

Characteristics and Substance Abuse Among Macon County Juveniles on Probation

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Authors' Notes

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I) Executive Summary

Substance use and mental health disorders among juveniles in the criminal justice system are common. Although existing estimates of prevalence vary somewhat across studies and populations (i.e., entering probation versus incarcerated), they typically indicate that a majority of youths in the criminal justice system suffer from substance use and/or mental health disorders (Cho, Johnson, and Graf, 2000; Coccozza, 1992; Winters, Weller, and Meland, 1994). In addition, juvenile offenders have a high rate of comorbidity of substance use and psychiatric disorders, especially conduct disorder and attention deficit hyperactivity disorder (Bilchik, 1998; Lexcen & Redding, 2000). Despite the widespread problem of substance abuse and mental health disorders among the juvenile justice population, the availability of quality treatment programs and mental health services is not the norm. To help turn around the currently dismal state of substance abuse treatment and mental health services for juveniles in all tiers of the justice system, Bilchik (1998) has called for better estimates of the prevalence and incidence of mental health and substance abuse disorders among juveniles, careful assessment of juveniles when they first come in contact with the justice system, an increase in the number of quality treatment programs in the community and in juvenile institutions, and a focus on juveniles who are at risk for delinquency.

In October 2000, officials from Macon County Court Services in Decatur, Illinois contracted with staff from Chestnut Health Systems in Bloomington, Illinois to aid in the collection of information on their youth clientele. The purpose of this document is to describe the Macon County juvenile probation population – their basic demographics, their psychological and substance abuse profiles, and their needs for treatment in these areas. This information will provide Macon County Court Services with data they seek to aid in future planning decisions regarding facilities, programs, services, staffing, grant proposals, and fund-raising.

- **What are the demographic and clinical characteristics of Macon County youths involved with probation?**

A total of 203 adolescents (77.8% males, 22.2% females) were screened in probation between October 28, 2000 and March 29, 2001. The sample was composed nearly equally of Black/African-American and White youths (47% and 46.5% respectively), with the remaining youths largely from Biracial or Mixed ethnicities (e.g., White/Native American, Black/Native American, Black/White). Youths ranged in age from 10 years to 19 years, with an average age of 15.2 years. Of the 200 youths under the age of 18, valid custody data was available on 154. Of these youths, most (57.1%) were in the custody of a single parent -- most often a mother, but also fathers and stepfathers. Approximately 88% of the youths reported they were currently in school or training.

Most (55.7%) reported using tobacco, while close to half (44.3%) reported using marijuana during the past 90 days. More youths reported using marijuana than alcohol (30.5%), a pattern that is typical for adolescent users. Very few (1%) reported using harder drugs. Evidence of misrepresentation of drug usage was discovered through urine testing.

Most youths reported difficulties at school or work, including lack of interest, bad grades or evaluations, and suspension during the past year. Close to half (44.7%) reported skipping school or work. Half of the youths (50.3%) had spent time in a controlled environment during the past year, including not only jail or detention, but also treatment programs or hospitals.

Nearly 18% of the youths reported being attacked with a weapon, beaten, sexually abused, or emotionally abused during the past year, with no significant difference between the rates of boys' and girls' reporting (16.1% and 22.2%, respectively).

Over one-third (36.5%) of the youths' scores on a series of clinical scales warranted referral for internal behavior problems, with 4.4% expressing heightened suicide risk, 28.1% reporting elevated symptoms of depression, and 50.2% reporting elevated symptoms of anxiety. Over two-thirds (67.5%) of the scores warranted referral for external behavior problems, with 54.2% reporting elevated ADHD symptoms, 64.5% referable for conduct disorder and aggression symptoms, and 75.4% with heightened crime behaviors. Nearly one-quarter (24.6%) of youths reported problematic symptoms of substance use – 30% with symptoms of substance use and abuse, and 20.2% with symptoms of substance dependence. Overall, 38.9% of the youths' total scores were in the referral categories.

The mean scores for girls on all of the internal behavior problem scales are significantly higher than those for the boys. There were no differences by gender on the external behavior problem scales or the substance problem scales. Overall, girls' total scores were significantly higher than the boys'.

- **How many and on what bases were youths referred for substance abuse and/or mental health treatment?**

Of the 203 youths screened, 150 (74%) were referred (a) for further assessment on substance abuse issues (N=71), (b) to another agency for mental health services (N=42), or (c) for *both* substance abuse assessment and to another agency for mental health services (N=37). Overall, most referrals were based on information obtained through the Global Appraisal of Individual Needs – Quick Screen (GAIN-QS), the screening instrument used in the study (54.1% on screener scores, 28.4% on other information on the screener) or positive urine tests (25.7%).

- **How do the demographic and clinical characteristics of youths referred for additional assessment and/or mental health services compare with those of youths not referred?**

The referred and non-referred groups were similar in gender mix, race/ethnicity, and in-school status, with the majority of both groups enrolled in school only. There was a non-significant trend ($p < .09$) in favor of the referred group being slightly older than the non-referred group (average ages 15.27 years and 14.85 years, respectively).

The referred youths more often reported using tobacco (63.3% of referred youths), alcohol (38%), marijuana (56%), and other drugs (1.3%) than the non-referred youths (34%, 9.4%, 11.3%, and 0%, respectively). These differences were significant for all drugs except the harder drugs.

Scores on the GAIN-QS's 12 clinical scales were compared for the referred and non-referred groups. Significantly higher scores for the Referred group were observed on the External Behavior Index, the Conduct Disorder-Aggression Index, the three substance use scales (Substance Problem Index, Substance Use and Abuse Index, and Substance Dependence Index), and the overall Total Symptom Severity Index. In addition, a trend for higher scores for the referred group was observed on the Depression Symptom Index ($p < .10$). For the Referred group, girls had significantly higher scores than boys on the Internal Behavior Index, the Depression Symptom Index, the Suicide Risk Index, the Anxiety Symptom Index, and the Total Symptom Severity Index. On the other hand, for the Non-Referred group, no significant differences were

observed between boys and girls on any of the GAIN-QS scales. However, a trend in favor of higher scores for girls was observed on the Depression Symptom Index ($p < .09$).

- **How does the Macon County sample of referred and assessed youths compare with samples of youths enrolled in substance abuse treatment?**

A total of 108 youths were referred for further assessment on substance abuse issues ($N=71$) or for *both* substance abuse assessment and to another agency for mental health services ($N=37$). Of these youths, 79 completed a more in-depth assessment of their substance abuse and mental health difficulties (Global Appraisal of Individual Needs - Intake (GAIN-I)). The demographic and clinical characteristics of the Macon County group who completed this second assessment were compared with those of two clinical samples of adolescents. The Cannabis Youth Treatment (CYT) (Dennis et al., under review) adolescents were entering outpatient treatment for marijuana abuse or dependence (level one or two in ASAM placement criteria). Adolescents at this level have well-defined needs for treatment, but are typically not abusing at a high frequency and not using “harder” drugs. Psychologically, they often have mental health difficulties such as ADHD, conduct disorder, depression, and anxiety, but are non-predatory and stable enough to meet periodically in a group format if necessary. Adolescents in the Assertive Aftercare Project (AAP) (Godley, Godley, & Dennis, in press) were entering residential treatment (level three in ASAM placement criteria). At this level, adolescents are more severely involved with drugs and alcohol in terms of more frequent use and/or the use of “harder” drugs. Their psycho-social profiles make them unsuitable to meet periodically on an outpatient basis.

Demographically, the Macon County sample had significantly more Black/African-Americans than the CYT and AAP samples, which were primarily composed of White adolescents. The AAP adolescents were slightly older than the other two groups.

The Macon County group was similar to both the CYT and AAP groups in weekly marijuana use. Use of heroin/opiate and other drugs was also similar across the three groups, though the overall usage was very low. The Macon County group used significantly less alcohol than the CYT and AAP groups, and the AAP group used significantly more cocaine than the Macon County and CYT groups.

In terms of clinical characteristics, the Macon County group was similar to the CYT group in reported symptoms of anxiety and crime behaviors. All groups had a similar risk for suicide. On the remaining clinical scales, in most cases the AAP group was the most severe and the Macon County group was the least severe.

- **For those youths referred to Chestnut Health Systems for treatment, what was the linkage rate to treatment?**

Of the 79 Macon County youths who completed a more in-depth assessment of their substance abuse and mental health difficulties, approximately 24% were referred to Chestnut Health Systems for substance abuse treatment. Most were referred for residential treatment. Of these youths, three youths from the referred group entered residential treatment as well as one additional youth who was not initially referred to Chestnut. The remainder likely enrolled in programs at St. Mary’s Hospital or other treatment programs, or may have chosen to not seek treatment services.

It is clear that the majority of youths involved with Macon County Probation have difficulties related to substance use, mental health, or both. This document concludes with a series of

recommendations that flow from the process and results of this study and are offered as suggestions on screening, referring, and tracking youths' progress.

II) Introduction

A) Background

Substance use and mental health disorders among juveniles in the criminal justice system are common. Although existing estimates of prevalence vary somewhat across studies and populations (i.e., entering probation versus incarcerated), they typically indicate that a majority of youths in the criminal justice system suffer from substance use and/or mental health disorders. Cocozza (1992) estimated that of youths entering the criminal justice system each year, 150,000 meet criteria for at least one mental health disorder, 225,000 meet criteria for an alcohol abuse or dependence disorder, and 95,000 meet criteria for a substance abuse or dependence disorder. In a study of 611 male and female juveniles screened at four detention centers, Winters, Weller, and Meland (1994) found 52.3% met criteria for a “red flag”, a recommendation that further assessment would be needed and that there was a high probability of the need for drug abuse treatment. In addition, over 90% of all participants reported use of at least one drug in the past year. Closer to home, Cho, Johnson, and Graf (2000) found that among 401 Illinois youths enrolled in juvenile correctional facilities, 68% were in need of substance abuse treatment for alcohol or drug abuse/dependence. Approximately 94% of youths reported lifetime use of at least one illicit drug (most often marijuana followed by psychedelics). During the month preceding their incarceration, 48% used one or more illicit drugs, with marijuana being the most popular (43.7%).

