



# OJJDP

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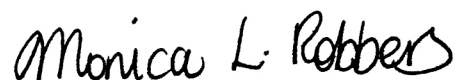
## Editor's Note

This Fall 2015 edition of the *Journal of Juvenile Justice* focuses on treatment programs for system-involved and at-risk juveniles. Joyce et al. provide the results of an outcome evaluation of a short-term residential treatment program for American Indian youth with substance abuse problems. Data collected over a 10-year period provides compelling recommendations for improving service delivery and treatment options for this population. Wiblishauser et al. present findings on substance use services from a study of juvenile correctional center directors and conclude that there are important indirect benefits to these programs, such as improvements in school performance, as well as barriers to service provision that must be overcome. Joseph and colleagues discuss the use of social media to transmit information to juvenile detainees on preventing sexually transmitted diseases, while Korchmaros et al. examine the effectiveness of treatment components in juvenile drug court and Reclaiming Futures programs.

Other articles that appear in this issue spotlight parenting stressors and family management techniques, stress-reduction training for juvenile justice officers, and truancy prevention. And finally, another article examines the perceptions of employers regarding disclosure of juvenile offender records when such juveniles seek employment.

These important studies bring new information and vital recommendations to juvenile justice. We thank these authors for choosing the *Journal of Juvenile Justice* to highlight their research and we welcome any feedback from readers.

Sincerely,



Monica L. P. Robbers, PhD  
Editor in Chief, JOJJ

# An Outcome-Based Evaluation of a Short-Term Residential Treatment Program for American Indian Youth with Substance Abuse Problems

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*Keywords: treatment programs, Native Americans, early intervention, substance use, delinquency prevention*

## Abstract

This study investigates the outcomes associated with a short-term residential treatment program serving American Indian youth ( $n = 2,103$ ) referred by law enforcement personnel for substance use issues that did not warrant detention. The youth, aged 12 to 17, came from a large area of New Mexico, Arizona, Utah, and Colorado. Survey data were examined over a 10-year span and significant changes were found in the desired direction on a dozen indicators of substance use, juvenile delinquency, and well-being that appeared to persist for at least a year following first admission to the program. The reductions in substance use compared favorably to reductions in substance use for other adolescent treatment programs. These results have implications for

enhancing interventions to address substance use and delinquency among American Indian adolescents.

## Introduction

Adolescent substance use has been called "America's #1 public health problem," and adolescence is understood as the critical period for the initiation of substance use and its consequences (The National Center on Addiction and Substance Abuse at Columbia University, 2011). By late middle school almost 30% of adolescents in the United States have drunk alcohol and nearly 31% have tried marijuana (Eaton et al., 2012).

Considerable evidence links early substance use to a number of downstream negative effects such as impulsivity, alienation, and psychological

distress (Hansell & White, 1991) and development of cannabis use disorder (Chen, O'Brien, & Anthony, 2005). Kenneson, Funderburk, and Maisto (2013) reported that adolescent-onset substance use was associated with developing a secondary mood disorder in adulthood.

For American Indian youth, these issues are particularly acute. DeRavello, Everett Jones, Tulloch, Taylor, and Doshi, (2014) investigated the prevalence of risk behaviors in adolescent American Indian and Alaska Native youth and found odds ratios higher than for White students on 18 of 26 risk variables. Adolescent suicide is the second leading cause of death—and 2.5 times higher than the national average—for American Indian and Alaska Native youth in the 15 to 24 year-old age group (Centers for Disease Control, 2012).

Substance abuse treatment programs in the United States admit approximately 150,000 youths under the age of 18 annually (Morrall, McCaffrey, Ridgeway, Mukherji, & Beighley, 2006). In comparison to adults with substance use disorders, adolescents present higher rates of binge use, lower rates of problem recognition, higher rates of comorbid psychiatric problems, are more likely to be susceptible to peer influence, and are more highly focused on immediate concerns (Winters, Botzet, & Fahnhorst, 2011).

Yet, despite the prevalence of substance use among adolescents, the relative severity of the associated problems, and the particular ways in which adolescents differ from adults, much less is known about the effectiveness of treatments designed specifically for adolescents compared to the effectiveness of substance abuse treatment for adults (Winters et al., 2011; Morrall et al., 2006; Williams & Chang, 2000). Even within the relatively limited literature on adolescent treatment, studies of programs providing treatment for American Indian youth with substance use problems, and especially American Indian youth with both substance use problems and justice-system involvement, are rare. Most programs in other studies served predominantly White clients: 89%

(Williams & Chang, 2000) and 90% (Wisconsin Bureau of Mental Health and Substance Abuse Services, 2005).

In 2006, an independent team of researchers at the Rand Corporation examined independent, longitudinal evaluations of client outcomes as evidence of treatment effectiveness in 11 short-term residential adolescent treatment programs in the Substance Abuse and Mental Health Services Administration's (SAMHSA's) Adolescent Treatment Models (ATM) program. One program in this study was the only program we found that served American Indian adolescents.

The Rand study found substantial pretreatment differences in the American Indian cohort, an "especially unique population of clients who differed on pretreatment covariates from those clients seen in every other ATM program" (Morrall et al., 2006). However, despite major differences between the programs and between the distinctly different populations they served, all the programs were associated with statistically significant improvements ( $p = <.01$ ) on each measure in 12-month outcomes that included significant reductions in substance use, emotional problems, and illegal activities (Morrall et al., 2006).

Juvenile substance use is an important known risk factor for ongoing justice-system involvement (Reingle & Maldonado-Molina, 2012) and has been linked to delinquency and criminal behavior (Office of Juvenile Justice and Delinquency Prevention, 1998). American Indian youth are overrepresented in the juvenile justice system across the United States (Hartney, 2008). Juvenile delinquency in American Indian youth has been found to be associated with substance use and depression (Pfefferbaum, Pfefferbaum, Strickland, & Brandt, 1999). Positive emotional health has been proposed as a protective factor for juvenile justice system involvement (Bearinger et al., 2005). McKay, Lindquist, Melton, & Martinez (2013, p. 1) posited that:

Understanding what helps justice-involved American Indian youth to make positive changes in their lives and

end or reduce their involvement in the tribal juvenile justice system is important for developing effective supports . . . Research and evaluation focused on the experiences of American Indian youth and innovative programs designed to serve them can help Indian nations to create effective, culturally relevant, and appropriate supports for justice-involved youth.

In this article we present an analysis of 10 years' worth of data from more than 2,000 predominantly (91%) American Indian youth aged 12 to 17 who were admitted to the Juvenile Substance Abuse Crisis Center (JSACC) in McKinley County, New Mexico, from a large catchment area encompassing parts of New Mexico, Arizona, Utah, and Colorado. The data provide strong evidence that the JSACC produced meaningful, sustained improvements at both 6-month and 12-month followup for adolescent clients participating in the program. Statistically significant positive outcomes included major reductions in substance use, emotional problems, and juvenile justice system involvement, and smaller but still significant gains in increased well-being, including reductions in thoughts of suicide and suicide attempts.

## Background

McKinley County, New Mexico, located adjacent to reservations of the Navajo and Zuni Indian Nations, is a community characterized by a predominantly American Indian population and an extremely high prevalence of poverty and substance abuse. The Juvenile Substance Abuse Crisis Center (JSACC) is located in Gallup, the county seat.

