findings of a treatment effect. Since random assignment was not available, there were significant differences on some background characteristics. These characteristics had to be controlled for when predicting outcome.

[20] The model was also ran without time at risk as a predictor. The other nine variables were not significant predictors of incarceration.

The amount of follow-up time available for the groups was also a limitation. The current study only tracked the youth for a period up to 21 months after they left Mohican or DYS. The amount of time at risk may not be long enough to adequately assess the long-term effects of Mohican's RSAT program.

General Conclusions

First, it appears that Mohican is targeting an appropriate population for the type of intensive treatment provided by the institution. The data reveal that the majority of Mohican participants have substantial criminal histories and are at moderate to high risk of recidivism according to the Y-LSI. JASAE scores revealed that all participants scored 21 or above on the JASAE indicating a severe substance abuse problem and the need for residential treatment. JASAE scores ranging from 17 to 74, however, suggest a broad range in the severity of substance abuse problems among Mohican participants.

Second, Mohican has changed treatment modalities from a 12-step residential substance abuse model to a therapeutic community. Mohican's therapeutic community has some cognitive components such as teaching youth to identify triggers, but the main emphasis is on the environment and interactions of the youth in changing behavior. For example, the therapeutic community allow the youth to have more control over their treatment by providing them opportunities to confront others antisocial behaviors and to direct the treatment in the morning and evening meetings.

When examining the intermediate outcomes, participation in Mohican reduced youths' levels of depression and increased youths' self-esteem and decision-making ability. However, participation in treatment increased youths' level of hostility. These factors,

however, were not correlated with outcome for the treatment group[21]. This finding is not surprising given the risk and need principle. Prior research has shown that depression and self-esteem are not strong predictors of recidivism. They may, however, be responsivity issues that can impede the treatment process, and thus should be addressed.

Fourth, the rate of program completion is high (82.1%). This may be due to the fact that once placed in treatment, most infractions were handled within the institution and did not necessitate the removal of youth to other institutions. Successful release from the program, however, should not be confused with progress in treatment for two reasons: 1) during the CPAI, it was revealed that a youth's movement through the program was more dependent on the completion of their sentence than it was on the acquisition of prosocial attitudes and behaviors and 2) the results of the service tracking form indicated that only 136 youth actually completed the last phase of treatment.

Last, Table 17 reviews the significant predictors across all models. Age was a significant predictor of incarceration for all three models. Younger youth were more likely to be incarcerated after termination. Felony level and JASAE score was significant two models: all groups combined and treatment and DYS group predicting outcome. Thus, youth who had been committed on a more serious offense and youth who had more serious levels of substance abuse were more likely to be incarcerated after release. Highest grade completed was only significant when examining all groups combined.

The last significant predictor of incarceration was the group variable. In all three models, participation in Mohican's therapeutic community RSAT program significantly

[21] A bivariate correlation was computed between depression and incarceration after termination and between self-esteem and incarceration after termination. These variables were not correlated with incarceration. In addition, these variables were included in a logistic regression model predicting outcome. They were not significant predictors of incarceration after termination.

reduced the probability of being incarcerated after termination. Mohican's therapeutic community did have a significant impact on the recidivism rates of the youth that participated in the therapeutic community when compared to the pre-TC and the DYS groups.

Table 17: Factors Predicting Incarceration

All Groups	Treatment & pre-TC	Treatment & DYS
Age	Age	Age
Highest Grade Completed	----	----
Felony Level	----	Felony Level
JASAE Score	----	JASAE Score
Group	Group	Group

Recommendations

The following are offered based on the findings of the outcome evaluation:

1. Mohican should continue the therapeutic community approach. The significant findings for treatment indicated that Mohican's TC treatment significantly reduced the probability of being incarcerated.
2. Research has shown that aftercare is an important component of therapeutic communities (Knight, Simpson, and Hiller, 1999; Wexler, Melnick, Lowe, and Peters, 1999). Accordingly, Mohican should strengthen the aftercare component. It is important that youth released from Mohican receive high quality aftercare services that address their needs.
3. Mohican should continue to collect data that would enable the outcome study to continue. The current study was limited in the amount of follow-up time to track the

youth. However, if Mohican continues the study, research can further examine the long-term effects of the therapeutic community RSAT program.