Substance use and mental health disorders do not occur independently. Juvenile offenders have a high rate of comorbidity of substance use and psychiatric disorders, especially conduct disorder and attention deficit hyperactivity disorder (Bilchik, 1998; Lexcen & Redding, 2000). Milin, Halikas, Meller, and Morse (1991) investigated the prevalence of drug abuse and coexisting psychiatric disorders among 111 juvenile offenders. A high rate of conduct disorder (91%) was observed in both drug-abusing and non-abusing juvenile offenders, with significantly higher rates of attention deficit disorder and aggressive subtype of conduct disorder in the offenders who abused drugs and alcohol. Excluding conduct and oppositional disorders, 39 percent of drug abusers versus 14 percent of those who did not abuse drugs had concurrent psychiatric diagnoses. Randall, Henggeler, Pickrel, and Brondino (1999) found that among 118 juvenile offenders who met criteria for substance abuse or dependence, concurrent externalizing disorders were associated with high rates of antisocial behavior and predicted worse 16 month outcomes than substance abuse alone or substance abuse with concurrent internalizing disorders. In Illinois, Cho, Johnson, and Graf (2000) found that among youths entering juvenile correctional facilities, 80% of those with severe mental health problems, 77% of those with moderate mental health problems, and 61% of those with slight mental health problems were also diagnosed with a substance abuse or dependence disorder.

Despite the widespread problem of substance abuse and mental health disorders among the juvenile justice population, the availability of quality treatment programs and mental health services are not the norm. According to Bilchik (1998), services available in the juvenile justice system are inadequate to alleviate substance abuse and comorbid psychiatric disorders. Moore (1999) discussed the historical lack of response to the health care needs of incarcerated juveniles. The juvenile corrections system has tended to focus its priorities on programming and custodial care rather than on health care for a number of reasons. First, there is a societal misconception that many juvenile offenders are violent and should therefore receive maximum penalties for their crimes with little thought to health care. Another misconceived objection to providing

health care is juveniles don't need health care because they won't be incarcerated for long. However, Moore asserts, juvenile inmates do indeed need comprehensive and adequate health care, including treatment for drug and alcohol abuse and psychiatric disorders. McBride, VanderWaal, VanBuren, and Terry (1997) call for an integrated, collaborative system with comprehensive assessment, referrals to appropriate services, case management along a continuum of care, and system collaboration. They believe this has the greatest probability of successful outcomes.

To help turn around the currently dismal state of substance abuse treatment and mental health services for juveniles in all tiers of the justice system, Bilchik (1998) has called for better estimates of the prevalence and incidence of mental health and substance abuse disorders among juveniles, careful assessment of juveniles when they first come in contact with the justice system, an increase in the number of quality treatment programs in the community and in juvenile institutions, and a focus on juveniles who are at risk for delinquency.

B) Purpose

Macon County Court Services in Decatur, Illinois, enrolls approximately 25 new cases each month involving juvenile offenders. Who are these youths? What are their backgrounds, their characteristics, and especially their needs for psychological or substance abuse treatment? Information on the Macon County juvenile probation population has not been systematically collected by the department, so it has not been possible to describe the youths or their needs in any detail. And yet it is precisely this kind of information that would be helpful to Macon County Court Services in making future planning decisions – decisions regarding facilities, programs, services, staffing, grant proposals, fund-raising. In particular, a detailed description of their juvenile population would help to identify any needs for substance abuse and mental health services.

In October 2000, officials from Macon County Court Services approached Dr. Alan Sodetz, Clinical Director of Chestnut Health Systems, to aid in the collection of information on their youth clientele. Headquartered in Bloomington, Illinois with several sites throughout the state, Chestnut Health Systems is a private behavioral health organization with a strong history in substance abuse treatment. It also has one of the largest on-site research and training institutes associated with a behavioral health organization in the United States. Dr. Sodetz enlisted the help of Drs. Mark Godley and Janet Titus of Chestnut's Lighthouse Institute to lead the collection and presentation of information on Macon County's juvenile probation population. Following several discussions, a core set of evaluation questions to focus the efforts was drafted and is presented below in Section C.

The purpose of this document is to describe the Macon County juvenile probation population – their basic demographics, their psychological and substance abuse profiles, and their needs for treatment in these areas. This information will provide Macon County Court Services with the data they seek to aid in future planning.

C) Evaluation Questions

The following set of questions guided the data collection efforts and were used to organize the presentation of results:

- 1) What are the demographic and clinical characteristics of Macon County youths involved with probation?

- 2) How many and on what bases were youths referred for substance abuse and/or mental health treatment?
- 3) How do the demographic and clinical characteristics of youths referred for additional assessment and/or mental health services compare with those of youths not referred?
- 4) How does the Macon County sample of referred and assessed youths compare with samples of youths enrolled in substance abuse treatment?
- 5) For those youths referred to Chestnut Health Systems for treatment, what was the linkage rate to treatment?

III) Instrumentation, Protocol, and Quality Assurance

A) Use of the GAIN-QS

The Global Appraisal of Individual Needs – Quick Screen (GAIN-QS) instrument was used for this project. Besides collecting descriptive information on clientele in a variety of life areas, it also identifies those in need of referral for a more detailed behavioral assessment on substance use or mental health problems. The GAIN-QS is organized in eight sections: Background, General Factors, Sources of Stress, Physical Health, Emotional Health, Behavioral Health, Substance-Related Issues, and End. At eight pages in length, the GAIN-QS is an efficient screening instrument and can be interviewer- or self-administered in 15 to 20 minutes. Most items are written in a “yes/no” format. A one-page “Case Disposition” form designed to collect information for the project’s participant pipeline (i.e., who was referred, who wasn’t, why were individuals referred, etc.) was attached to the back of the GAIN-QS instrument. A copy of the GAIN-QS as used in this project is included in the Appendix.

The GAIN-QS scales are composed of a subset of items taken from its parent instrument, the GAIN-I (Dennis, 1998). Although the GAIN-QS scales are much shorter than those found on the GAIN-I, from a psychometric standpoint they function in a near-equivalent manner. Further information on the GAIN-QS, including details on its development, is available in the GAIN-QS administration and scoring manual (Titus & Dennis, 2000).

For this project, the GAIN-QS was individually-administered in all but three cases by members of Chestnut’s adolescent clinical team or research staff. A total of 203 youths involved with Macon County Court Services were screened from October 2000 to March 2001. The youths’ statuses with the probation system varied. Some were newly admitted to probation, others were already on probation, some were “pending” and likely to be referred to probation, and some were “informals” – youths whose crimes are not pursued by the State’s Attorney but who are still referred to probation for services.

B) Use of the GAIN-I

Following completion of the GAIN-QS with a youth client, the staff member recorded a series of recommendations on the need for further assessment of the youth. If the youth appeared to need more detailed assessment on substance abuse issues -- or on *both* substance abuse *and* mental health issues – a recommendation was made for the individual to complete the Global Appraisal of Individual Needs – Intake (GAIN-I). (Note that if an individual appeared to be in need of *only* mental health services, a recommendation was made for those services and a GAIN-I was not completed. The GAIN-I was completed only with those youths whose behaviors indicated *at least* substance abuse problems.) If possible, the GAIN-I was completed immediately following the GAIN-QS.

The GAIN-I is a comprehensive, standardized biopsychosocial assessment battery organized around the American Society of Addiction Medicine (ASAM, 1996) patient placement criteria. The assessment covers eight life domains, and each domain is composed of a series of subscales that taps specific aspects of the domain. The eight GAIN-I domains are: Background and Treatment Arrangements, Substance Use (Alcohol, Marijuana, and Other Drugs), Physical Health, Risk Behaviors and Disease Prevention, Mental and Emotional Health, Environment and Living Situation, Legal (Civil and Criminal), and Vocational (School, Work, Financial). Data collected via the GAIN-I provides all information necessary for determining ASAM placement.

The GAIN-I was individually administered to 79 youth participants by members of Chestnut’s adolescent clinical team or research staff. The instrument takes approximately 90 minutes to complete. Besides providing valuable information for treatment, the use of the GAIN-I in this project permits comparison with data collected on other adolescents in substance abuse treatment in Illinois, most of whom are involved with the juvenile legal system.

C) Data Collection Protocol

Dr. Sodetz and members of Chestnut’s adolescent clinical staff met with Drs. Titus and Godley on November 10, 2000 to help plan the project protocol and review the GAIN-QS administration instructions. GAIN-QS administration and scoring manuals were provided for all staff who would be administering the screening instrument. On November 15, 2000, Dr. Titus and members of the Lighthouse Institute staff led a training on the use of the GAIN-I for those clinical staff involved in this project.

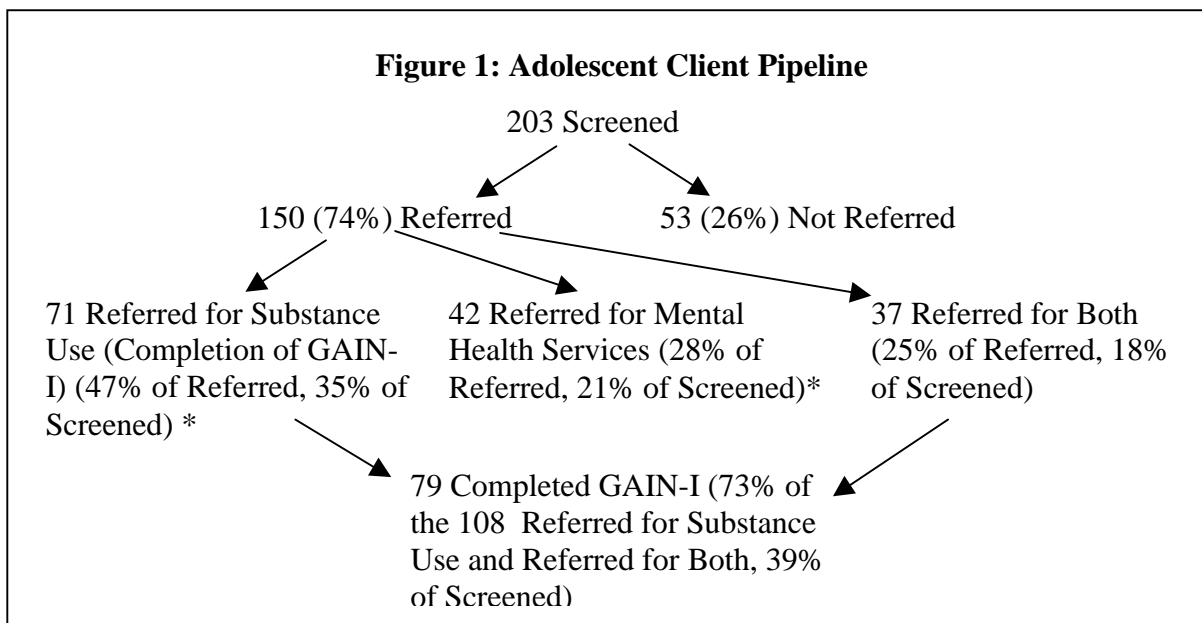
Chestnut staff traveled to Macon County Court Services on 13 occasions from October 2000 to March 2001 to screen juvenile offenders involved with probation. Table 1 displays the data collection dates and numbers of completed screenings.