In the 1970s, the National Institute on Alcohol Abuse and Alcoholism (NIAAA) ranked McKinley County as the worst of all 3,106 counties in the United States for indicators of alcohol-related mortality. In the 1990s, with funding from the Robert Wood Johnson Foundation and other sources, the city began to reduce the high rate of drinking in the adult population. However, substance abuse among the region's youth continued to be problematic.

In 2000, the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA), Center for Substance Abuse Treatment (CSAT), awarded McKinley County a \$1,000,000 capacity-building grant to establish the JSACC, an innovative program providing short-term residential treatment, social detoxification, and assessment and referral services ("Detox") for mainly American Indian adolescents aged 12 to 17 who were referred to the program by law enforcement officers for substance-abuse related issues that did not warrant detention. McKinley County sustained the program through a combination of federal, state, and local funding and, in 2004, added a longer-term case management component with life skills training targeted to clients with repeat admissions to Detox.

In 2010, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) awarded McKinley County a Tribal Field-Initiated Research and Evaluation (FIRE) grant to evaluate the JSACC, which had shown promising results in five previous local evaluations. Joyce Planning and Development conducted the OJJDP evaluation. The purpose, in part, was to produce a quantitative assessment of the effect of program participation on youth outcomes, particularly substance use and juvenile justice system involvement.

## Methodology

Information from standard self-report structured interviews contained in existing program records over a 10-year span provided the data for the outcome study. Interviews were conducted by program staff.

The primary survey instrument was the *Center for Substance Abuse Treatment Government Performance and Results Act Client Outcome Measures for Discretionary Programs* (the GPRA), a standardized federal survey for use by treatment programs around the country. Additional data were derived from a 26-item *Adolescent Cluster Data* (ACD) survey with questions on individual, family and community risk and protective factors



for substance abuse, unprotected sex and violent behavior, suicidal ideation, and attempted suicide.

CSAT had mandated the use of the GPRA in connection with the original grant that established the JSACC program. CSAT also convened a work group that created the ACD for use by adolescent programs. Early evaluations analyzing these GPRA/ACD data showed promising outcomes from the very beginning of the program, so the JSACC continued to use these instruments to collect data after the CSAT grant ended.

Although we might have selected another instrument, we found that the extant GPRA/ACD data were quite comprehensive. Although the data on employment, education, and housing status were aimed more at adults, we were able to examine all the characteristics and outcomes of interest to the program using data derived from GPRA/ACD questions as single-item measures and combined into tested scales measuring complex constructs.

New questions added to the GPRA tool by SAMHSA in 2011 in accordance with its Strategic Initiatives on Trauma and Justice and Military Families did not work well for adolescents, and a more youth-oriented trauma screen would have enhanced our findings. Items measuring attitudes toward substance use and willingness to quit also might have helped us better understand the efficacy of the JSACC residential treatment program.

## Data

The data set assembled for this study included intake surveys for 2,103 clients admitted to the JSACC for their first intake between March 2001 and December 2010. Samples for the outcome analysis consisted of matched pairs of surveys at 6-month and 12-month follow-up time points. Distribution of surveys in the data set at intake and two follow-up time points showed low follow-up rates: 58.8% (1,236 of 2,103) at 6 months and 46.3% (974 of 2,103) at 12 months. To measure client characteristics and outcomes, we utilized 14 indicators composed of single questions and scales, as shown in Table 1.

Table 1. *List of Measures*

Construct	Measures
Substance Use	Mean days of past-month use of alcohol, marijuana, cocaine, and inhalants
Negative Effects of Substance Use	Things stressful because of alcohol or drug use, activities reduced or given up due to alcohol or drug use, emotional problems caused by alcohol or drug use
Past Month Arrests	Been arrested in past 30 days
Juvenile Violence	Been physically violent, threatened someone with violence, lost temper, started fights, scared someone, did impulsive things
Neighborhood Disorganization	Crime and/or drug selling, fights, shootings, violence, empty or abandoned buildings, graffiti
Parental Control	Parent or guardian monitors behavior, parent or guardian made rules to follow, parent or guardian enforced rules
Negative Factors in the Family Environment	Family member used drugs, family member used alcohol, family member in jail or on parole
Self-Rating of Overall Health	Rating of overall health right now
Emotional Problems	Serious depression; serious anxiety or tension; trouble understanding, concentrating or remembering; trouble controlling violent behavior
Bothered by Emotional Problems	Bothered by psychological or emotional problems in past 30 days
Suicidal Thoughts	Have thought about killing self in past 3 months
Suicidal Attempts	Have tried to kill self in past 3 months
Resilience	Get along well with peers, have a number of good qualities, able to do things as well as most people, am a person of worth at least equal to others
Pro-Social Involvement	School organizations, clubs/organizations outside of school, cultural/tribal activities

## Data Analysis

Because these were extant data, we were careful about the data preparation techniques. We examined the frequencies and z scores to identify outliers and found that most of the scores within the distributions were within three standard deviations. Patterns of marijuana use were outliers, but they were consistent with other observations about the client population, so we concluded that these data on marijuana use were real and descriptive of the clients. For this reason, we included these statistical outliers in the analysis.

We tested clients' responses for internal consistency by testing the strength of associations

among selected pairs of conceptually related variables using the chi-square statistic and Cramér's V. In all cases the selected questions were moderately or strongly related. Although we could not guarantee the truthfulness of the self-reported data, we concluded that the clients were consistent in their answers across pairs of similar questions.

We conducted the outcome analysis using a comparison of means at intake, 6-month followup, and 12-month followup to determine the directions of the changes, and we used paired *t*-tests to determine the statistical significance of the changes. In order to ensure that we reported only the strongest results, we required that the change was statistically significant at both 6 and 12 months.

We used actual use-reduction and arrest data to define success at followup as an 80% reduction in days of use and no past-month arrest. We used this definition of success to test a dozen predictors against these measures in order to try to identify the types of persons who would do well in the program. We also tested length of stay as a predictor of success.

We sought comparison data from outside the JSACC. We found studies of comparable adolescent treatment programs reported in the literature by conducting keyword searches of databases using the terms juvenile, substance abuse, treatment program, and treatment outcomes.

## Results

### Descriptive Analyses

We carried out a characterization analysis of the juvenile clients that included demographics, as well as measurements of substance use patterns, violent behavior and risk factors for delinquency, family functioning, physical health and emotional problems, prosocial involvement, and resilience.

The gender breakdown showed 66% male and 34% female clients, and they ranged in age from 12 to 17 with a mean age of 15.66 years. Nineteen

percent (19%) of the clients in the study self-identified as of Hispanic or Latino ethnicity. The racial breakdown showed that the client population was 91% American Indian, 4% White, 3% More Than One Race, and 2% Other. Not all clients identifying as "American Indian" reported a tribal affiliation, but we did note clients reporting tribal membership as Navajo, Zuni, Pueblo, Apache, Cherokee, and Lakota.

We found risk factors for juvenile delinquency but a low prevalence of delinquent behavior. More than half (52%) reported some neighborhood disorganization, while 72% reported no violent behavior.