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APPENDIX A

DATA COLLECTION INSTRUMENTS

OHIO'S RESIDENTIAL SUBSTANCE ABUSE TREATMENT PROGRAMS
Standardized Intake Form

1) _____ Name of individual completing form

2) _____ Program code
2 = Mohican Youth Center
3 = MonDay Community Correctional Institution
4 = Noble Correctional Institute

IDENTIFYING INFORMATION

3) _____ Case #

4) _____ Name
Last First Middle Initial

5) _____ SSN

6) ____/____/____ Date of birth

OFFENDER CHARACTERISTICS

7) _____ Race: 1=White 2=Black 3=Hispanic 4=Native American 5=Asian 6=Other

8) _____ Sex: 1=Male 2=Female

9) _____ Marital status: 1= Married 2=Not married

10) _____ Number of dependents (under 18 years of age)

11) _____ Highest grade completed: 1-12 = Grades 1-12; 13 = Some college; 14 = Bachelors or higher

_____ If completed less than 12 grades, did the offender earn a GED? 1=Yes; 2=No

12) _____ Employment status prior to arrest

1=Employed full-time (35 hours or more/week) 2=Employed part-time (less than 35hours/week)
3=Unemployed

CURRENT OFFENSE

13) _____ Most serious charge (enter name of charge - e.g., CCW, Burglary)

14) _____ Level of conviction offense:
1=F1 2=F2 3=F3 4=F4 5= F5 6=M1 7=M2 8=M3 9=M4

15) _____/_____/_____ Date screened for RSAT

16) _____/_____/_____ Date placed in RSAT program

CRIMINAL HISTORY

17) _____/_____/_____ Date of first arrest

_____ If exact date is unknown, please indicate age of first arrest

18) Number of prior arrests (adult and juvenile) _____ Felony _____ Misdemeanor

19) Number of prior convictions (adult and juvenile) _____ Felony _____ Misdemeanor

20) _____ Has the offender ever been arrested on a drug charge? 1=Yes 2=No

21) _____ Number of prior sentences to a secure facility

22) _____ Number of prior sentences to community supervision

23) _____ Number of unsuccessful terminations from community supervision

SUBSTANCE USE HISTORY

24) _____ First Drug of Choice

1=heroin
2=non-crack cocaine
3=crack
4=amphetamines
5=barbiturates/tranquilizers
6=marijuana
7=LSD
8=PCP
9=inhalants
10=over the counter drugs
11=alcohol
12=Other (specify:_____)

25) _____ Second Drug of Choice (use codes for question #24)

26) _____ Age of first alcohol use

27) _____ Age of first drug use

28) _____ Do any immediate family members have a substance abuse problem? 1=Yes 2=No

29) _____ Has the offender received previous drug/alcohol treatment? 1=Yes 2=No

If yes, indicate the number of times the offender has experienced each of the following types of treatment:

_____ Detoxification
_____ Methadone maintenance
_____ Outpatient
_____ Short-term inpatient (30 days or less)
_____ Residential

30) _____ Has the offender been dual diagnosed with mental illness and substance abuse? 1=Yes 2=No

Please attach the following completed instruments OR a summary of results/scores:

Noble - PII

MonDay - LSI and ASUS

OHIO'S RESIDENTIAL SUBSTANCE ABUSE TREATMENT PROGRAMS

Client Self-rating Form

(Adapted from TCU DCJTC Client Evaluation of Self and Treatment)

Today's date: _____/_____/_____

To be completed by staff: ____ intake ____ discharge

Full name:_____ Birthdate: _____/_____/_____

Directions: Each of the statements below describes a way that you might or might not feel about yourself. There are no right or wrong answers, we just want to know what you think. Please use the following scale to tell us whether you agree or disagree with each of the statements listed below. Just circle the one number closest to your opinion (to the right of each statement).

1	2	3	4	5
Strongly Disagree	Disagree	Undecided/ Unsure	Agree	Strongly Agree

		Circle One				
1.	You like to take chances	1	2	3	4	5
2.	You feel sad or depressed	1	2	3	4	5
3.	You need help in dealing with your drug/alcohol use	1	2	3	4	5
4.	Sometimes you feel that you are being pushed around in your life	1	2	3	4	5
5.	You consider how your actions will affect others	1	2	3	4	5
6.	You have much to be proud of	1	2	3	4	5
7.	You want to be in a drug/alcohol treatment program	1	2	3	4	5
8.	In general, you are satisfied with yourself	1	2	3	4	5
9	You like the "fast" life	1	2	3	4	5
10.	You feel mistreated by other people	1	2	3	4	5
11.	It is urgent that you find help immediately for your drug/ alcohol use	1	2	3	4	5
12.	You have thoughts of committing suicide	1	2	3	4	5
13.	You have trouble sitting still for long	1	2	3	4	5
14.	You plan ahead	1	2	3	4	5