Table 1: Number of Completed Screenings by Date, N=203

<u>Date</u>	<u># Screenings</u>	<u>Date</u>	<u># Screenings</u>
10/28/2000*	22	2/10/2001	20
11/30/2000	17	2/15/2001	3
12/2/2000	21	2/24/2001	22
1/13/2001	28	3/17/2001	9
1/17/2001	16	3/28/2001	1
1/27/2001	34	3/29/2001	1
1/31/2001	9		

*Data collection took place prior to development of the Case Disposition form.

Following completion of the GAIN-QS, staff members recorded their recommendations on the need for further assessment and/or services on the Case Disposition form at the end of the instrument. Figure 1 displays the youth client pipeline, detailing the numbers of youths referred for substance use assessment (i.e., to complete a GAIN-I) and/or for further mental health services, and those who completed the GAIN-I. The pipeline information defines the various groups of youths whose data was analyzed to answer specific evaluation questions.



*Staff members could refer clients for *both* substance use assessment and mental health services despite the construction of the Case Disposition form.

D) Data Quality Assurance

Data quality assurance was provided on two levels. First, Ms. Michelle White of the project’s research team reviewed all completed GAIN-QS instruments to check for accuracy in completion. The instruments were sent to Lighthouse Institute in eight batches. After reviewing each batch, Ms. White prepared written feedback for the project’s adolescent clinical supervisor to share with all interviewers. Examples of issues noted included leaving items blank, not filling out the Case Disposition form at the end of the GAIN-QS, writing peoples’ names in the “custody” item rather than relationships, and illegible handwriting that made data entry difficult. Nevertheless, the rate of missing or inaccurate data in the database was much higher than that typically encountered in research projects and required considerable staff time to remediate. Fortunately, an adolescent clinical staff coordinator kept track of the outcomes of each screened adolescent, so much of the missing Case Disposition data was reconstructed through that document.

Dr. Titus provided a second level of data quality assurance. This entailed cleaning the data prior to analyses, checking for out-of-range values, checking the instrument data against the database for suspicious values and replacing were necessary, and tracking down and replacing missing data.

IV) Results

A) What are the demographic and clinical characteristics of Macon County youths involved with probation?

1) **General Demographics.** Table 2 displays a selection of the sample's general demographic characteristics outlined below. A total of 203 adolescents (77.8% males, 22.2% females) were screened in probation between October 28, 2000 and March 29, 2001. The sample was composed nearly equally of Black/African-American and White youths (47% and 46.5% respectively), with the remaining youths largely from Biracial or Mixed ethnicities (e.g., White/Native American, Black/Native American, Black/White). English was the first language for all but one youth, who was from a biracial (White/Native American) background. Youths ranged in age from 10 years to 19 years, with an average age of 15.2 years. Of the 200 youths under the age of 18, valid custody data was available on 154. Of these youths, most (57.1%) were in the custody of a single parent -- most often a mother, but also fathers and stepfathers. Only 20.8% of the youths were in the custody of both parents, either biological or step, living together or not. Ten percent of a larger slice of the sample (N=201) indicated they were currently living in foster care, a group home, or were a ward of the state.

Table 2: Demographics on Macon County Youths Screened in Probation (N=203)

Variable/Values	N	%
Gender		
Males	158	77.8
Females	45	22.2
Race/Ethnicity (N=202)		
Black/African-American	95	47.0
White	94	46.5
Hispanic	1	0.5
Biracial/Mixed	12	5.9
Age at Screening		
10 years	2	1.0
11 years	2	1.0
12 years	6	3.0
13 years	24	11.8
14 years	23	11.3
15 years	51	25.1
16 years	55	27.1
17 years	37	18.2
18 years	2	1.0
19 years	1	0.5

Table 2, Continued

Variable/Values	N	%
Custody (N=154 under age 18 w/valid data)		
Two parents	32	20.8
Single parent	88	57.1
Grandparent	15	9.7
Other family members	8	5.2
DCFS	10	6.5
Self	1	0.6
In Foster Care/Group Home		
/Ward (N=201)	20	10.0
On Probation/Parole (N=201)	156	77.6
Highest Grade Completed		
2nd	1	0.5
3rd	2	1.0
4th	1	0.5
5th	8	3.9
6th	25	12.3
7th	36	17.7
8th	42	20.7
9th	47	23.2
10th	31	15.3
11th	10	4.9
In School or Training (N=201)	177	88.1
Working (N=201)	46	22.9
School X Work (N=201)		
School only	144	71.6
Work only	13	6.5
Both school and work	33	16.4
Neither school nor work	11	5.5

Approximately 88% of the youths reported they were currently in school or training, and the highest grade completed ranged from 2nd to 11th. The average age-for-grade was computed and, after correcting for the year lag between current age and last grade completed, the average-age-for-grade was high for the 2nd grade (12 years, N=1) and 5th grade (13.13 years, N=8). None of the youths had yet graduated from high school. Nearly 72% of the youths reported being in

school only, 16.4% were in school and worked, 6.5% held jobs only (i.e. did not attend school), and 5.5% neither attended school nor worked. Overall, approximately 23% of the sample held a job.

Nearly 78% of the youths indicated they were currently on probation or parole. This is not inconsistent with the nature of the sample, as some of the youths screened were on “pending” status, awaiting a court date to determine whether or not they would go on probation. Approximately 33% of the youths reported having been arrested five or more times in their lifetime.

2) Substance Use. Table 3 displays self-reported drug and alcohol use during the previous 90 days. Most (55.7%) reported using tobacco, while close to half (44.3%) reported using marijuana. More youths reported using marijuana than alcohol (30.5%), a pattern that is typical for adolescent users. Very few (1%) reported using harder drugs.

**Table 3: Self-Reported Substance Use During Past 90 Days --
Macon County Youths Screened in Probation (N=203)**

Substance	N	%
Smoke or use any tobacco	113	55.7
Drink beer, wine, or any alcohol	62	30.5
Smoke or use any marijuana, blunts, hashish	90	44.3
Use LSD, cocaine, heroin, ecstasy, inhalants or any other drug (N=202)	2	1.0

The self-reported drug use results may be a lower bound for actual drug use during the previous 90 days. As part of their assessment, youths also completed a urine test to screen for a variety of drugs (amphetamines, alcohol, THC, benzodiazepines, cocaine, opiates, barbiturates). Creatinine levels were also checked for evidence of tampering with the urine sample (through dilution or adding chemicals). In 26 cases, youths who were initially *not* recommended for further assessment based on self-reported GAIN-QS information or other sources of referral were eventually referred to complete a GAIN-I due to positive urine screens. Most of these youths indicated they had not used alcohol (80.8%) or marijuana (53.8%) during the past 90 days. In addition, there was evidence of dilution in 7 cases. This rate of dilution is much higher than that observed in a current study that monitors over 1000 adolescents who have been through drug treatment (WESTAT, 2001). Of the approximately 200 adolescents in the PETSAs study (Persistent Effects of Treatment Study for Adolescents) who have completed their 24 or 30 month follow-up assessments to date, evidence of dilution has been observed in only one case.

3) Urine Test Results. Urine test results for the screened youths with valid data (N=151) yielded 58.3% with negative tests, 37.1% with positive tests, and 4.6% with diluted tests. In all cases, tests were positive for marijuana only. Table 4 shows a comparison between self-reported marijuana use during the past 90 days with urine test results. In most cases (72.2%), urine test results were consistent with self-reported use. Urine test results and self-reports generally have good agreement, though the discrepancy between them grows when the context of the self-report may lead to consequences. In nearly 13% of the cases, youths self-reported use during the past 90 days but came up negative in their urine test, and in nearly 11% of the cases, youths self-

reported no use during the past 90 days but came up positive in their urine test. Similar percents of indeterminate/diluted tests were reported for both self-reported using and non-using.

It is not unheard of for youths who self-report use during the past 90 days to come up negative. The range of time that marijuana metabolites stay in the body following use varies enormously. Metabolites are absorbed into the fat cells of the body and dissipate only as fat is burned. Individual factors such as physical activity, the amount of water consumed, illness, and weight loss can have enormous effects on the range of time that metabolites remain in the body. Metabolites from marijuana use begin to appear in urine approximately 12 to 24 hours following use and have been demonstrated to stay in the body in minute amounts (5+ ng/ml) for 77 days in controlled environments. Among people who use marijuana weekly or more often, the level of metabolites will generally remain over the National Institute on Drug Abuse/Substance Abuse and Mental Health Services Administration (NIDA/SAMHSA) recommended cut-off for a positive test (50+ ng/ml) for a period of one to four weeks. Among experimental or infrequent users, metabolites can reliably be detected in urine for seven days, though some who have used marijuana during the past one to four weeks may still show up positive. Secondary smoke from marijuana can lead to very low levels of metabolites in urine but they would not reach the recommended cut-off for a positive test. See Buchan, Dennis, Tims, and Diamond (under review) for further information on the consistency and validity of urine testing for marijuana use.

Table 4: Percent of Screened Youths Self-Reporting Marijuana Use During the Past 90 Days by Urine Test Results (N=151)

	Self-Report		
	Yes MJ	No MJ	
Urine +	26.5	10.6	37.1
Urine -	12.6	45.7	58.3
Indeterminate	2.6	2.0	4.6
	41.7	58.3	

4) School, Work, Violence, & Criminal Justice. Table 5 displays a sampling of past year behaviors for the group related to school or work, violent behavior, and experiences with the juvenile criminal justice system. Most students found school or work dull, had gotten bad grades or evaluations at school or work, had been absent for more than two days when not sick, and had been suspended or fired. Close to half (44.7%) reported skipping school or work. Just over a quarter of the youths had attacked someone, while over 31% had been attacked. Half of the youths (50.3%) had spent time in a controlled environment during the past year, including not only jail or detention, but also treatment programs or hospitals. Just over 80% reported being arrested in the past year. This last result is specious, as according to a Macon County probation officer familiar with the project, all of the youths most likely would have been arrested during the past calendar year. A trend indicating younger respondents were more likely to answer the item “no” was found ($p < .09$). Also, it is possible that those answering “no” were interpreting the item very concretely. That is, according to the adolescent clinical coordinator for the project, when youths she interviewed answered that item “no” and she questioned them about it, the youths reported thinking that the item meant “have you been arrested in the year 2000”, the “past year”.