We measured parental controls with three questions about whether or not parents monitored behavior, made rules to follow, and enforced the rules. We found that 93% of clients reported at least some parental controls.

Substance use was limited almost exclusively to alcohol and marijuana, with 72% of the clients reporting past-month alcohol use and 52% reporting past-month marijuana use. We found that most clients (74%) reported no negative effects because of their substance use.

Reported use of drugs other than marijuana was low (less than 7%). The 18 specific drugs surveyed were Cocaine/Crack, Heroin, Morphine, Dilaudid, Demerol, Percocet, Darvon, Codeine, Tylenol 2,3,4, Nonprescription Methadone, Hallucinogens, Methamphetamine, Benzodiazepines, Barbiturates, Nonprescription GHB, Ketamine, Other Tranquilizers, and Inhalants. We also measured a category called "Other Illegal Drugs." In all these categories, we found only 165 reports from 141 clients using any of these drugs alone or in any combination.

Four drugs of particular local concern were inhalants, heroin, methamphetamine and hallucinogens: of the more than 2,000 clients in the data set, 14 reported inhalant use, 5 reported heroin use, 8 reported use of hallucinogens, and 9 reported methamphetamine use.

We found both risk factors and protective factors in the family environment. Clients tended not to report emotional problems, and those who did report problems tended not to be too bothered by them. Rates were low for suicide indicators. Clients reported fairly good health and high levels of resilience. We found at least some prosocial involvement for about 64% of the clients.

The statistical profile of the JSACC client population suggested that the JSACC clients seemed fairly healthy and resilient in the face of challenging community circumstances, high levels of alcoholism in the adult population, disorganized neighborhoods, and poverty, substance use, and justice system involvement in the families.

### Outcome Analysis

The outcome analysis produced evidence of significant long-term changes in the desired direction on 12 indicators of juvenile delinquency, substance use, and well-being at both 6-month and 12-month follow-up. The percentage of change at 12-month followup ranged from a 9% increase in overall health to an 80% decrease in past-month alcohol use. The relative percentages of change at 6 and 12 months for the 12 indicators with statistically significant changes are shown in Figure 1.

Figure 1. McKinley County JSACC: Outcome findings for all clients  
Percent of Change in Outcomes at 6 and 12 Months

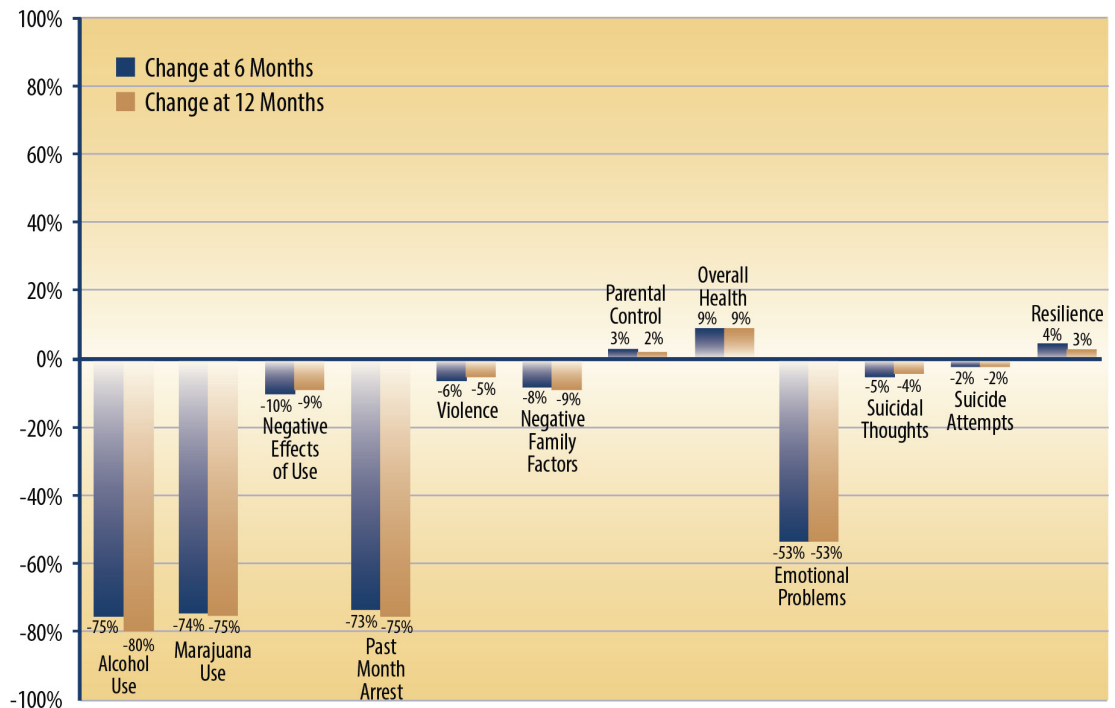


Table 2. Outcomes for All Clients—Change at 6 Months

Indicator	Number of Matched Pairs	Mean at Intake (Standard Deviation)	Mean at 6 Months (Standard Deviation)	Change	P-Value
Alcohol Use in Past 30 Days	n = 1,230	1.56 (2.81)	0.39 (1.41)	-75%	p = .0000
Marijuana Use in Past 30 Days	n = 1,230	4.05 (7.95)	1.04 (4.24)	-74%	p = .0000
Negative Effects of Substance Use	n = 1,204	3.47 (1.07)	3.13 (0.50)	-10%	p = .0000
Past Month Arrest	n = 1,229	0.15 (0.38)	0.04 (0.24)	-73%	p = .0000
Juvenile Violence	n = 1,038	3.42 (0.76)	3.20 (0.56)	-6%	p = .0000
Negative Factors in Family Environment	n = 1,036	3.80 (0.92)	3.51 (0.79)	-8%	p = .0000
Parental Control	n = 1,041	5.36 (0.94)	5.54 (0.83)	3%	p = .0000
Self-Rating of Overall Health	n = 1,211	3.58 (1.02)	3.90 (0.96)	9%	p = .0000
Emotional Problems	n = 1,032	3.46 (10.79)	1.64 (6.50)	-53%	p = .0000
Suicidal Thoughts in Past Three Months	n = 1,081	1.06 (0.23)	1.01 (0.11)	-5%	p = .0000
Suicide Attempts in Past Three Months	n = 1,081	1.03 (0.17)	1.01 (0.09)	-2%	p = .0001
Resilience	n = 1,038	13.01 (1.90)	13.47 (1.86)	4%	p = .0000

Tables giving the number of matched pairs for each indicator, the mean scores and standard deviations, percentages of change, and *p*-values for 6-month and 12-month outcomes for all clients are provided in Tables 2 and 3.

We were not able to identify any particular JSACC client characteristics predictive of success and we found that it didn't matter how long clients were in the program, but we did verify that the overall level of success was high: 79% of clients met the definition of success at 12 months following admission to the program.

We concluded that contact with the JSACC led to improved choices in the areas of substance use and delinquency and that the JSACC and programs like it could be effective supports to help justice-involved American Indian youth make positive changes in their lives and reduce their involvement in the juvenile justice system.