1	2	3	4	5
Strongly Disagree	Disagree	Undecided/ Unsure	Agree	Strongly Agree

Circle One

15. This treatment program seems too demanding for you.....	1	2	3	4	5
16. You like others to feel afraid of you.....	1	2	3	4	5
17. You feel lonely.....	1	2	3	4	5
18. You like friends who are wild.....	1	2	3	4	5
19. Your life has gone out of control.....	1	2	3	4	5
20. You like to do things that are strange or exciting.....	1	2	3	4	5
21. You have too many outside responsibilities now to be in this treatment program.....	1	2	3	4	5
22. You feel like a failure.....	1	2	3	4	5
23. You have trouble sleeping.....	1	2	3	4	5
24. You feel interested in life.....	1	2	3	4	5
25. You sometimes want to fight or hurt others.....	1	2	3	4	5
26. You are tired of the problems caused by drugs/alcohol.....	1	2	3	4	5
27. You think about the possible results of your actions.....	1	2	3	4	5
28. You stay away from anything dangerous.....	1	2	3	4	5
29. You feel you are basically no good.....	1	2	3	4	5
30. This treatment may be your last chance to solve your drug/ alcohol problems.....	1	2	3	4	5
31. You have a hot temper.....	1	2	3	4	5
32. You have trouble making decisions.....	1	2	3	4	5

1	2	3	4	5
Strongly Disagree	Disagree	Undecided/ Unsure	Agree	Strongly Agree

	Circle One				
33. You think of several different ways to solve a problem.....	1	2	3	4	5
34. You feel nervous.....	1	2	3	4	5
35. There is really no way you can solve some of the problems you have.....	1	2	3	4	5
36. You analyze problems by looking at all the choices.....	1	2	3	4	5
37. Your temper gets you into fights or other trouble.....	1	2	3	4	5
38. You will give up your friends and hangouts to solve your drug/alcohol problems.....	1	2	3	4	5
39. You make decisions without thinking about consequences.....	1	2	3	4	5
40. You have trouble concentrating or remembering things.....	1	2	3	4	5
41. There is little you can do to change many of the important things in your life.....	1	2	3	4	5
42. This type of treatment program will <u>not</u> be very helpful to you..	1	2	3	4	5
43. You feel extra tired or run down.....	1	2	3	4	5
44. You make good decisions.....	1	2	3	4	5
45. You feel afraid of certain things, like crowds or going out alone.	1	2	3	4	5
46. You want to get your life straightened out.....	1	2	3	4	5
47. You only do things that feel safe.....	1	2	3	4	5
48. You get mad at other people easily.....	1	2	3	4	5
49. You wish you had more respect for yourself.....	1	2	3	4	5
50. You have little control over the things that happen to you.....	1	2	3	4	5

1	2	3	4	5
Strongly Disagree	Disagree	Undecided/ Unsure	Agree	Strongly Agree

	Circle One				
51. You can quit using drugs/alcohol with without any help.....	1	2	3	4	5
52. You worry or brood a lot.....	1	2	3	4	5
53. You are in this treatment program because someone else made you come.....	1	2	3	4	5
54. You often feel helpless in dealing with the problems of life.....1		2	3	4	5
55. You have carried weapons, like knives or guns.....	1	2	3	4	5
56. You feel tense or keyed-up.....	1	2	3	4	5
57. You plan to stay in this treatment program for awhile.....	1	2	3	4	5
58. You are always very careful.....	1	2	3	4	5
59. You think about what causes your current problems.....	1	2	3	4	5
60. You can do just about anything you really set your mind to do..	1	2	3	4	5
61. You feel a lot of anger inside you.....	1	2	3	4	5
62. You feel tightness or tension in your muscles.....	1	2	3	4	5
63. What happens to you in the future mostly depends on you.....	1	2	3	4	5
64. This treatment program can really help you.....	1	2	3	4	5
65. You feel you are unimportant to others.....	1	2	3	4	5

The "HOW I THINK" Questionnaire

NAME: _____ DATE: _____

AGE: _____ Circle One: Male/ Female

To be completed by staff: _____ intake _____discharge

Each statement in this questionnaire may describe how you think about things in life. Read each statement carefully. Then ask yourself, "Is it fair to say that this statement describes my thinking within the past six months?" Your answers will be kept confidential.

Mark your answer on the sheet. Don't say it out loud.

Any questions?

O.K., turn the page and begin.

1. Sometimes I get bored.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

2. I can't help losing my temper a lot.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

3. I might as well lie- when I tell the truth, people don't believe me anyway.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

4. Everybody has the right to be happy.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

5. I have tried to get even with someone.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

6. When I lose my temper it's because people try to make me mad.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

7. People are always trying to hassle me.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

8. If I lie to people, that's nobody's business but my own.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

9. If I really want something, it should be mine.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

10. You can't trust people because they will always lie to you.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

11. When I get mad, I don't care who gets hurt.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

12. I have forgotten important things.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

13. Sometimes you have to lie to get out of trouble.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

14. When friends need you, you should be there for them.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

15. People are always trying to start fights with me.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

16. If I tell someone off, it's their fault for trying to tell me what to do.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

17. People need to be roughed up once in awhile.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

18. If you know you can get away with it, only a fool wouldn't steal.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

19. I have taken things without asking.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

20. You should hurt people first, before they hurt you.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

21. Everybody lies. It's no big deal.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

22. It's important to think of other people's feelings.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

23. Everybody steals; you might as well get your share.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

24. The police are going to hassle you whether you steal or not.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

25. I sometimes want things that my friends have.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

26. People force me to lie when they ask me too many questions.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

27. If I make a mistake, it's not my fault if I got mixed up with the wrong crowd.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