Table 5: Past Year School, Work, Violent, and Criminal Justice Experiences Among Macon County Youths Screened in Probation (N=203)

Item	N	%
Found school or work dull (N=200)	101	50.5
Gotten bad grades at school/work (N=199)	135	67.8
Been absent 2+ days when not sick (N=199)	124	62.3
Been suspended/fired (N=199)	116	58.3
Skipped school/work (N=199)	89	44.7
Attacked someone (N=201)	52	25.9
Been attacked by someone (N=201)	63	31.3
Been arrested (N=197)	158	80.2
Been in a controlled environment (N=201)	101	50.3

5) Sources of Stress. Table 6 displays the percent endorsement of relationship and environmental sources of stress among the 203 youths during the past year. Nearly one-third of the youths reported being under stress from the death of a family member or close friend. This is followed by health problems in a family member or close friend (22.7%) and fights with a teacher or boss (20.2%) as the most-cited sources of stress. Under environmental stress, the most-cited sources were a new job, position, or school (21.7%), major change in housing (18.2%), and problems with transportation (17.7%).

Table 6: Percent of Past Year Sources of Stress Among Macon County Youths Screened in Probation (N=203)

Item	N	%
Relationship Stress		
Birth or adoption of new family member	15	7.4
Health problem in family/close friend	46	22.7
Major change in relationship	22	10.8
Death in family/close friend	62	30.5
Fights with teacher/boss	41	20.2
Other changes in primary support (N=200)	24	12.0
Environmental Stress		
Major change in housing	37	18.2
New job, position, or school	44	21.7
Hard work or school schedule	25	12.3
Problems with transportation	36	17.7
Discrimination	14	6.9
Threat of losing housing/job/school/transp.	11	5.4
Interruption/loss of housing/job/school/tranp.	10	4.9
Other environmental demands (N=201)	9	4.5

6) Victimization. Nearly 18% of the youths reported being attacked with a weapon, beaten, sexually abused, or emotionally abused during the past year, with no significant difference between the rates of boys' and girls' reporting (16.1% and 22.2%, respectively). Regarding current worries of victimization, 6.9% of the youths reported being worried that someone might attack them with a weapon, 5.4% were worried that someone might beat them, one girl (.5%) was worried that she might be forced into sex, and 4.4% reported being worried about emotional abuse.

7) Physical Health. Most youths (87.2%) reported having good, very good, or excellent physical health during the past year. Even so, one-fifth of the youths (20.7%) reported their activities had been limited at some point during the past year by their health. Table 7 displays the percent of youths reporting past-year health concerns. The concern reported most often was losing or gaining 10 or more pounds without trying, reported by 42% of the youths. There was no significant difference between boys' and girls' answers to this item.

Table 7: Percent of Youths Reporting Past Year Health Concerns (N=203)

Item	N	%
Lost/gained 10+ pounds w/o trying (N=200)	84	42.0
A lot of physical pain or discomfort	32	15.8
Worried about health or behaviors (N=202)	40	19.8
Health problems kept from responsibilities	28	13.8
Lung or breathing problems	35	17.2
Pain on urination	9	4.4
Coughed up or urinated blood	6	3.0

8) Clinical Characteristics. The GAIN-QS contains 12 clinical scales. The Internal Behavior Index has three subscales: Depression Symptom Index, Suicide Risk Index, and Anxiety Symptom Index. The External Behavior Index also has three subscales: Attention-Deficit Hyperactivity Disorder (ADHD) Index, Conduct Disorder-Aggression Index, and General Crime Index. The Substance Problem Index has two subscales: Substance Use and Abuse Index and Substance Dependence Index. The instrument's total scale index is the Total Symptom Severity Index. A list of the GAIN-QS item numbers that compose each clinical scale is included in the Appendix. Further information on the GAIN-QS clinical scales is found in the administration and scoring manual (Titus & Dennis, 2000).

For each of the GAIN-QS clinical scales, the numbers of screened youth falling into each of the scoring categories (Minimal, Clinical, High, and Acute) are displayed in Table 8.

**Table 8: Percent of Macon County Juvenile Offenders in GAIN-QS
Clinical Categories by Scale (N=203)**

	Minimal	Clinical	High	Acute
Internal Behavior Index	63.5	28.1	7.4	1.0
Depression Symptom Index	71.9	14.3	5.9	7.9
Suicide Risk Index	95.6	1.0	2.5	1.0
Anxiety Symptom Index	49.8	30.5	16.3	3.4
External Behavior Index	32.5	38.9	20.7	7.9
ADHD Index	45.8	16.7	28.1	9.4
CD-Aggression Index	35.5	18.7	30.5	15.3
General Crime Index	24.6	45.3	22.2	7.9
Substance Problem Index	75.4	15.8	5.9	3.0
Substance Use and Abuse Index	70.0	17.2	9.9	3.0
Substance Dependence Index	79.8	13.8	3.9	2.5
Total Symptom Severity Index	61.1	31.0	6.9	1.0

Scores falling into the Clinical, High, or Acute categories warranted referral to complete the GAIN-I and/or referral to a mental health provider. Thus, these categories are called the “referral” categories. Over one-third (36.5%) of the youths’ scores warranted referral for internal behavior problems, with 4.4% expressing heightened suicide risk, 28.1% reporting elevated symptoms of depression, and 50.2% reporting elevated symptoms of anxiety. Over two-thirds (67.5%) of the scores warranted referral for external behavior problems, with 54.2% reporting elevated ADHD symptoms, 64.5% referable for conduct disorder and aggression symptoms, and 75.4% with heightened crime behaviors. Nearly one-quarter (24.6%) of youths reported problematic symptoms of substance use – 30% with symptoms of substance use and abuse, and 20.2% with symptoms of substance dependence. Overall, 38.9% of the youths’ total scores were in the referral categories.

When viewed by gender, an interesting pattern of results appears. Table 9 displays the mean scores on each of the clinical scales for girls, boys, and the entire sample. The level of significance between the boys’ and girls’ mean scores is also displayed.

Table 9: Average Scores on the GAIN-QS Clinical Scales for Boys, Girls, and Total Sample

	Boys (N=158)	Girls (N=45)	Total (N=203)	Sig.
Internal Behavior Index	2.43	4.98	3.00	****
Depression Symptom Index	0.80	1.89	1.04	**
Suicide Risk Index	0.03	0.31	0.09	****
Anxiety Symptom Index	1.60	2.78	1.86	****
External Behavior Index	5.49	5.87	5.57	ns
ADHD Index	1.94	2.09	1.98	ns
Conduct Disorder-Aggression Index	2.39	2.69	2.45	ns
General Crime Index	1.16	1.09	1.15	ns
Substance Problem Index	2.28	2.93	2.42	ns
Substance Use and Abuse Index	1.61	1.84	1.67	ns
Substance Dependence Index	0.66	1.09	0.76	ns
Total Symptom Severity Index	10.20	13.78	11.00	**

=p<.02; **=p<.001

The mean scores for girls on all of the internal behavior problem scales are significantly higher than those for the boys. There were no differences by gender on the external behavior problem scales or the substance problem scales. Overall, girls' total scores were significantly higher than the boys'.

When asked about previous treatment for mental health issues, 42.8% of the 201 youths with valid answers indicated they had indeed received treatment for their mental health (39.7% of the boys, 53.3% of the girls, $p<.10$ with girls reporting more treatment). Regarding previous treatment for substance abuse, 18% of the 200 youths with valid answers had received treatment (17.4% of the boys, 20% of the girls, difference is not significant).

Youths were also asked whether they wanted help with their problems. Of the 202 youths providing valid answers, 34 (16.8%) requested help, with significantly more girls than boys making this request ($p<.01$). For what did these youths request assistance? Many youths provided more than one request. The topic of their requests for help are displayed in Table 10.

Table 10: Requests for Help by 34 Youths

Topic of Request for Help	N Requests	% Requests
Drug use/abuse (marijuana, alcohol, cigarettes)	20	48
Anger management (temper, fighting)	12	29
Mental/Emotional health problems ("attitude adjustment", depression, sexual behavior problems)	8	19
School	1	2
Stay out of trouble	1	2
Total	42	100

“Anger management” was separated from the more general “Mental/Emotional health problems” because it was mentioned so often. However, if those two categories were combined, the requests for help would be evenly split between requests for help with substance use problems (20) and requests for help with mental health problems (20).

B) How many and on what bases were youths referred for substance abuse and/or mental health treatment?

Of the 203 youths screened, 150 (74%) were referred (a) for further assessment on substance abuse issues (N=71), (b) to another agency for mental health services (N=42), or (c) for *both* substance abuse assessment and to another agency for mental health services (N=37). Reasons for referral can be diverse, based not only on information gained during a screening session, but also on information gained through records, speaking with family, through urine test results, or other channels. On what bases were the 150 Macon County youths referred?

Table 11 displays the percent of youths in each referral group (referred for assessment because of substance use only, referred for mental health services only, or referred for both substance use assessment and mental health services) whose referrals were based on specific sources. The sources of referral are from the Case Disposition form at the end of the GAIN-QS.

Table 11: Percent of Youths in Each Referral Group Whose Referrals Were Based on Specific Sources

	SA Only (N=61) [#]	MH Only (N=13) [#]	SA and MH (N=35) [#]	All (N=109) [#]
Scores on GAIN-QS	41.0	46.2	80.0	54.1
Other GAIN-QS Info	14.8	38.5	48.6	28.4
Discussion with PO	3.3	0.0	5.7	3.7
Discussion with Family	6.6	38.5	22.9	15.6
Discussion with Employer	0.0	7.7	0.0	0.9
Info from CJ Records	1.6	7.7	14.3	6.4
Info from School Records	0.0	0.0	0.0	0.0
Info from Counseling Records	0.0	0.0	0.0	0.0
Positive Urine Screen	42.6	0.0	5.7	25.7
Other	18.0	23.1	20.0	19.3

[#]Percents are based on the number of valid cases. Sample size per group was smaller due to missing data.