### Comparative Data

We found no comprehensive portraits of justice-involved American Indian or Alaska Native adolescents in residential treatment programs. Sedlak and McPherson (2010) provide extensive data on characteristics and needs of adolescents in residential placement, but the youth in the study were in custody because they were charged with or adjudicated for offenses, while the JSACC youth were not in custody and not charged with or adjudicated for offenses. Consequently, the Sedlak and McPherson (2010) study sample data did not provide useful comparisons with the JSACC population.

In our review of the literature on other adolescent treatment program models, we found that most

Table 3. Outcomes for All Clients—Change at 12 Months

Indicator	Number of Matched Pairs	Mean at Intake (Standard Deviation)	Mean at 12 Months (Standard Deviation)	Change	P-Value
Alcohol Use in Past 30 Days	<i>n</i> = 971	1.53 (2.88)	0.30 (1.06)	-80%	<i>p</i> = .0000
Marijuana Use in Past 30 Days	<i>n</i> = 970	3.51 (7.44)	0.87 (3.97)	-75%	<i>p</i> = .0000
Negative Effects of Substance Use	<i>n</i> = 951	3.49 (1.12)	3.16 (0.73)	-9%	<i>p</i> = .0000
Past Month Arrest	<i>n</i> = 970	0.16 (0.44)	0.04 (0.20)	-75%	<i>p</i> = .0000
Juvenile Violence	<i>n</i> = 830	3.39 (0.73)	3.21 (0.58)	-5%	<i>p</i> = .0000
Negative Factors in Family Environment	<i>n</i> = 818	3.81 (0.92)	3.48 (0.73)	-9%	<i>p</i> = .0000
Parental Control	<i>n</i> = 826	5.38 (0.93)	5.47 (0.88)	2%	<i>p</i> = .0192
Self-Rating of Overall Health	<i>n</i> = 954	3.62 (1.06)	3.96 (0.91)	9%	<i>p</i> = .0000
Emotional Problems	<i>n</i> = 827	4.01 (12.92)	1.88 (9.22)	-53%	<i>p</i> = .0000
Suicidal Thoughts in Past Three Months	<i>n</i> = 858	1.06 (0.23)	1.02 (0.13)	-4%	<i>p</i> = .0000
Suicide Attempts in Past Three Months	<i>n</i> = 858	1.03 (0.18)	1.01 (0.11)	-2%	<i>p</i> = .0040
Resilience	<i>n</i> = 837	13.08 (1.92)	13.47 (1.84)	3%	<i>p</i> = .0000

short-term residential programs associated with successful outcomes for adolescents across the United States and Canada had nine core elements in common: a) screening and assessment; b) comprehensive services for substance abuse, medical, mental health, family, or education problems; c) family involvement; d) services developmentally appropriate for adolescents; e) strategies to engage and keep adolescents in treatment; f) qualified staff; g) cultural and gender differences addressed; h) aftercare support; and i) data gathering to measure outcomes and success of the program (Williams & Chang, 2000).

The JSACC includes all these elements, but the program model uses a unique configuration of these elements adapted over time to specific local circumstances. Either directly or by referral, the JSACC provides treatment at all five levels of intensity defined in the American Society of

Addiction Medicine (ASAM) patient placement criteria (Mee-Lee, 2013). Within the facility, the JSACC provides early intervention and short-term residential treatment that are not usually found together in the same program. With the assessment, referral, and case management components, the JSACC provides access to outpatient, intensive outpatient, and medically managed intensive inpatient treatment.

The JSACC residential treatment component of up to 72 hours was much shorter in duration than other programs that provided longer stays ranging from 10 to 60 days (Williams & Chang, 2000; Morral et al., 2006; Wisconsin Bureau of Mental Health and Substance Abuse Services, 2005).

The JSACC admission process relies on referrals from law enforcement, but a program policy ensures that all program participation is voluntary. We found no other program with this design using the justice system as gatekeeper to a voluntary program. One study examined six adolescent treatment centers and found that only half were voluntary and none required law enforcement referral for admission (Wisconsin Bureau of Mental Health and Substance Abuse Services, 2005).

The JSACC serves a community of diverse cultures and the youth have various exposures to different beliefs and practices among the cultures including the Navajo, Zuni, Hopi, Ute, Acoma, and Laguna Indian Nations. A course in Navajo weaving techniques is given in the summer and is popular with JSACC youth of all races and ethnicities.

The JSACC staff found that individual attitudes toward traditional American Indian culture were too sensitive and complicated to address in the program context. As a matter of policy, JSACC staff respect and support the beliefs and wishes of individual clients and families with regard to Native healing traditions. The program does not provide traditional healing services, but upon request provides a Traditional Healing Resource List.

The majority of the adolescent treatment programs we found in the literature measured

abstinence, relapse episodes, or percentages of clients reporting reductions (Williams & Chang, 2000; Rutherford & Banta-Green, 1998; Winters et al., 2011; Wisconsin Bureau of Mental Health and Substance Abuse Services, 2005; Henggler, Clingempeel, Brondino, & Pickrel, 2002), and their outcomes could not be compared to the JSACC outcomes.

We did identify a handful of programs that measured quantified reductions in substance use, and we found that the JSACC reductions in substance use of 73% to 80% compared favorably to the outcomes for these programs. For example, Clay (2003) reported that in Adolescent Treatment Model (ATM) programs, outcomes ranged from 50% to 60% reductions in the number of days adolescents used drugs in the year following intake. Friedman, Glickman, & Morrissey (1986) (as cited in Williams & Chang, 2000) examined 30 outpatient programs ( $n = 5,603$ ) and reported average drug use at discharge decreased to approximately 50% of pretreatment levels. Other studies found decreases in substance use at 6 months posttreatment, ranging from 38.8% (Azrin et al., 2001) to 67.8% (Wisconsin Bureau of Mental Health and Substance Abuse Services, 2005).

## Discussion

This evaluation study aimed in part to establish the effectiveness of the McKinley County JSACC program model in reducing juvenile delinquency, juvenile justice system involvement, and substance abuse over a 10-year period. Results of the study support the conclusion that admission to the JSACC was associated with reductions in adolescent use of alcohol and marijuana; fewer negative effects of substance use; fewer emotional problems; reductions in suicidal thoughts and suicide attempts; less juvenile delinquency, violent behavior, and past-month arrest; fewer negative factors in the family environment; increased parental control; and improved overall health for predominantly American Indian youth aged 12 to 17 for at least the first year after program admission. These desired changes were significant at 6 months and held up well at 12 months, with little

measurable weakening of the program effects. The reductions in substance use associated with the JSACC model compared favorably to reductions in substance use for other adolescent treatment programs.

This was an observational study using statistical analysis of nonexperimental data. Although not a randomized controlled trial, the study had key strengths. The first was the large sample size of 2,103 clients. Comparable evaluations in the literature tended to be based on much smaller samples. For instance, the four short-term residential program evaluations in a Rand study had an average sample size of 149 (Morral et al., 2006), and another study provided outcomes for samples of 33 and 21 clients (Wisconsin Bureau of Mental Health and Substance Abuse Services, 2005). Other strengths of the JSACC study included the care we took in looking at the data, the unusually long 10-year time frame of the data set, the inclusion of longitudinal follow-up data for up to 12 months, and the fact that the study included all clients the program intended to treat without excluding dropouts.