28. If I really want to do something, I don't care if it's legal or not.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

29. I have sometimes said something bad about a friend.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

30. No matter how hard I try; I can't help getting in trouble.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

31. If you don't push people around, you will always get picked on.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

32. I get into arguments, but other people always start them.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

33. I am generous with my friends.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

34. It's important to look at all sides of a situation.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

35. If someone is careless enough to lose a wallet, they deserve to have it stolen.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

36. It's O.K. to tell a lie if someone is dumb enough to fall for it.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

37. Getting what you need is the only important thing.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

38. I have covered up things that I have done.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

39. If I hit someone, it's their fault for making me mad.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

40. I have done bad things that I haven't told people about.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

41. If I see something I like, I take it.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

42. A lie doesn't really matter if you don't know the person.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

43. If people don't cooperate with me, it's not my fault if they get hurt.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

44. Sometimes I gossip about other people.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

45. If a store or homeowner gets robbed, it's their fault for not having better security.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

46. It's no use trying to stay out of fights.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

47. Everybody needs help once in awhile.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

48. It's O.K. to push people around if you're in a bad mood.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

49. You might as well steal; people would steal from you if they have the chance.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

50. In the past, I have lied to get myself out of trouble.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

51. You might as well steal. If you don't take it somebody else will.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

52. I have sometimes done things that bother other people.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

53. Rules are mostly meant for other people.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

54. Sometimes you have to hurt someone if they don't cooperate with you.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

55. Stores make so much money that it's O.K. to just take things you need.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

56. I have taken advantage of other people.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

57. Taking a car doesn't really hurt anyone if nothing happens to the car and the owner gets it back.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

58. Only a coward would walk away from a fight.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

59. You should get what you need even if it means someone has to get hurt.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

60. People should be honest with me.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

61. If someone leaves a car unlocked, they are asking to have it stolen.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

62. Everybody breaks the law; it's no big deal.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

63. You have to get even with people who don't show you respect.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

OHIO'S RESIDENTIAL SUBSTANCE ABUSE TREATMENT PROGRAMS

Service Tracking Form

Client Name: _____ _____ **Case No:** _____

Program code:_____ 1= Nova House; 2 = Mohican; 3 = Monday; 4 = Noble

1. Specialized Services Provided

Please maintain a log of the discrete services provided to individual offenders (e.g., education, cognitive skills training, anger management) beyond those general services provided all offenders through the TC environment. In the columns provided include the name of service (e.g., Rational Emotive Therapy), date started, date ended, and progress in treatment. Do not include individual counseling.

Type of Service	Date Started	Date Ended	Please check the box which describes the offender's progress in treatment		
			Achieved Objectives	Some progress	No progress

2. Individual Counseling

Please record the date and length of individual counseling sessions that were held with the offender throughout his/her participation in the program.

Date of session	Length of session (in minutes)

3. Encounters

Please record the date of any encounters that were held with the offender.

A. ____/____/____

B. ____/____/____

C. ____/____/____

D. ____/____/____

E. ____/____/____

F. ____/____/____

H. ____/____/____

I. ____/____/____

J ____/____/____

K ____/____/____

L. ____/____/____

M. ____/____/____

N. ____/____/____

O. ____/____/____

4. Treatment Phases

If your program uses a phase or level system, please indicate the client's start and end dates for each phase. If a client regresses or repeats a phase, please indicate the reason for the regression in column four. Otherwise, leave column four blank.

Phase Name	Start date	End date	If moved back to earlier phase, please indicate reason

5. Drug Testing

Date of Test	Result (1=positive; 2=negative)	If positive, for what drug(s)?*

***Substance Codes**

1=Cocaine 2=Amphetamine 3=THC 4 = Benzodiazapine 5 = PCP 6= Opiate 7 = Alcohol

6. Program Violations

Please record violations committed by the client throughout his/her participation in the residential phase of the therapeutic community.

Date of Violations	Type of Violations (check all types that apply for the date specified. If the offender committed multiple violations of one type, record the number of violations committed instead of a checkmark)			
	House	Cardinal	Major	Institutional Infractions

OHIO'S RESIDENTIAL SUBSTANCE ABUSE TREATMENT PROGRAMS

Standardized Termination Form

Please indicate the circumstances surrounding the client's discharge from the program including the date of discharge, type of discharge, and plan for aftercare.