Note: Each reason for referral is treated individually as any combination of reasons could be endorsed. Thus, each cell can have a percent up to 100.

Overall, most referrals were based on information obtained through the screening instrument (54.1% on screener scores, 28.4% on other information on the screener) or positive urine tests (25.7%). Information on the GAIN-QS (scores and other information) was a strong basis for referral across all referral groups, while not surprisingly, a positive urine test was a strong basis for referral in the “substance use only” group. “Discussion with family” was a basis for referral

in the “mental health only” group, while “information from school records” and “information from counseling records” were not cited at all. Not surprisingly, “discussion with employer” was cited very little, given most youths do not hold jobs.

“Other” sources of referral were cited similarly across the referral groups and included diluted urine screens, counselor impression of minimizing and/or staff discretion, youth request, youth’s history of unsuccessful treatment, youth smelling of alcohol, youth talking a lot about suicide, and youth’s drug-related legal charge.

A number of referrals took place only after urine test results were available. Of the 108 youths who were referred for either substance abuse treatment alone (71) or for both substance abuse and mental health services (37), 26 (24.1%) were initially *not* referred for treatment or services. Their referrals came only after positive or diluted urine test results were reported.

C) How do the demographic and clinical characteristics of youths referred for additional assessment and/or mental health services compare with those of youths not referred?

1) General Demographics. As mentioned above, 150 of the 203 screened youths (74%) were referred for further assessment and/or services. Most of the demographics discussed below are displayed in Table 12.

The referred and non-referred groups were similar in gender mix, race/ethnicity, and in-school status, with the majority of both groups enrolled in school only. There was a non-significant trend ($p < .09$) in favor of the referred group being slightly older than the non-referred group (average ages 15.27 years and 14.85 years, respectively). The referred group was more likely to hold jobs and, not surprisingly, was significantly more likely to request help for their problems than was the non-referred group.

Table 12: Demographics on Referred and Non-Referred Youths

Variable/Values	% Referred (N=150)[#]	% Non-Referred (N=53)[#]	Sig.
Gender			ns
Males	77.3	79.2	
Females	22.7	20.8	
Race/Ethnicity			ns for black/white
Black/African-American	49.6	39.6	
White	45.6	49.1	
Hispanic	0.0	1.9	
Biracial/Mixed	4.7	9.4	
In School or Training	86.6	92.3	ns
Working	26.8	11.5	*

Table 12, Continued

School X Work			ns
School only	67.1	84.6	
Work only	7.4	3.8	
Both school and work	19.5	7.7	
Neither school nor work	6.0	3.8	
Want help with problems	20.1	7.5	*

[#]Ns vary slightly by item; *= $p < .05$; ns=not significant

2) Substance Use. Table 13 displays substance use reported by the referred and non-referred groups during the 90 days prior to the screening. The referred youths more often reported using tobacco (63.3% of referred youths), alcohol (38%), marijuana (56%), and other drugs (1.3%) than the non-referred youths (34%, 9.4%, 11.3%, and 0%, respectively). These differences were significant for all drugs except the harder drugs.

Table 13: Self-Reported Substance Use During Past 90 Days for Referred and Non-Referred Youths

Substance	% Referred (N=150)[#]	% Non-Referred (N=53)[#]	Sig.
Smoke or use any tobacco	63.3	34.0	*****
Drink beer, wine, or any alcohol	38.0	9.4	*****
Smoke or use any marijuana, blunts, hashish	56.0	11.3	*****
Use LSD, cocaine, heroin, ecstasy, inhalants or any other drug (N=202)	1.3	0.0	ns

[#]Ns vary slightly by item; *****= $p < .000$; ns=not significant

3) Clinical Characteristics. Scores on the GAIN-QS's 12 clinical scales were compared for the referred and non-referred groups and are displayed in Table 14. Significantly higher scores for the Referred group were observed on the External Behavior Index, the Conduct Disorder-Aggression Index, the three substance use scales (Substance Problem Index, Substance Use and Abuse Index, and Substance Dependence Index), and the overall Total Symptom Severity Index. In addition, a trend for higher scores for the referred group was observed on the Depression Symptom Index ($p < .10$).

**Table 14: Average Scores on the GAIN-QS Clinical Scales
for Referred and Non-Referred Youths**

	Referred (N=150)	Non-Referred (N=53)	Sig.
Internal Behavior Index	3.18	2.47	ns
Depression Symptom Index	1.13	0.79	ns
Suicide Risk Index	0.10	0.05	ns
Anxiety Symptom Index	1.95	1.62	ns
External Behavior Index	5.97	4.43	***
ADHD Index	2.09	1.66	ns
Conduct Disorder-Aggression Index	2.68	1.81	****
General Crime Index	1.21	0.98	ns
Substance Problem Index	3.09	0.55	*****
Substance Use and Abuse Index	2.11	0.42	*****
Substance Dependence Index	0.98	0.13	*****
Total Symptom Severity Index	12.25	7.43	*****

=p<.01; *=p<.001; *****=p<.000

Results for the Referred and Non-Referred groups are displayed by gender in Table 15. Here, the significance between Girls' and Boys' scores within each referral group is shown. For the Referred group, girls had significantly higher scores than boys on the Internal Behavior Index, the Depression Symptom Index, the Suicide Risk Index, the Anxiety Symptom Index, and the Total Symptom Severity Index. These results mirror those in Table 9, the differences by gender for the entire screened group. On the other hand, for the Non-Referred group, no significant differences were observed between boys and girls on any of the GAIN-QS scales. However, a trend in favor of higher scores for girls was observed on the Depression Symptom Index (p<.09).

Table 15: Significance Levels on Differences Between Boys' and Girls' Average GAIN-QS Scores, Referred and Non-Referred

	Referred Boys vs. Girls [#]	Non-Referred ⁺ Boys vs. Girls ⁺
Internal Behavior Index	*****	ns
Depression Symptom Index	*****	ns
Suicide Risk Index	*	ns
Anxiety Symptom Index	****	ns
External Behavior Index	ns	ns
ADHD Index	ns	ns
Conduct Disorder-Aggression Index	ns	ns
General Crime Index	ns	ns
Substance Problem Index	ns	ns
Substance Use and Abuse Index	ns	ns
Substance Dependence Index	ns	ns
Total Symptom Severity Index	*	ns

[#] N of boys=116, N of girls=34; ⁺ N of boys=42, N of girls=11; *= $p < .05$; **= $p < .02$;

= $p < .01$; *= $p < .001$; *****= $p < .000$; ns=not significant

D) How does the Macon County sample of referred and assessed youths compare with samples of youths enrolled in substance abuse treatment?

1) Comparison Samples. Of the 108 youths who were referred to complete a GAIN-I (71 for substance abuse issues, 37 for both substance abuse and mental health issues), 79 (73%) completed the assessment, the parent instrument of the GAIN-QS. (The remaining 29 youths who did not complete a GAIN-I could not stay for the assessment, did not return for the assessment, or could not be reached for an appointment.) Data from these 79 youths was compared with GAIN-I data from youths involved in two other Illinois studies. Both comparison samples are composed of adolescents who were enrolled in substance abuse treatment. Their comparison data was collected prior to their treatment.

Six hundred adolescents in four sites across the United States took part in the Cannabis Youth Treatment (CYT) study (Dennis et al., under review). Of these, 150 were recruited in Madison County, Illinois and received treatment through Chestnut Health Systems' Maryville, Illinois facility. Adolescents in the CYT study were recruited between the ages of 12 and 18 and were appropriate for outpatient treatment (level one or two in ASAM placement criteria). Adolescents at this level have well-defined needs for treatment, but are typically not abusing at a high frequency and not using "harder" drugs. Psychologically, they often have mental health difficulties such as ADHD, conduct disorder, depression, and anxiety, but are non-predatory and stable enough to meet periodically in a group format if necessary. The CYT group is used as the "level one-to-two" standard in the comparisons that follow. The Illinois branch of the CYT study was led by Drs. Susan and Mark Godley of Chestnut's Lighthouse Institute.

Adolescents in the Assertive Aftercare Project (AAP) (Godley, Godley, & Dennis, in press) are currently being recruited from 13 counties across central Illinois. Data from 161 participants between the ages of 12 and 18 was used in the comparisons below. Adolescents in the AAP study are in residential treatment (level three in ASAM placement criteria). At this level, adolescents are more severely involved with drugs and alcohol in terms of more frequent use and/or the use of “harder” drugs. Their psycho-social profiles make them unsuitable to meet periodically on an outpatient basis. The AAP group is used as the “level three” standard in the comparisons that follow. The AAP study is also led by Drs. Susan and Mark Godley of Chestnut’s Lighthouse Institute.

2) General Demographics. Table 16 displays the gender, ethnicity, and age data of the three groups. The gender mix across the three samples was similar. Though non-significant, a trend ($p < .07$) was observed with the AAP adolescents appearing older than the other two groups. When the average ages of the Macon County, CYT, and AAP groups were compared (15.58 years, 15.73 years, and 16.26 years, respectively), the AAP adolescents were indeed significantly older than the Macon County and CYT adolescents ($p < .05$). Regarding race and ethnicity, the Macon County sample had significantly more Black/African-Americans than the CYT and AAP samples, which were primarily composed of White adolescents.

Table 16: Percent Comparisons of Macon County Assessed Youths’ Demographics with Demographics of Youths from Two Illinois Studies

Variable/Values	Macon Co. (N=79)	CYT (N=150)	AAP (N=161)	Sig.
Gender				ns
Males	74.7	75.3	73.3	
Females	25.3	24.7	26.7	
Race/Ethnicity				*****
Native/Alaskan	0.0	0.0	1.2	
Asian/Pacific Is.	0.0	0.7	0.6	
Black/African-Amer.	45.6	14.0	19.3	
White	51.9	82.0	71.4	
Hispanic	0.0	1.3	2.5	
Other/Mixed	2.5	2.0	5.0	
Age				ns
under 15 years	16.5	14.0	8.1	
15-18 years	82.3	86.0	91.9	
19-29 years	1.3	0.0	0.0	

*****= $p < .000$; ns=not significant

3) Substance Use. Table 17 displays the groups' self-reported weekly substance use during the 90 days prior to their GAIN-I assessment. ("Weekly" substance use means the drug was used 13 or more times during the 90 day period.) The Macon County group is similar to both the CYT and AAP groups in weekly marijuana use. (Though non-significant, a trend was observed for the CYT group using the most marijuana ($p < .06$)). Use of heroin/opiate and other drugs was also similar across the three groups, though the overall usage was very low. The Macon County group used significantly less alcohol than the CYT and AAP groups, and the AAP group used significantly more cocaine than the Macon County and CYT groups.