## Limitations

The JSACC study relied on existing program data derived from client self-reports in response to survey questions. Thus the limitations of single-source data were those inherent in all self-reported data without corroborating evidence from other sources. Although we tested for and found some internal consistency in the client responses, this was not evidence of truthfulness in the responses.

Methodological weaknesses are not uncommon in evaluation studies. For example, of the 16 outcome studies reviewed by Williams and Chang (2000), only 4 employed control groups, and they concluded that there are few studies on adolescent substance use treatment and they tend to be methodologically weak.

However, the low response rates to the follow-up interviews and the lack of a control group, while

not uncommon, represent major limitations of the JSACC study. Confounding variables that threaten direct causality of the JSACC intervention were beyond statistical control. Potential rival hypotheses that could explain our findings include the natural effects of aging and normal maturation and the statistical effect of regression toward the mean.

Since we did not find any defining client characteristics or programmatic features predicting success, the success we observed may be limited to clients with a similar pretreatment profile and relatively low levels of use, almost exclusively of alcohol and marijuana, with extremely low frequencies of use for drugs such as heroin, methamphetamine, and cocaine. Generalizability of the findings for the JSACC program is limited to individuals who share similar socio-demographic characteristics and have access to the essential features of the program model (Collins & Onwuegbuzie, 2013).

## Conclusion and Implications for Program Practice

Our findings are encouraging. The JSACC program works. Adolescents can change for the better, even if the treatment is relatively brief. By intervening early, programs like the JSACC have the potential to improve the lives of justice-involved youth with emerging substance abuse problems for the duration of life.

These results have implications for enhancing interventions to address substance use and delinquency among American Indian adolescents. At a broader level, this study has implications for the fields of adolescent treatment and juvenile justice.

Our descriptive analysis found plenty of risk factors, but marijuana and alcohol use were at low levels, few hard drugs were used, and the youth had high levels of resilience, and good parental controls. These findings challenge policymakers not to stigmatize troubled, justice-involved youth but to see them as good kids who could be helped to make better decisions.

When making choices on the allocation of scarce resources, policymakers often feel compelled to focus on emergencies and short-term fixes in areas where there are the greatest visible needs. Sustaining a program such as the JSACC without over-emphasizing the severity of the problem requires that elected officials look beyond their terms of office and make a commitment to long-term benefits.

Our process analysis revealed a unique configuration of program elements in the JSACC model. McKinley County's experimental partnership between the law enforcement and treatment communities to serve justice-involved youth with substance use issues who did not meet the criteria for detention resulted in a program that produced positive changes for almost 80% of the clients. Agencies at the state and federal level that fund local programs have to be willing to allow local communities the autonomy and flexibility to craft solutions adaptive to local conditions within a framework of best practices.

The history of the JSACC illustrates an argument for the value of ongoing data-driven evaluation. During the first 3 years of the JSACC, local evaluations immediately began to show promising results. A comprehensive evaluation after 5 years of program operation confirmed the early

promise and was the basis for OJJDP's award to double the sample size and time frame for this new study. We found that with a newer, larger sample, and in a program that changed and evolved over the years, the results were stable through waves of analyses. Governments typically are not good at self-reflection, but constant review and analysis by outside evaluators have been essential to the JSACC's success.

### About the Authors

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# Substance Use Services for Adolescents in Juvenile Correctional Facilities: A National Study

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## Abstract

The purpose of this study was to identify and assess the substance use services provided to juvenile offenders in juvenile justice–affiliated facilities. The study’s random sample of 540 directors was broken into three groups according to the gender of the clients they served: 218 coed facilities, 217 male-only facilities, and 105 female-only facilities. The majority of juvenile justice–affiliated facilities (79.4%) reported providing substance use services to juvenile offenders. More male-only facilities (88.8%) reported providing substance use services than either female-only (79.7%) or coed facilities (66.7%). The most cited perceived benefit to providing services was improving overall school performance (85.4%). The most cited perceived barrier to providing services was lack of qualified staff (42.9%). The results indicate that significant differences in substance use services exist according to gender of the client served in juvenile justice–affiliated facilities. These differences need to be reconciled

to ensure that all juvenile offenders are provided with equitable and effective treatments.

## Introduction

Substance use among adolescents in the United States is a major public health problem and priority. According to the 2013 Monitoring the Future study, approximately 28% of American adolescents reported having used illicit substances during the year and approximately 36% of high school seniors stated they had used an illicit substance within their lifetimes (Johnston, O’Malley, Miech, Bachman, & Schulenberg, 2014). As an indicator of the importance of this issue in the United States, the nation’s health objectives, i.e., Healthy People 2020, included 21 specific objectives related to substance abuse, many of them targeted directly at adolescents (U.S. Department of Health and Human Services, 2011).

Incarcerated adolescents are especially at risk for problems related to substance use. When compared to nonincarcerated youth, incarcerated

adolescents reported high levels of substance use (Wilson, Rojas, Haapanen, Duxbury, & Steiner, 2001; Ford, Hartman, Hawke, & Chapman, 2008). Juvenile drug use may also be predictive of criminality continuing into adulthood. One study found that adults who had committed 90 or more offenses during the courses of their lifetimes were more likely to have used drugs as juveniles (DeLisi, Angton, Behnken, & Kusow, 2013).

In 2013, approximately 715,000 juveniles were arrested in the United States (Federal Bureau of Investigation, 2014a). The most prevalent types of juvenile offenses are typically associated with property crimes (e.g., larceny, arson, burglary, motor vehicle theft; Federal Bureau of Investigation, 2014a). However, in 2013, juvenile offenders were involved in approximately one-tenth of the total arrests for violent crimes committed in the United States (Federal Bureau of Investigation, 2014b).

In 2011, male juvenile offenders accounted for 72% of delinquency arrests (Hockenberry & Puzanchara, 2014). Property crimes were responsible for the highest numbers of arrests for both female (38%) and male (36%) juvenile offenders. Fortunately, there has been a gradual decline in the number of juvenile arrests. Between 1997 and 2011, there was a 38% decline in male arrests and a 22% decline in female arrests (Hockenberry & Puzanchara, 2014).

In 2011, nearly 69,000 juveniles were being held in correctional or residential treatment facilities in the United States (Office of Juvenile Justice and Delinquency Prevention, 2013). Approximately, 62% of juvenile offenders were placed in public correctional or residential treatment facilities, while 27% were placed in private facilities. This population of incarcerated adolescents included a spectrum of races and ethnicities: Black (41%), White (33%), Hispanic (23%), American Indian (2%), and Asian/Pacific Islander (1%) (Sickmund, Sladky, & Kang, 2013).

The purpose of this research study was to survey program directors of juvenile justice–affiliated

treatment facilities in the United States to answer the following research questions according to the gender served in the facilities: (a) Into what stages of implementation of the Precaution Adoption Process Model (PAPM) do program directors place their substance use services? (b) What methods of assessment or screening are used by juvenile justice facilities to diagnose substance use, abuse, or dependence? (c) How much time (in hours) do juvenile justice facilities invest in common topics found in substance use programs for juvenile offenders? (d) What types of treatment approaches are being used by juvenile justice facilities? (e) What types of substance use services are used by juvenile justice facilities when treating juvenile offenders? (f) What barriers do juvenile justice facilities face when trying to expand or improve their substance use services to juvenile offenders? (g) What benefits do program directors see to offering substance use treatment programs to juvenile offenders? (h) How do juvenile justice facilities evaluate the effectiveness of their substance use services for juvenile offenders?