1) Client Name: _____

2) Social Security No:_____

3) Program code:_____ 1= Nova House; 2 = Mohican; 3 = MonDay; 4 = Noble

4) Date of discharge _____/_____/_____

5) Type of discharge _____

1=Successful completion (achieved treatment goals)
2=Successful completion (completed required time but did not achieve treatment goals)
3=Unsuccessful termination (disciplinary, lack of participation/progress)
4=Voluntary withdrawal from program
5=Escape/Absconsion
6=Unable to participate due to reclassification, medical, out to court
7=Other (specify: _____)

6) Living arrangements upon discharge_____

1=With family/relatives
2=With friends
3=By him/her self in apartment/house
4=Group home
5=Halfway house
6=Foster care
7=Other (specify: _____)

7) Has continued drug/alcohol treatment been arranged for the client? _____ 1=Yes; 2=No

8) Criminal Justice Placement _____

1=Probation supervision
2=Parole supervision
3=Jail
4=Prison
5=DYS institution
6=Other (specify:_____)

9) To facilitate the collection of follow-up data, please provide the following information on the agency responsible for the offender's supervision/custody upon discharge from RSAT.

Agency (probation, parole, institution)_____

Probation/Parole Officer's name_____

Address_____

City, State, Zip_____

Phone Number _____

10) Please provide reassessment information by attaching the following items Or a summary of results/scores.

Monday - LSI reassessment
Noble - PII reassessment

RSAT FOLLOW-UP DATA

Please 1) Write legibly. 2) Use an "X" to mark the box(es) next to the appropriate answers. 3) leave the question blank if the information is unknown or not available.

1. Youth's name: _____

2. Youth's SSN: _____

3. Please place an "X" in the box that best describes the youth's parole status and record the date where appropriate:

   ☐ active

   ☐ successfully terminated (date of termination: ____/____/____)

   ☐ revocation pending

   ☐ revoked for technical violation (date of revocation: ____/____/____)

   ☐ revoked for new arrest/conviction (date of revocation: ____/____/____)

   ☐ absconder (date of absconsion: ____/____/____)

   ☐ other: (please specify: _____)

If the youth is no longer under your supervision, please answer the following questions as they pertain to the youths' supervision activities during the time period between his release from Mohican and his termination, revocation, or absconsion.

4. Has the youth received any follow-up drug/alcohol services since his/her release from Mohican?

   ☐ yes ☐ no - skip to question 5

   A. If yes, which types of treatment? ("X" all that apply.)

   ☐ residential

   ☐ intensive outpatient treatment

   ☐ standard outpatient treatment

   ☐ other (please specify: _____)

   B. Is the youth still active in drug/alcohol treatment?

   ☐ yes - skip to question 4 ☐ no

   C. If no, was the youth successfully or unsuccessfully terminated from treatment?

   ☐ successfully ☐ unsuccessfully

5. Does/did the youth attend AA/NA meetings at least once per week?

   ☐ yes ☐ no

6. What other services has the youth received since his/her release from Mohican? ("X" all that apply.)

☐ educational/vocational ☐ cognitive skills training

☐ employment services ☐ domestic violence treatment

☐ mental health counseling (group or individual) ☐ family counseling

7. Is the youth attending school regularly (i.e., during the regular school year)?

☐ yes ☐ no

8. Is the youth employed?

☐ yes ☐ no

Place an "X" in the box that best describes the Youth's current employment status.

☐ unemployed ☐ employed part-time (< 35 hrs/week)

☐ student ☐ employed full-time (35+ hrs/week)

9. Place an "X" in the box that best describes the youth's reporting status?

☐ once a week or more ☐ once a month

☐ twice a month ☐ less than once a month

10. Has the youth reported <u>alcohol</u> use or tested positive for alcohol use since released from Mohican?

☐ yes ☐ no - skip to question 10

A. If yes, number of times: _____

B. Date of first reported/detected alcohol use since release: _____/_____/_____

11. Has the youth reported <u>drug</u> use or tested positive for drug use since released from Mohican?

☐ yes ☐ no - skip to question 11

A. If yes, number of times: _____

B. For which drugs? ("X" all that apply.)

☐ marijuana ☐ barbiturates

☐ cocaine ☐ hallucinogens

☐ opiates

C. Date of first reported/detected drug use since released: _____/_____/_____

12. Has the youth had any technical violations reported to the parole board?

☐ yes ☐ no - skip to question 13

A. If yes, number of violations reported?_____

B. Date of the commission of the first technical violation reported: ____/____/____

13. Has the youth been arrested for a new offense (do not include parole violations) since released from Mohican?

☐ yes ☐ no

If yes, please indicate the date(s) of any new arrest(s), the offense(s) leading to the arrest(s), and whether or not the youth was convicted of the offense(s).

Date?	Offense?	Conviction?
____/____/____	_____	☐ yes ☐ no ☐ pending
____/____/____	_____	☐ yes ☐ no ☐ pending
____/____/____	_____	☐ yes ☐ no ☐ pending
____/____/____	_____	☐ yes ☐ no ☐ pending
____/____/____	_____	☐ yes ☐ no ☐ pending

THANK YOU FOR YOUR ASSISTANCE!