Table 17: Percent of Weekly[#] Substance Use by Macon County Assessed Youths and Youths in Two Illinois Studies

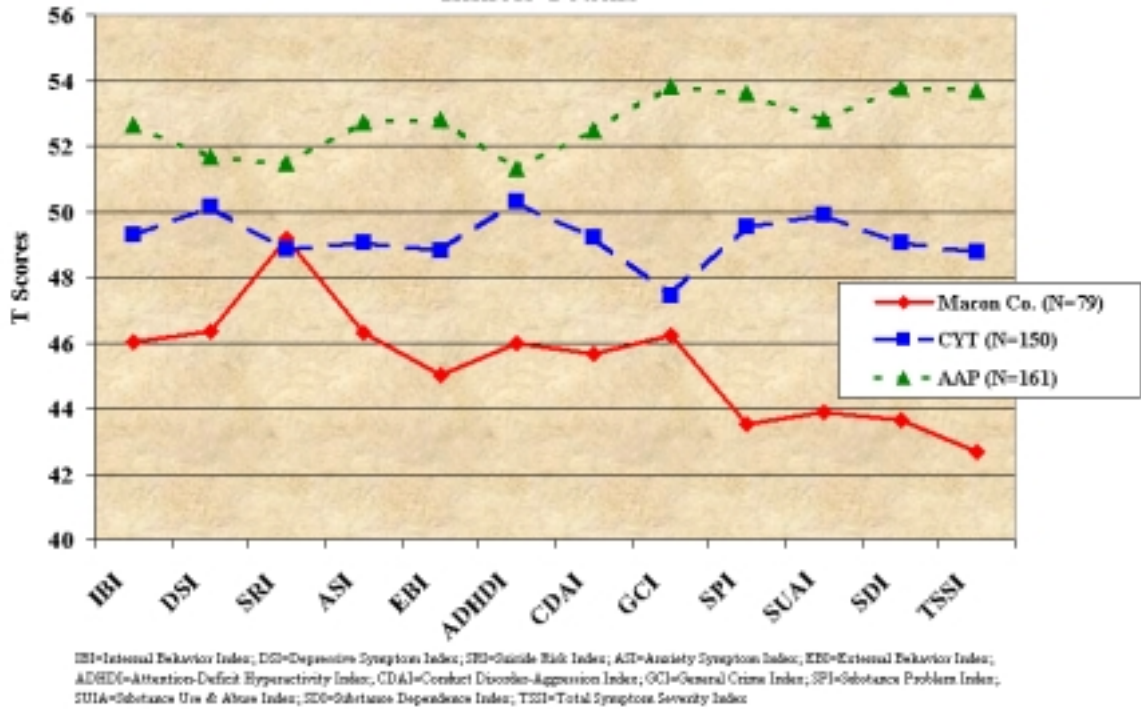
Substance	Macon Co. (N=79) [§]	CYT (N=150)	AAP (N=161) [§]	Sig.
Alcohol	14.1	22.0	28.3	*
Marijuana	50.0	64.0	53.1	ns
Cocaine	1.3	0.0	7.5	****
Heroin/Opiate	0.0	0.0	0.6	ns
Other Drugs	1.3	0.7	4.4	ns

[#]"Weekly" substance use is defined as using a substance 13 or more times in the past 90 days; [§] Ns vary slightly across substances; *= $p < .05$; ****= $p < .001$

4) Clinical Characteristics. All three groups completed the GAIN-I instrument. On the clinical comparisons that follow, data collected via the GAIN-I was used to compute the 12 GAIN-QS scale scores that have been previously introduced.

Because the total raw scores on the clinical scales varies from a low of 5 to a high of 47, it would be difficult to visually compare the three groups' scores across scales in a meaningful way. Thus, raw scale scores were converted to T scores, which have a mean of 50 and a standard deviation of 10. The T score metric was used so that all clinical scale scores could be compared on the same scale. Figure 2 displays a profile of the three groups' average T scores on the GAIN-QS clinical scales. Higher scores signify more severe behaviors.

Figure 2: Average T Scores on GAIN-QS Scales for Three Groups of Illinois Youths



The Macon County group appears most similar to the CYT group on the internal behavior scales (Internal Behavior Index, Depression Symptom Index, Suicide Risk Index, Anxiety Symptom Index). Their profile drops further from the CYT group on the external behavior scales (External Behavior Index, Attention-Deficit Hyperactivity Disorder Index, Conduct Disorder-Aggression Index, General Crime Index), and further still on the substance use scales (Substance Problem Index, Substance Use and Abuse Index, Substance Dependence Index). The Macon County group appears to be most like the CYT group on the Suicide Risk and General Crime Index.

Table 18: Average Scores on GAIN-QS Scales for Three Groups of Illinois Youth

Scale	Macon Co. (N=79)[§]	CYT (N=150)[§]	AAP (N=161)[§]	Sig.
Internal Behavior Index	2.54	3.76	5.03	*****
Depressive Symptom Index	1.08	1.68	1.92	*****
Suicide Risk Index	0.13	0.11	0.27	*
Anxiety Symptom Index	1.34	1.97	2.81	*****
External Behavior Index	4.93	6.56	8.29	*****
ADHD Index	1.76	2.65	2.86	****
CD-Aggression Index	2.27	2.96	3.60	*****
General Crime Index	0.73	0.91	1.80	*****
Substance Problem Index	5.71	8.40	10.24	*****
Substance Use and Abuse Index	3.58	5.07	5.80	*****
Substance Dependence Index	2.05	3.33	4.44	*****
Total Symptom Severity Index	12.67	18.77	23.69	*****

[§]Total Ns vary slightly across scales with the largest drop for the Macon County group's EBI and TSSI (N=54);
 *=p<.05; ****=p<.001; *****=p<.000

Differences between the groups' mean raw scores on each scale were also inspected for significance. As shown in Table 18, significant differences existed between the groups on all but the Suicide Risk Index, though there was a trend toward significance (p<.051). When inspected more closely, the following similarities and differences emerge:

- 1) All three groups are significantly different from each other on the Internal Behavior Scale, External Behavior Scale, Conduct Disorder-Aggression Scale, Substance Problem Index, Substance Use and Abuse Index, Substance Dependence Index, and the Total Symptom Severity Index. In all cases, the AAP group was the most severe, the Macon County group was the least severe, and the CYT group was in the middle.
- 2) The AAP group was significantly more severe than both the CYT and Macon County groups on the Anxiety Symptom Index and General Crime Index, but there was no difference between the CYT and Macon County groups on these scales.
- 3) The Macon County group was significantly less severe than the AAP and CYT groups on the Depression Symptom Index and the Attention-Deficit Hyperactivity Disorder Index, and there was no difference between the AAP and CYT groups on these scales.
- 4) The Suicide Risk Index showed marginally significant results overall (p<.051), with a trend toward a significant difference between the CYT and AAP groups (p<.055), but no differences observed between those two groups with the Macon County group.

Given the significant difference in racial composition between the three groups (the Macon County sample was composed of approximately half African-American and half White youths, while the comparison samples were composed primarily of White youths), the clinical characteristics data was rerun for the Macon County group, comparing scores for African-

American and White youths. No significant differences between these groups were found on any of the clinical scales.

E) For those youths referred to Chestnut Health Systems for treatment, what was the linkage rate to treatment?

As mentioned above, of the 108 youths referred to complete the GAIN-I for further assessment on substance abuse issues, 79 (73%) completed the instrument. At the end of the GAIN-I, Chestnut staff recorded further treatment-related recommendations on a Case Disposition form. Table 19 displays the recommendations for the 79 youths.

Table 19: Percent of Youths Referred to Area Agencies (N=79)

		Referred to Chestnut		
		Yes	No	
Referred Elsewhere	Yes	16.4	69.6	86.1
	No	7.6	6.3	
		24.1		

Approximately 24% of the youths were referred to Chestnut Health Systems for substance abuse treatment, while 86% were referred to a variety of other agencies for substance abuse treatment, mental health services, or both. The other referred programs are located at Heritage Behavioral Health, St. Mary’s Hospital, Decatur Memorial Hospital, Triangle, Gateway, and the TRG group at Macon County Probation. Referrals to agencies were based on need and location. The Chestnut facility in central Illinois is located further from Macon County than the remaining agencies and is the only area adolescent substance abuse program with a residential unit. Some youths were referred both to Chestnut and to other agencies (16.4%), while very few (6.3%) were not referred at all. Some youths were already enrolled in treatment or services and were recommended to continue at those agencies.

For what services were the youths referred? Of the 79 referred youths, valid data was available on 45. Of these 45, 48.8% were referred for substance abuse treatment only, 6.6% were referred for mental health treatment only, and 44.4% were referred for both substance abuse treatment and mental health services. Collapsing across the “referred for both” category, 93.2% were referred for substance abuse treatment and 51% were referred for mental health services.

For those youths referred for substance abuse treatment, to what level of service were they referred? Table 20 displays the placement information for 77 youths with valid data.

Table 20: Level of Treatment Recommendations for Youths Referred to Substance Abuse Treatment (N=77)

	N	%
Early Intervention	2	2.6
Outpatient	54	70.1
Intensive Outpatient	8	10.4
Residential	11	14.3
Other	2	2.6

Most youths were referred for outpatient treatment (80.5% outpatient and intensive outpatient). This figure is consistent with national placement estimates for adolescents referred for substance abuse treatment (Dennis, Dawud-Noursi, Muck, and McDermeit, in press). All 11 of the youths referred for residential treatment were referred to Chestnut Health Systems.

Of the 19 youths referred to Chestnut Health Systems, how many entered treatment? A total of three youths from the referred group entered residential treatment as well as one additional youth who was not initially referred to Chestnut. The remainder likely enrolled in programs at St. Mary's Hospital or other treatment programs, or may have chosen to not seek treatment services.