## Methods

### Sampling and Participants

The initial study population included 913 juvenile justice–affiliated facilities registered with the American Correctional Association’s (ACA) *2010 Adult and Juvenile Correctional Departments, Institutions, Agencies, and Probation and Parole Authorities* (American Correctional Association, 2010). The study population included facilities from 49 of 50 states. One state chose not to participate in the study ( $n = 2$  facilities) and 14 facilities listed in the ACA’s directory were no longer in operation. Thus, the final study population included 897 facilities.

A sample size analysis was conducted for a population of 897 with 95% confidence interval, a 50/50 split and a 5% margin of error. The results of the sample size analysis indicated that 270 completed surveys were needed for adequate

external validity. The investigator's goal was to achieve at least a 50% response rate. Therefore, a total of 540 facilities (i.e., Program Directors) were randomly selected from the ACA's directory. The final sample included 105 female-only facilities, 217 male-only facilities, and 218 coed facilities.

### Instrument

A survey instrument was developed to measure the variables of interest. A comprehensive review of the literature was conducted to establish the face validity of the survey. Content validity of the instrument was established via the input and suggested revisions from a panel of experts in the field of substance use and juvenile delinquency. The final survey contained 31 items with close-ended questions with unordered choices. The items were designed to assess respondents' views and opinions on the availability, usage, and evaluation of substance use services provided to juvenile offenders in their respective facilities.

The survey was formulated using the PAPM (Weinstein & Sandman, 1992) and the Health Belief Model (HBM) (Rosenstock, Strecher, & Becker, 1988). The PAPM was selected to ask respondents to place the status of their substance use services along the implementation states of the model. The constructs, perceived barriers and perceived benefits, were taken from the HBM. In addition to questions regarding the facilities' substance use services, the survey also included questions concerning the characteristics of the facility, such as the number of juveniles served, number of staff employed, accreditation status, and location of the facility.

### Procedure

Since many of the potential respondents were employees of state governments, the investigators needed to secure approval to send out surveys to the respondents at the facility level. The investigators telephoned each state's juvenile justice administrative office to gain permission to disseminate the surveys. The method of dissemination was often dictated by the state's

administrative office. Due to some states' restrictions on surveys being sent, completed, and returned by their employees by postal mail, some of the surveys were completed and returned via e-mail through a liaison. This liaison, who was typically appointed by the state's administrative offices, dispensed the surveys to the facilities and also collected the completed surveys for the investigator.

The vast majority of surveys were disseminated via postal mail. A three-wave mailing technique was used to ensure the maximum response rate. A \$1 bill was enclosed as an incentive in the first wave mailing for those facilities that allowed employees to receive a gratuity. All three postal wave mailings were spaced 2 weeks apart.

### Data Analysis

To determine whether the data met the assumptions for parametric statistical testing, the data were plotted on a graph and visually examined. The assumptions for parametric testing were further assessed by examining the skewness of the responses. If the skewness statistic fell between the skewness deviation and the skewness deviation two-squared, then the data met the assumptions for parametric testing. The data in this study did not meet the conditions for parametric statistics. Therefore, nonparametric statistics such as the Mann-Whitney *U* test, Kruskal-Wallis, and chi-square tests were used to analyze the data. The Spearman Rho test was utilized to detect any statistically significant associations.

## Results

### Characteristics of Juvenile Justice–Affiliated Services

The participants returned 287 completed surveys for a response rate of 53.1% (287/540). The surveys were returned to the investigators by two delivery methods: postal mail (65.5%) and e-mail (34.5%). Respondents from male-only facilities comprised the largest proportion of responses from the gender-based facility types, with 47.0% (135/287), followed by responses from

coed facilities (32.4%, or 93/287), and responses from female-only facilities (20.6%, or 59/287). The response rates by gender of clients served in the facilities were as follows: male-only, 62.2% (135/217); coed, 42.7% (93/218); and female-only, 56.2% (59/105) (see Table 1).

Approximately 42% of the facilities were located in rural settings. Residential (incarceration–juvenile justice) was the most frequently reported facility type (71.4%). Respondents reported serving an average of 61 adolescents with an average staff size of 66 full-time employees. Female-only facilities were the smallest facilities, with an average of 42 adolescents per facility. The majority of facilities (52.3%) were not currently accredited. For those respondents who reported having “other accreditation” sources, the American

Correctional Association was the most frequently reported accreditation source (18.5%). On average, respondents reported that they received 94.1% of their funding through public sources and the remaining 5.5% through private sources (see Table 1).

### Substance Use Services

Nearly 8 of 10 respondents reported that their facilities had been providing substance use services to adolescents. Male-only facilities (88.8%) were statistically significantly more likely to provide substance use services (maintenance stage of the PAPM) than were female-only (79.7%) and coed facilities (66.7%) ( $\chi^2 = 10.19, df = 2, p < .05$ ). The majority of respondents (70.9%) indicated that their facilities spent 0–10% of their

budget on substance use services. Female-only facilities (37.2%) were more likely to report spending more than 10% of their budget on substance use services than coed (36.7%) and male-only (22.6%) facilities. A plurality of facilities (37.7%) offered substance use services to clients twice a week (see Table 2).

The type of substance use services differed by gender-based facility type. Group counseling for substance use was the most prevalent type of service provided (92.1%). There was no statistically significant difference in the provision of group counseling sessions by gender-based facility type (male-only, 93.3%; female-only, 93.2%; and coed, 87.3%). Female-only facilities (55.3%) were statistically significantly more likely

Table 1. *The Demographics of Juvenile Justice–Affiliated Facilities*

Item	M (%)	F (%)	C (%)	O (%)				
<b>Facilities by Gender Served</b>	47.0	20.6	32.4	–				
<b>Geographical Location of Facilities</b>								
Rural	36.3	51.7	43.0	41.6				
Urban	34.1	15.5	39.8	32.2				
Suburban	29.6	32.8	17.2	26.2				
<b>Facility Types</b>								
Residential (incarceration–juvenile justice)	77.8	72.9	67.3	71.4				
Residential (non-incarceration)	8.1	18.6	10.8	11.1				
Group Home	8.1	11.9	3.2	7.3				
Outpatient Services	0.7	3.4	10.8	4.5				
Halfway House	2.2	1.7	0	1.8				
Other (Day Treatment, Detention Centers, Non-Secure, etc.)	8.1	10.2	33.3	17.1				
<b>Accreditation Status &amp; Sources</b>								
No Accreditation	58.5	49.2	45.2	52.3				
Council on Accreditation	2.2	8.5	4.3	4.2				
Joint Commission on the Accreditation of Healthcare Organizations	0	1.7	4.3	1.8				
Other (American Correctional Association, performance-based standards, state accreditation)	34.8	37.3	39.8	36.2				
<b>Funding Sources for Substance Use Services</b>								
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Public	95.2	1.2	94.8	17.1	91.4	2.1	94.1	19.3
Private	4.7	4.1	5.2	17.1	8.5	22.1	5.5	20.4
<b>Capacity to Serve Youth</b>								
	65.1	8.1	41.8	4.7	68.1	6.7	61.2	7.6