APPENDIX B

DESCRIPTIVE STATISTICS

Table B1: Youthful Level of Services Inventory

YO-LSI Scale	Treatment (N= 425)				Pre-TC (N=72)				DYS (N=450)			
	Min.	Max.	Mean	SD	Min.	Max.	Mean	SD	Min.	Max.	Mean	SD
Prior and Current Offenses, Adjudications (range 0-5)	.00	5.00	3.16	1.19	.00	5.00	3.32	1.16	.00	5.00	2.80	1.35
Family Circumstances and Parenting (range 0-6)	.00	6.00	3.51	1.35	.00	6.00	2.99	1.62	.00	6.00	2.78	1.44
Employment/Education (range 0-7)	.00	7.00	3.68	1.84	.00	7.00	3.76	1.72	.00	7.00	3.27	1.82
Peer Relations (range 0-4)	.00	4.00	2.92	0.92	.00	4.00	3.22	0.99	.00	4.00	2.52	1.10
Substance Abuse (range 0-5)	.00	5.00	3.98	1.22	.00	5.00	3.92	1.21	.00	5.00	2.93	1.77
Leisure/Recreation (range 0-3)	.00	3.00	1.94	0.61	.00	3.00	1.89	0.74	.00	3.00	1.74	0.71
Personality and Behavior (range 0-7)	.00	7.00	3.57	1.66	.00	7.00	3.49	1.80	.00	7.00	3.05	1.81
Attitudes and Orientations (range 0-5)	.00	5.00	2.00	1.12	.00	5.00	1.74	1.31	.00	5.00	1.38	1.14
Total (range 0-42) F= 58.501; p = .000	.00	37.00	24.76	5.51	.00	35.00	24.06	6.51	.00	37.00	20.47*	6.31

Table B2: Reliabilities for The Client Self Rating for the Treatment Group

Scale	N	Pre-test	N	Post-test
Anxiety	401	.7562	198	.7887
Depression	406	.7204	202	.7170
Self-esteem	402	.7028	198	.6692
Decision Making	398	.7431	198	.7204
Risk Taking	404	.7482	197	.7615
Hostility	398	.8062	197	.7391
Self-efficacy	400	.5987	197	.6349
Desire for Help	407	.7157	195	.6838
Treatment Readiness	399	.7003	200	.6545

Table B3: Reliabilities for How I Think

Scale	N	Pre-test	N	Post-test
Anomalous response	396	.6730	209	.5971
Self-centered	388	.6893	205	.5803
Blaming others	397	.7634	209	.7320
Minimizing	393	.6087	207	.5936
Assuming the worst	393	.8327	207	.8071
Oppositional defiance	397	.7594	211	.6901
Physical aggression	394	.7266	208	.6347
Lying	390	.5784	205	.4677
Stealing	397	.7022	205	.6625
Overt	391	.8595	207	.8066
Covert	385	.7981	203	.7572
How I Think	377	.9114	201	.8835
How I Think (all)	377	.9563	201	.9425

Table B4: Descriptive Statistics for How I Think Questionnaire – Time 1*

Scale	N	Minimum	Maximum	Mean	SD
Cognitive Distortions					
Anomalous Responding (range 1-6)	301	1.00	4.25	3.67	.53
Self-centered (range 1-6)	296	1.67	6.00	3.25	.61
Blaming Others (range 1-6)	298	1.00	6.00	3.16	.63
Minimizing/Mislabeling (range 1-6)	296	2.56	6.00	4.13	.58
Assuming the Worst (range 1-6)	296	1.27	6.00	2.76	.66
Behavioral Referents					
Opposition-Defiance (range 1-6)	299	1.40	6.00	3.18	.68
Physical Aggression (range 1-6)	296	2.00	6.00	3.34	.59
Lying (range 1-6)	292	0.25	6.00	3.44	.57
Stealing (range 1-6)	299	1.91	6.00	3.22	.56
Summary Scores					
Covert (range 1-6)	296	1.80	6.00	3.26	.59
Overt (range 1-6)	291	1.40	6.00	3.33	.50
How I Think (range 1-6)	286	1.91	6.00	3.31	.51

* Includes the scores that may be considered “suspect” because the AR scale is greater than 4.0 but less than 4.25.