V) Conclusions and Recommendations

A) Conclusions

The majority of youths involved with Macon County Probation appear to have difficulties related to substance use, mental health, or both. Of the 203 youths screened, 74% were candidates for further assessment or services. Of the 150 youths referred, 47% were referred for substance use problems, 28% were referred for mental health services, and 25% were referred for both.

During the 90 days prior to the screening, most of the juveniles reported using tobacco (55.7%), while close to half reported using marijuana (44.3%). Alcohol use during the same time period was reported by 30.5% of the youths, while the use of harder drugs was rarely reported (1%). Thirty percent of the youths reported symptoms of substance use and abuse, while 20.2% reported symptoms of substance dependence. It is likely that some youths underreported their use of drugs. Urine testing identified 33 youths initially not referred for further assessment, either through a positive urine test or through evidence of dilution. All positive tests were positive for marijuana only.

Regarding mental health difficulties, over one-quarter of the screened youths reported elevated symptoms of depression (28.1%), over one-half reported difficulties with anxiety (50.2%) or ADHD (54.2%), over two-thirds were referable for conduct disorder and aggression (64.5%), and over three-quarters reported symptoms of criminal behavior (75.4%). Gender differences in mental health difficulties were found, with girls reporting significantly more internal behavioral problems (depression, suicide risk, anxiety) than boys.

When comparing those youths referred for further assessment or services with those who were not referred, the referred group was slightly older and, not surprisingly, significantly worse-off in terms of drug use and aggressive behavior. The referred girls reported significantly more symptoms of depression, anxiety, and suicide risk than the referred boys.

How do the referred youths who also completed the GAIN-I assessment compare with youths who are in substance abuse treatment? There was no difference between the Macon County youths and the two clinical comparison groups in weekly marijuana use. This is a significant finding given one of the comparison groups (CYT) was recruited for treatment because of their marijuana use, and the other comparison group (AAP) is composed of youths with substance use and mental health problems severe enough to require admission to residential treatment. In terms of clinical characteristics, the Macon County group was similar to the CYT group in reported symptoms of anxiety and crime behaviors. All groups had a similar risk for suicide. On the remaining clinical scales, in most cases the AAP group was the most severe and the Macon County group was the least severe.

One important yet subtle effect that undergirds the results is the possible negative impact of context. It is likely that some of the Macon County youths underreported behaviors, especially those related to drug use. Youths were screened in probation and it is possible they may have misrepresented information out of fear of retribution. By way of comparison, the CYT and AAP youths provided information as part of a research study. Participation was voluntary and took place in a neutral research setting. The CYT youths also received free treatment and urine results were not shared with any other persons or organizations. In sum, the AAP and CYT youths had no incentive to misrepresent information. It is possible the Macon County group may look even more similar to the CYT and AAP youths if they did not perceive their answers could get them in further trouble.

B) Recommendations

It is clear that most of the Macon County screened youths are in need of substance abuse and/or mental health treatment. The following recommendations flow from the process and results of this study and are offered as suggestions on screening, referring, and tracking youths' progress.

- 1) **Screen youths as they enter probation and make referrals immediately.** The youths' difficulties will be known from the beginning of their probation history and attempts to address them will not be delayed. Immediate action also communicates the seriousness of the situation.
- 2) **Use both a screening instrument and urine testing.** Although they largely identify the same youths (72.2% consistency rate in this study), each method also identifies youths not previously identified by the other method (i.e., the screening instrument identified an additional 13% of youths who reported drug and alcohol use during the past 90 days but came up negative, and the urine test identified an additional 11% of youths who reported no use during the past 90 days but came up positive).
- 3) **To minimize misrepresentation of drug use, obtain and test urine prior to the screening instrument.** This can be done with on-site tests. The interviewer could say, "We need to obtain and test a urine sample. Before we do that, is there any drug use that will show up on it?" This may induce the youth who used and might misrepresent to be truthful about his use, as he knows the truth will be known by the end of the test. If the outcome of the test were not shared until after the assessment, a youth who used and was untruthful might think twice about how to answer the assessment questions, especially if it were communicated that getting caught lying is worse than telling the truth about using. Another alternative is offered that can minimize costs. After asking the youth "Is there any drug use that will show up on it?", if the youth reports any drug use, forgo the urine test and go straight to the screening instrument. If the youth does not report any use, test the specimen before completing the screening instrument.
- 4) **Track youths to make sure the connection is made to treatment.** Require youths to bring in some proof that they have made contact with the provider by a specified time period.
- 5) **Obtain "Release of Information" forms from the provider and have youths sign them.** This will enable the probation officer to track a youth's progress through treatment. (The release forms must be consistent with confidentiality laws for drug, alcohol, and mental health patients.)
- 6) **Track youths' progress through treatment.** Conversations with the provider on youths' attendance and progress keeps the probation officer informed and communicates accountability and interest to youths. Frequent checking in with youths on their progress may even promote attendance.
- 7) **Locate providers who could offer gender-specific services.** As reported here, the referred girls were significantly more internally distressed than the referred boys and may benefit from services that cater to their specific needs.

The results of this project show that the Macon County juvenile probation population is similar in some ways to clinical populations of youths in substance abuse treatment. However, in many important ways, they are not as severe. It is possible the Macon County juveniles could

follow a similar trajectory as the clinical comparison groups if they are not serviced promptly and appropriately.

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V) Appendix

- A) Copy of the GAIN-QS Instrument
- B) GAIN-QS Item Numbers Composing Each Clinical Scale

GF. General Factors

- | | | |
|---|---------------------|-----------|
| 1. In your <u>lifetime</u> , have you ... | <u>Yes</u> | <u>No</u> |
| a. Been treated <u>5 or more times</u> in a hospital or emergency room for physical health problems? | 1 | 0 |
| b. <u>Ever</u> received treatment or counseling for a mental, emotional, behavioral or psychological problem? | 1 | 0 |
| c. <u>Ever</u> received treatment or counseling for alcohol, marijuana or other drugs? | 1 | 0 |
| d. Been stopped by the police or arrested 5 or more times? | 1 | 0 |
| | | |
| 2. During the <u>past year</u> , have you ... | <u>Yes</u> | <u>No</u> |
| a. found school or work dull? | 1 | 0 |
| b. gotten bad grades in school (Ds & Fs) or done badly at work? | 1 | 0 |
| c. smoked cigarettes regularly | 1 | 0 |
| d. been absent 2 or more days from school or work other than when you were sick? | 1 | 0 |
| e. been suspended or expelled from school or laid off or fired from work? .. | 1 | 0 |
| f. skipped or cut school or work? | 1 | 0 |
| g. attacked someone else? | 1 | 0 |
| h. been attacked by someone else? | 1 | 0 |
| i. been arrested? | 1 | 0 |
| | | |
| 3. Are you <u>currently</u> ... | <u>Yes</u> | <u>No</u> |
| a. Going to a school or training program? | 1 | 0 |
| b. Working part or full time? | 1 | 0 |
| c. In foster care, a group home or a ward of the state? | 1 | 0 |
| d. On probation or parole? | 1 | 0 |
| e. Staying overnight in a detention, jail or prison? | 1 | 0 |
| f. Involved in the criminal justice system in some <u>other</u> way? | 1 | 0 |
| g. Involved in a child custody or other civil justice system case? | 1 | 0 |
| | | |
| 4. When was the <u>last time</u> you lived in a place where you were not free to come and go as you please – such as jail, an inpatient program, or hospital? | (Circle one) | |
| In the past 3 months | 3 | |
| About 4-12 months ago | 2 | |
| More than 12 months ago | 1 | |
| Never | 0 | |

SS. Sources of Stress

1. During the past year, have you been under stress for any of the following reasons related to your family, friends, classmates or co-workers? Yes No
- | | | |
|--|---|---|
| a. Birth or adoption of a new family member? | 1 | 0 |
| b. Health problem of family member or close friend? | 1 | 0 |
| c. Major change in relationships (marriage, divorce, separations)? | 1 | 0 |
| d. Death of a family member or close friend? | 1 | 0 |
| e. Fights with boss/teacher or co-workers/classmates? | 1 | 0 |
| f. Other changes or problems in primary support groups? | 1 | 0 |
- (If yes, please describe v. _____)
2. During the past year, have you been under stress because of the following other kinds of demands on you? Yes No
- | | | |
|--|---|---|
| a. Major change in housing or bad housing? | 1 | 0 |
| b. New job, position, or school? | 1 | 0 |
| c. Hard work or school schedule? | 1 | 0 |
| d. Problems with transportation? | 1 | 0 |
| e. Discrimination in community, work, school, or transportation? | 1 | 0 |
| f. Threat of losing current housing, job, school, or transportation? | 1 | 0 |
| g. Interruption or loss of housing, job, school, or transportation? | 1 | 0 |
| h. Other environmental demands on you? | 1 | 0 |
- (If yes, please describe v. _____)
3. During the past year, were you attacked with a weapon, beaten, sexually abused or emotionally abused? Yes No
- | | | |
|-------|---|---|
| | 1 | 0 |
|-------|---|---|
4. Are you currently worried that someone might... Yes No
- | | | |
|--|---|---|
| a. <u>attack</u> you with a gun, knife, stick, bottle, or other weapon? | 1 | 0 |
| b. <u>hurt you by striking or beating</u> or otherwise physically abuse you? | 1 | 0 |
| c. pressure or <u>force you to participate in sexual acts</u> against your will? | 1 | 0 |
| d. <u>abuse you emotionally</u> ? | 1 | 0 |

PH. Physical Health

1. During the past year, would you say your health in general was. . . (Circle one)
- | | | |
|---------------------|---|--|
| Excellent | 0 | |
| Very good | 1 | |
| Good | 2 | |
| Fair | 3 | |
| Poor | 4 | |
-
2. During the past year, has your health limited your ability to do... Yes No
- | | | |
|--|---|---|
| a. vigorous activities like running, lifting heavy objects
or active sports? | 1 | 0 |
| b. moderate activities like moving a table, carrying groceries
or light sports? | 1 | 0 |
| c. light activities like bending, lifting or stooping? | 1 | 0 |
-
3. During the past year, have you . . . Yes No
- | | | |
|--|---|---|
| a. lost or gained 10 or more pounds when you were <u>not</u> trying to? | 1 | 0 |
| b. had a lot of <u>physical pain or discomfort</u> ? | 1 | 0 |
| c. been <u>worried</u> about your health or behaviors? | 1 | 0 |
| d. had health problems that <u>kept</u> you from meeting your
responsibilities at work, school or home? | 1 | 0 |
| e. had lung or breathing problems? | 1 | 0 |
| f. had pain when you urinated? | 1 | 0 |
| g. coughed up or urinated blood? | 1 | 0 |
-
4. During the past 90 days, were you . . . Yes No
- | | | |
|---|---|---|
| a. bothered by <u>any</u> health or medical problems? | 1 | 0 |
| b. having medical problems that kept you from meeting your
responsibilities at work, school or home? | 1 | 0 |

EH. Emotional Health

The next questions are about common psychological problems. These problems are considered significant when you have them for two or more weeks, when they keep coming back, when they keep you from meeting your responsibilities or they make you feel like you cannot go on.