*N* = ranges from 217 to 287 (Respondents) depending on item. Percentages may not equal 100% due to rounding and/or non-responses. M = Male-only, F = Female-only, C = Coed, O = Overall

Table 2. Substance Use Services That Are Provided to Juvenile Offenders in Juvenile Affiliated—Facilities

Item	M (%)	F (%)	C (%)	O (%)
<b>Current State of Substance Use Services</b>				
Unaware for a need for substance use services	0	1.7	0	0.3
Aware of need for substance use services, not yet decided to implement them	0.7	8.5	12.9	6.3
Currently deciding about implementing substance use services	0.7	1.7	5.4	2.8
Decided to implement substance use services	3.7	1.7	2.2	2.8
Decided not to implement substance use services	4.4	5.1	7.5	5.6
Currently in the process of implementing substance use services	1.5	1.7	5.2	3.1
Have offered substance use services for less than 1 year	0.7	1.7	0	0.7
Have offered substance use services for more than 1 year	88.1	78.0	66.7	78.7
<b>Frequency of Substance Use Sessions</b>				
Every day (7 days/week)	6.7	6.4	6.5	6.6
Most days per week (5–6 days)	10.9	25.5	14.5	14.9
Several days per week (3–4 days)	13.4	19.1	25.8	18.0
Twice a week	49.6	29.8	21.0	37.7
Once a week	16.0	14.9	27.4	18.9
Couple times per month	1.7	4.3	2.1	2.2
Other	1.7	0	3.0	1.7
<b>Types of Substance Use Services</b>				
Group substance use counseling	94.1	93.6	88.5	92.1
Individual substance use counseling	94.1	89.4	85.2	90.4
Educational or information sessions	84.9	89.4	83.6	85.1
Family counseling	31.1	55.3	37.7	37.7
Other (guest speakers, videos)	11.8	8.5	14.5	12.3
<b>Treatment Approaches (Top 3)</b>				
Cognitive behavioral therapy	93.3	87.2	72.6	86.4
Motivational enhancement	62.2	59.6	37.1	54.8
12 Step	56.3	44.7	37.1	48.7
<b>Educational Level Needed for an Employee to Provide Substance Use Services</b>				
High School Diploma	11.8	10.6	21.9	13.7
Associates	5.9	8.5	9.4	7.5
Bachelors	31.9	48.9	56.2	42.3
Masters	50.4	31.9	12.5	36.6
Doctorates	0	0	0	0
<b>Median Number of Treatment Approaches Used</b>	2.7	3.3	2.5	2.9
<b>Tailored Substance Use Services</b>				
Yes	43.7	66.0	90.3	61.0
No	56.3	34.0	9.7	39.0
<b>Facility Budget Expenditures on Substance Use Services</b>				
0–10%	77.8	62.8	63.3	70.9
11–100%	22.6	37.2	36.7	29.1

to provide family counseling than coed (37.7%) or male-only facilities (31.1%) ( $\chi^2 = 6.20, df = 2, p \leq .05$ ) (see Table 2).

Cognitive behavioral therapy was the most commonly utilized treatment approach by all types of facilities (86.4%). Female-only facilities ( $Mdn = 3.3$ ) were statistically significantly more likely to use more treatment approaches than male-only ( $Mdn = 2.7$ ) and coed facilities ( $Mdn = 2.5$ ) ( $\chi^2 = 8.30, df = 2, p \leq .05$ ). The vast majority of coed facilities (90.3%) reported tailoring their substance use services specifically to youth, compared to female-only (66%) and male-only facilities (43.7%) (see Table 2).

### Assessment, Screening, and Evaluation Methods

The assessment/screening method most frequently cited was the Substance Abuse Subtle Screening Inventory (in various versions) (35.1%). The majority of respondents (36.6%) indicated that they used an assessment/screening method that was not presented as a choice on the survey, (e.g., Global Appraiser of Individual Needs-Short Screener (28.6%). Female-only (36.2%) and coed facilities (35.5%) were more likely to use their own methods

Table 2. Substance Use Services That Are Provided to Juvenile Offenders in Juvenile Affiliated—Facilities (Continued)

Item	M (%)		F (%)		C (%)		O (%)	
	M	SD	M	SD	M	SD	M	SD
Number of Youth Treated for Substance Use Services	29.3	36.3	26.2	1.99	36.4	31.4	30.6	3.2
Average Length of Sessions	59.0	16.0	63.5	2.5	60.6	20.8	60.3	2.0

N = ranges from 218 to 287 (Respondents) depending on item.  
 Percentages may not equal 100% due to rounding and/or non-responses.  
 M = Male-only, F = Female-only, C = Coed, O = Overall

Table 3. The Methods Used by Juvenile Justice—Affiliated Facilities to Assess and Evaluate Their Substance Use Services

Item	M (%)	F (%)	C (%)	O (%)
<b>Methods of Assessment/Screening</b>				
Substance Abuse Subtle Screening Inventory (various versions)	24.4	51.1	45.2	35.1
Use of own screening/assessment methods	16.0	36.2	35.5	25.6
CRAFT	5.0	2.1	14.5	7.0
No use of screening/assessment methods	3.4	0	6.5	3.5
Problem Orientated Screening Instrument for Teenagers	3.4	4.3	3.2	3.5
Other (Global Appraisal of Individual Needs, MAYSI-II)	21.5	53.1	42.4	36.6
<b>Pharmacological Services</b>				
Do not offer pharmacological services	95.7	93.6	100.0	96.5
Offer pharmacological services (Methadone, Naxopren, Naltrexone)	4.2	6.5	0	3.6
<b>Criteria Used to Evaluate Substance Use Services</b>				
Do not formally evaluate the effectiveness of substance use services	63.9	36.2	35.5	50.4
Successful completion of certain goals	31.9	44.7	45.2	38.1
Successful completion of certain % of youth	10.9	29.8	35.5	22.8
Reduced substance use reported by youth	10.9	21.3	24.2	16.7
Retention of youth in services	7.6	10.6	4.8	7.5
Other (reduced crime, tests)	7.6	21.7	12.9	12.3

N = ranges from 225 to 228 (Respondents) depending on the item.  
 Percentages may not equal 100% due to rounding and/or non-responses.  
 M = Male-only, F = Female-only, C = Coed, O = Overall

of assessment/screening for substance use than male-only facilities (16%) ( $\chi^2 = 11.67, df = 2, p \leq .05$ ). Nearly all (96.5%) of the respondents stated that their facilities did not offer pharmacological services to youth. Female-only facilities (6.5%) provided more pharmacological services (e.g., methadone, naxopren, and naltrexone) to

juveniles than did the other gender-based facility types (see Table 3).

One-half of the facilities (50.4%) did not formally evaluate their programs or use any criteria to rate the effectiveness of their substance use services. There was no statistically significant difference among the gender-based facility types in the use of a formal evaluation process for substance use services ( $\chi^2 = 4.35, df = 2, p = .11$ ). The most prevalent criterion used in evaluating substance use services was successful completion of certain goals in substance use treatment (38.1%). Coed facilities (45.2%) reported using this criterion more frequently than female-only (44.7%) and male-only (31.9%) facilities (see Table 3).