Table B5: Individual Counseling

Session Number	N	Minimum Minutes	Maximum Minutes	Mean	SD
Session 1	173	5.00	75.00	32.60	14.54
Session 2	170	10.00	60.00	26.84	8.84
Session 3	165	8.00	60.00	27.56	9.62
Session 4	160	10.00	80.00	27.31	10.23
Session 5	153	10.00	60.00	25.29	9.22
Session 6	149	10.00	60.00	26.58	9.11
Session 7	141	10.00	120.00	27.64	14.01
Session 8	129	10.00	60.00	25.03	10.25
Session 9	115	10.00	120.00	27.02	13.76
Session 10	106	5.00	90.00	26.43	11.85
Session 11	91	5.00	75.00	28.48	12.43
Session 12	75	5.00	60.00	25.99	11.68
Session 13	60	10.00	105.00	27.00	14.38
Session 14	51	10.00	60.00	27.00	9.70
Session 15	48	12.00	46.00	27.08	9.53
Session 16	43	12.00	75.00	25.37	11.30
Session 17	33	15.00	75.00	27.42	12.30
Session 18	31	11.00	60.00	29.13	13.46
Session 19	26	10.00	33.00	25.88	6.84
Session 20	20	15.00	66.00	31.05	14.05
Session 21	13	15.00	90.00	29.23	19.56
Session 22	10	15.00	30.00	22.00	7.15
Session 23	9	15.00	45.00	23.89	12.94
Session 24	8	20.00	60.00	34.38	12.37
Session 25	7	20.00	60.00	32.86	12.54
Session 26	6	30.00	45.00	30.00	9.49
Session 27	3	15.00	30.00	20.00	8.66
Session 28	3	15.00	30.00	20.00	8.66
Session 29	3	15.00	30.00	25.00	8.66
Session 30	3	15.00	30.00	25.00	8.66
Session 31	3	20.00	60.00	36.67	20.82
Session 32	3	15.00	30.00	21.67	7.64
Session 33	3	15.00	20.00	18.33	2.89
Session 34	2	30.00	45.00	37.50	10.60
Total	173	15.00	1095.00	318.46	191.37

Table B6: The Effects of Time on Psychological and Social Functioning, With Controls for Pre-test Scores

	Anxiety			Depression			Self Esteem		
Independent Variables	*b*	SE	Beta	*b*	SE	Beta	*b*	SE	Beta
Time	.013	.007	.125	.004	.005	.056	.0005	.005	.007
Pre-test score	.562	.067	.532*	.256	.059	.315*	.3480	.068	.367*
Constant	5.708	1.729*	---	8.211	1.221*	---	15.7680	1.780*	---
F-value		37.34			9.87			13.12	
R^2		.30			.09			.13	

	Decision-making			Risk-taking			Hostility		
Independent Variables	*b*	SE	Beta	*b*	SE	Beta	*b*	SE	Beta
Time	.004	.007	.045	.014	.006	.155*	.021	.007	.205*
Pre-test score	.344	.072	.347*	.575	.062	.568*	.401	.060	.447*
Constant	21.112	2.673*	---	6.783	1.669*	---	9.224	1.771*	---
F-value		11.67			48.74			29.17	
R^2		.11			.36			.25	

* p = .05

Table B6: The Effects of Time on Psychological and Social Functioning, With Controls for Pre-test Scores

	Self-efficacy			Desire for Help			Treatment Readiness		
Independent Variables	*b*	SE	Beta	*b*	SE	Beta	*b*	SE	Beta
Time	-.001	.005	-.018	-.005	.006	-.056	-.014	.007	-.144*
Pre-test score	.398	.070	.399*	.428	.063	.466*	.287	.064	.325*
Constant	16.391	2.169*	---	14.628	1.998*	---	21.387	2.243*	---
F-value		16.23			24.23			12.64	
R^2		.15			.22			.12	

* p = .05

Table B7: The Effects of Time on How I Think Scales, With Controls for Pre-test Scores (includes suspect cases)

	Self-Centered			Blaming Others			Minimizing/ Mislabeling		
Independent Variables	*b*	SE	Beta	*b*	SE	Beta	*b*	SE	Beta
Time	.001	.001	.123	.001	.001	.131	.002	.001	.185*
Pre-test score	.263	.075	.316*	.282	.073	.345*	.505	.091	.462*
Constant	2.046	.306*	---	1.990	.299*	---	1.590	.405*	---
F-value		7.85			10.04			21.11	
R^2		.13			.15			.28	

	Assuming the Worst			Oppositional Defiance			Physical Aggression		
Independent Variables	*b*	SE	Beta	*b*	SE	Beta	*b*	SE	Beta
Time	.002	.001	.126	.003	.001	.227*	.002	.001	.167
Pre-test score	.173	.007	.211*	.239	.076	.277*	.308	.077	.353*
Constant	1.897	.334*	---	1.828	.336*	---	1.899	.313*	---
F-value		3.35			8.89			11.15	
R^2		.06			.14			.17	

* p = .05

Table B7: The Effects of Time on How I Think Scales, With Controls for Pre-test Scores (includes suspect cases)

	Lying			Stealing			Overt		
Independent Variables	*b*	SE	Beta	*b*	SE	Beta	*b*	SE	Beta
Time	.001	.001	.118	.000	.001	.078	.003	.001	.220*
Pre-test score	.233	.066	.329	.338	.074	.402*	.276	.071	.340*
Constant	2.392	.279*	---	1.960	.293*	---	1.868	.292*	---
F-value		7.76			11.70			12.02	
R^2		.13			.18			.18	