- | | | | |
|--|------------|-----------|--|
| 1. During the <u>past year</u> , have you had <u>significant</u> problems with. . . | <u>Yes</u> | <u>No</u> | |
| a. Headaches, faintness, dizziness, tingling, numbness, sweating or hot or cold spells? | 1 | 0 | |
| b. Sleep trouble, such as bad dreams, sleeping restlessly or falling asleep during the day? | 1 | 0 | |
| c. Feeling very trapped, lonely, sad, blue, depressed, or hopeless about the future? | 1 | 0 | |
| d. Having no energy and losing interest in work, school, friends, sex or other things you cared about? | 1 | 0 | |
| e. Remembering, concentrating, making decisions, or having your mind go blank? | 1 | 0 | |
| | | | |
| 2. During the <u>past year</u> , have you . . . | <u>Yes</u> | <u>No</u> | |
| a. Had a plan to commit suicide? | 1 | 0 | |
| b. Gotten a gun, pills or other things to carry out your plan? | 1 | 0 | |
| c. Attempted to commit suicide? | 1 | 0 | |
| | | | |
| 3. During the <u>past year</u> , have you had <u>significant</u> problems with. . . | <u>Yes</u> | <u>No</u> | |
| a. Feeling very anxious, nervous, tense, fearful, scared, panicked or like something bad was going to happen? | 1 | 0 | |
| b. Having to repeat an action over and over, or having thoughts that kept running over in your mind? | 1 | 0 | |
| c. Trembling, having your heart race or feeling so restless that you could not sit still? | 1 | 0 | |
| | | | |
| 4. During the <u>past year</u> , have the following situations happened to you? | <u>Yes</u> | <u>No</u> | |
| a. When something reminds you of the past, you became very distressed and upset | 1 | 0 | |
| b. Sometimes you used alcohol or other drugs to help yourself sleep or forget about things that happened in the past | 1 | 0 | |
| c. You had a hard time expressing your feelings, even to the people you cared about | 1 | 0 | |
| d. You felt guilty about things that happened because you felt like you should have done something to prevent them | 1 | 0 | |
| | | | |
| 5. <u>During the past 90 days</u> , were you ... | | | |
| a. bothered by any nerve, mental, or psychological problems? | 1 | 0 | |
| b. disturbed by memories of things from the past that you did, saw or had happen to you? | 1 | 0 | |

BH. Behavioral Health

1. During the past year, have you done the following things
two or more times? Yes No
- | | | |
|---|---|---|
| a. Had a hard time paying attention at school, work or home? | 1 | 0 |
| b. Had a hard time listening to instructions at school, work or home? | 1 | 0 |
| c. Had a hard time staying organized or getting everything done? | 1 | 0 |
| d. Been unable to stay in a seat or where you were supposed to stay? | 1 | 0 |
| e. Gotten in trouble for being too "loud" when you were playing
or relaxing? | 1 | 0 |
| f. Had a hard time waiting for your turn? | 1 | 0 |
2. During the past year, have you done the following
things two or more times? Yes No
- | | | |
|---|---|---|
| a. Been a bully or threatened other people? | 1 | 0 |
| b. Lied or conned to get things you wanted or to avoid having to do
something? | 1 | 0 |
| c. Stayed out at night later than your parent or partner wanted? | 1 | 0 |
3. During the past year, have you had a disagreement in
which you did the following things? Yes No
- | | | |
|--|---|---|
| a. Insulted or swore at someone? | 1 | 0 |
| b. Pushed, grabbed, or shoved someone? | 1 | 0 |
| c. Kicked, bit, or hit someone? | 1 | 0 |
4. During the past year have you..... Yes No
- | | | |
|---|---|---|
| a. purposely damaged or destroyed property that did not belong to you? .. | 1 | 0 |
| b. other than from a store, taken money or property that didn't
belong to you? | 1 | 0 |
| c. hit someone or got into a physical fight? | 1 | 0 |
| d. sold, distributed or helped to make illegal drugs? | 1 | 0 |
5. During the past 90 days, did you ... Yes No
- | | | |
|---|---|---|
| a. have any problems paying attention, controlling your behavior
or breaking rules you were supposed to follow? | 1 | 0 |
| b. have an argument with someone else in which you swore,
threatened them, threw something, pushed or hit someone? | 1 | 0 |
| c. do any activities you thought might get you into trouble
or be against the law? | 1 | 0 |
| d. support yourself financially from activities that you thought
might get you into trouble or be against the law? | 1 | 0 |

SR. Substance-Related Issues

- | | <u>Yes</u> | <u>No</u> |
|--|------------|-----------|
| 1. During the <u>past year</u> , have.... | | |
| a. you tried to hide that you were using alcohol, marijuana or other drugs? . | 1 | 0 |
| b. your parents, family, partner, co-workers, classmates or friends complained about your alcohol, marijuana or other drug use? . . . | 1 | 0 |
| c. you used alcohol, marijuana or other drugs weekly? | 1 | 0 |
| d. alcohol, marijuana or other drug use caused you to feel depressed, nervous, suspicious, uninterested in things, reduced your sexual desire or caused other psychological problems? | 1 | 0 |
| e. alcohol, marijuana or other drug use caused you to have numbness, tingling, shakes, blackouts, hepatitis, TB, sexually transmitted disease or any other health problems? | 1 | 0 |
| 2. During the <u>past year</u> , have | <u>Yes</u> | <u>No</u> |
| a. you kept using alcohol, marijuana or other drugs even though you knew it was keeping you from meeting your responsibilities at work, school, or home? | 1 | 0 |
| b. you used alcohol, marijuana or other drugs where it made the situation unsafe or dangerous for you, such as when you were driving a car, using a machine, or where you might have been forced into sex or hurt? | 1 | 0 |
| c. alcohol, marijuana or other drug use caused you to have repeated problems with the law? | 1 | 0 |
| d. you kept using alcohol, marijuana or other drugs even after you knew it could get you into fights or other kinds of legal trouble? | 1 | 0 |
| 3. During the <u>past year</u> , have | <u>Yes</u> | <u>No</u> |
| a. you needed more alcohol, marijuana or other drugs to get the same high or found that the same amount did not get you as high as it used to? | 1 | 0 |
| b. you had withdrawal problems from alcohol, marijuana or other drugs like shaking hands, throwing up, having trouble sitting still or sleeping, or that you used any alcohol, marijuana or drugs to stop being sick or avoid withdrawal problems? | 1 | 0 |
| c. you used alcohol, marijuana or other drugs in larger amounts, more often or for a longer time than you meant to? | 1 | 0 |
| d. you been unable to cut down or stop using alcohol, marijuana or other drugs? | 1 | 0 |
| e. you spent a lot of time either getting alcohol, marijuana or other drugs, using them, or feeling the effects of them (high, sick)? | 1 | 0 |
| f. alcohol, marijuana or other drugs caused you to give up, reduce or have problems at important activities at work, school, home or social events?. | 1 | 0 |
| g. you kept using alcohol, marijuana or other drugs even after you knew it was causing or adding to medical, psychological or emotional problems you were having? | 1 | 0 |

-
4. During the last 90 days you lived in the community, did you... Yes No
- | | | |
|---|---|---|
| a. smoke or use any kind of tobacco? | 1 | 0 |
| b. drink beer, wine, or any kind of alcohol? | 1 | 0 |
| c. smoke or use any kind of marijuana, blunts or hashish? | 1 | 0 |
| d. use LSD, cocaine, heroin, ecstasy, inhalants or any other kind of drug? .. | 1 | 0 |
- (If yes, what? v. _____)

EN. End

1. Do you want help with any emotional, behavioral, or substance use related problems? Yes No
- | | | |
|-------|---|---|
| | 1 | 0 |
|-------|---|---|

a. If yes, what do you want help with?

v1. _____

v2. _____

v3. _____

2. Did anyone read these questions to you or help you fill out this form? Yes No
- | | | |
|-------|---|---|
| | 1 | 0 |
|-------|---|---|

3. Is English your first language? 1 0
- a. (If no, what is? v. _____)

4. What kind of place best describes where you completed this form?
- | | |
|---|----|
| Home | 1 |
| School or training program | 2 |
| Employment or work setting | 3 |
| Jail, detention, probation, parole or other correctional setting | 4 |
| Treatment or intake unit | 5 |
| Research office | 6 |
| Other (Please describe v. _____) . | 99 |

5. What time is it? (Please circle AM or PM too): .. |__|__:|__|__| 1-AM 2-PM
- H H M M

Thank You! Please return this form to the person who gave it to you.

(For further information on this form see www.chestnut.org/li/gain.)

GAIN-QS Item Numbers Composing Each Clinical Scale

Scale Name	Item Numbers
Internal Behavior Index	EH1a-e, EH2a-c, EH3a-c, EH4a-d
Depression Symptom Index	EH1a-e
Suicide Risk Index	EH2a-c
Anxiety Symptom Index	EH3a-c, EH4a-d
External Behavior Index	BH1a-f, BH2a-c, BH3a-c, BH4a-d
ADHD Index	BH1a-f
Conduct Disorder-Aggression Index	BH2a-c, BH3a-c
General Crime Index	BH4a-d
Substance Problem Index	SR1a-e, SR2a-d, SR3a-g
Substance Use and Abuse Index	SR1a-e, SR2a-d
Substance Dependence Index.....	SR3a-g
Total Symptom Severity Index	EH1a-e, EH2a-c, EH3a-c, EH4a-d, BH1a-f, BH2a-c, BH3a-c, BH4a-d, SR1a-e, SR2a-d, SR3a-g