	Covert			How I Think		
Independent Variables	*b*	SE	Beta	*b*	SE	Beta
Time	.001	.001	.109	.001	.001	.188*
Pre-test score	.287	.069	.380*	.294	.071	.376*
Constant	2.163	.271*	---	1.959	.281*	---
F-value		10.34			12.06	
R^2		.17			.20	

* p = .05

Table B8: The Effects of Time on How I Think Scales, With Controls for Pre-test Scores (excludes suspect cases)

	Self-Centered			Blaming Others			Minimizing/ Mislabeling		
Independent Variables	*b*	SE	Beta	*b*	SE	Beta	*b*	SE	Beta
Time	.003	.002	.185	.004	.002	.260*	.005	.002	.294*
Pre-test score	.257	.002	.300*	.225	.098	.271*	.529	.107	.495*
Constant	1.943	.426*	---	1.888	.393*	---	1.048	.490*	---
F-value		5.62			7.47			21.04	
R^2		.15			.19			.40	

	Assuming the Worst			Oppositional Defiance			Physical Aggression		
Independent Variables	*b*	SE	Beta	*b*	SE	Beta	*b*	SE	Beta
Time	.003	.002	.175	.005	.002	.295*	.003	.002	.236*
Pre-test score	.155	.105	.183	.253	.097	.296*	.249	.102	.289*
Constant	1.888	.445*	---	1.616	.421*	---	1.946	.401*	---
F-value		2.57			8.89			7.23	
R^2		.08			.22			.18	

* p = .05

Table B8: The Effects of Time on How I Think Scales, With Controls for Pre-test Scores (excludes suspect cases)

	Lying			Stealing			Overt		
Independent Variables	*b*	SE	Beta	*b*	SE	Beta	*b*	SE	Beta
Time	.002	.002	.193	.003	.002	.239*	.004	.001	.295*
Pre-test score	.223	.101	.284*	.277	.100	.326*	.272	.090	.340*
Constant	2.214	.396*	---	1.819	.400*	---	1.726	.357*	---
F-value		5.30			7.89			11.29	
R^2		.15			.20			.26	

	Covert			How I Think		
Independent Variables	*b*	SE	Beta	*b*	SE	Beta
Time	.003	.001	.223	.003	.001	.288*
Pre-test score	.278	.101	.340*	.287	.097	.357*
Constant	1.937	.382*	---	1.759	.366*	---
F-value		7.92			10.73	
R^2		.22			.28	

* p = .05

Table B9: Number of Days to Outcome For Terminated Participants

Variable	Treatment Group (N = 448)		Terminated (N = 367)		
	N	Min	Max	Mean	SD
Time to Arrest:	28	26	259	147.11	65.85
Time to Incarceration:	63	14	561	193.89	127.47

Ns may not equal to total due to missing data

Variable	Pre-TC Group (N = 343)		Terminated (N = 341)		
	N	Min	Max	Mean	SD
Time to Arrest:	118	21	636	164.86	125.45
Time to Incarceration:	128	25	633	296.03	177.69

Mohican Pre-TC participants January 1998 – August 1999
Ns may not equal to total due to missing data

Variable	DYS (N = 450)		Terminated (N = 421)		
	N	Min	Max	Mean	SD
Time to Arrest:	143	0	627	202.56	133.44
Time to Incarceration:	154	41	635	255.07	161.29

Ns may not equal to total due to missing data

Table B10: List of Measures for the Independent and Dependent Variables in Regression Models

Independent Variables

Race: 0 = White; 1 = Nonwhite

Age: 12 to 20

Highest Grade Completed: 1 to 13

Felony Level: 0 = Misdemeanor; 1 = F5; 2 = F4; 3 = F3; 4 = F2; 5 = F1

JASAE Score: 1 to 88

YO-LSI Score: 0 to 37

Group: Model 1 – 0 = all comparison cases combined; 1 = treatment group
Model 2 – 0 = Pre-TC; 1 = treatment
Model 3 – 0 = DYS; 1 = treatment

Dependent Variables

Incarceration: 0 = no; 1 = yes

Table B11. Regression Coefficients Predicting Recommitment = 1*

Factor	Beta	Significance Level
Race	.168	.223
Age	-.477	.000
Highest grade completed	.162	.021
Felony level	-.136	.010
Y-LSI score	.000	.976
JASAE score	.016	.004
Group	-.966	.000
Constant	5.308	
-2 Log Likelihood	1259.742	

*Treatment versus comparison groups combined

Table B12. Regression Coefficients Predicting Recommitment = 1*

Factor	Beta	Significance Level
Race	.053	.772
Age at discharge	-.432	.000
Highest grade completed	.165	.065
Felony level	-.142	.058
Y-LSI score	-.029	.225
JASAE score	.016	.102
Group	-1.054	.000
Constant	5.436	
-2 Log Likelihood	748.465	

*Treatment and pre-TC predicting incarceration