### Topics Covered and Time Invested in Substance Use Programming

Respondents were asked to report the number of hours devoted to covering specific topics commonly found in adolescent substance use services and programming. “Behavioral and emotional triggers to substance use” was the most prevalent topic—

70% of all facilities devoted 5 or more hours to the topic. In contrast, “violence prevention” and “impact of recovery from violence and trauma” were covered for 3 or more hours by only 46% of all facilities. A significant portion of male-only facilities reported not devoting any time to “violence prevention” (42.4%) and “impact of recovery

Table 4. *The Time Invested in Each Specific Substance Use Curricular Topics*

Substance Use Curricular Topics	Not Covered (0 hours)	Slightly Covered (1–2) hours	Moderately Detailed (3–4) hours	Covered in Detail (5+ hours)
The impact of recovery from violence and trauma	29.1% (M=41.5, C=21.0, F=10.9)	24.2% (C=33.9, M=20.3, F=21.7)	23.8% (C=27.4, M=22.9, F=19.6)	22.9% (F=47.8, C=17.7, M=15.3)
Violence prevention	29.6% (M=42.4, C=16.1, F=15.2)	24.2% (C=37.1, F=21.7, M=19.5)	25.6% (C=32.3, F=28.3, M=20.3)	20.6% (F=34.8, M=17.8, C=14.5)
Stress management	25.6% (M=39.8, F=10.9, C=8.1)	22.0% (C=29.0, F=23.9, M=17.8)	25.6% (C=32.3, F=26.1, M=22.9)	26.9% (F=39.1, C=30.6, M=19.5)
Anger management	25.1% (M=39.0, F=10.2, C=6.5)	12.6% (C=19.4, F=10.2, M=9.3)	24.7% (C=35.5, F=26.1, M=18.6)	37.7% (F=47.8, C=38.7, M=33.1)
Personal health	4.0% (C=8.1, M=2.5, F=2.2)	20.2% (C=29.0, M=17.8, F=15.2)	50.2% (M=61.9, C=38.7, F=37.0)	25.6% (F=45.7, C=24.2, M=17.8)
Behavioral and emotional triggers to substance use relapse	3.1% (C=8.1, M=1.7, F=0)	7.6% (C=12.9, M=6.8, F=4.3)	19.3% (C=27.4, F=17.4, M=16.1)	70.0% (F=78.3, M=75.4, C=51.6)
Relapse prevention of substance use	3.1% (C=6.5, (F=2.2, M=1.7)	12.6% (C=24.2, M=9.3, F=8.7)	17.0% (C=22.6, F=17.4, M=13.6)	67.3% (M=75.4, F=71.7, C=46.8)
Signs and symptoms of substance use disorders	2.2% (C=8.0, M=1.7, F=0)	36.8% (M=46.6, F=26.1, C=24.2)	23.8% (C=37.1, M=19.5, F=7.4)	37.2% (F=56.5, M=32.2, C=30.6)
Physiological or psychological effects of drugs	2.7% (C=8.1, M=0.8, F=0)	14.8% (C=25.8, M=11.9, F=10.9)	47.5% (M=55.9, F=41.3, C=35.5)	35.0% (F=47.8, C=31.4, M=29.7)
Promoting recreational, social, and cultural activities to alcohol/drug use	2.2% (C=6.5, M=0.7, F=0)	35.0% (M=52.5, C=16.1, F=15.2)	22.4% (C=33.9, F=21.7, M=16.9)	40.4% (F=63.0, C=43.5, M=29.7)

N = 223 to 227 Respondents.  
 Percentages may not equal 100% due to rounding and/or non-responses.  
 M = Male-only, F = Female-only, C = Coed, O = Overall

from violence and trauma” (41.5%). More female-only facilities (45.7%) devoted 5 or more hours to “personal health” than the other facilities. Coed (74.2%) and female-only facilities (73.9%) were statistically significantly more likely to devote 3 or more hours to “anger management” than male-only facilities (51.7%) ( $\chi^2 = 11.39, df = 2, p \leq .01$ ). (See Table 4.)

### Perceived Benefits and Barriers to Substance Use Services

The three most frequently identified benefits of providing substance use services to juvenile offenders were improved school performance (85.4%), improved family relationships (83.3%), and decreased criminal recidivism (82.6%). There was no statistically significant difference in the reported number of perceived barriers to the provision of substance use services by gender-based facility type ( $\chi^2 = 1.71, df = 2, p = .43$ ). (See Table 5.)

The three most frequently identified barriers to providing substance use services were lack of qualified staff to conduct substance use services (42.9%), lack of funding for substance use services (39.4%), and insufficient time to conduct substance use services (29.3%). Coed facilities (52.7%) were more likely to report lack of funding as a barrier to providing services than the other gender-based fac-

ility types. More than one-third of female-only facilities (33.9%) reported no barriers to providing substance use services, compared to coed (32.3%) and male-only (16.3%) facilities. There was no statistically significant difference in the number of perceived benefits in the provision of substance use services to juvenile offenders by gender-based facility type ( $\chi^2 = .95, df = 2, p = .62$ ). (See Table 5.)



Table 5. *Perceived Benefits and Barriers to Offering Substance Use Services*

Item	M (%)	F (%)	C (%)	O (%)
<b>Perceived Benefits to Offering Substance Use Services</b>				
Improved school performances	86.7	86.4	82.8	85.4
Improved family relationships	83.0	83.1	83.9	83.3
Decreased criminal recidivism	86.7	79.7	78.5	82.6
Increased health benefits	81.5	79.7	74.1	78.7
Reduced high school dropouts	71.8	81.4	77.4	77.0
Less sexually transmitted diseases	65.2	66.1	54.8	62.0
Cost savings due to reduced crimes	43.0	52.5	62.4	51.2
There are no benefits	0	0	1.1	.03
Other (increased self-esteem, reduced mortality, etc.)	0.5	0.8	15.1	9.1
<b>Perceived Barriers to Offering Substance Use Services</b>				
Lack of qualified staff	53.3	37.3	31.2	42.9
Lack of funding	28.9	42.4	52.7	39.4
Insufficient time	45.2	23.7	9.7	29.3
There are no barriers	16.3	33.9	32.3	25.1
Lack of appropriate program materials	11.9	15.3	18.3	14.6
Not enough youth to warrant substance use services	2.2	3.4	1.1	2.1
Substance use services are not effective	2.2	0	0	1.0
Other (short length of stay, uncooperative families, youth not interested in treatment, etc.)	5.2	0.8	16.1	9.4

*N* = 255–257 Respondents.  
 Percentages may not equal 100% due to rounding and/or non-responses.  
 M = Male-only, F = Female-only, C = Coed, O = Overall

## Discussion

More than three out of four juvenile justice affiliated facilities in this study (79.4%) provided substance use services to their clients. These results are similar to those reported by Young, Dembo, & Henderson (2007), who found that 75% of facilities provided substance use services. In the current study, more male-only than female-only and coed facilities provided substance use services. One reason for these differences in services by gender-based facility type may be the difficulty in conducting substance use services, specifically group sessions, simultaneously with both gender groups in a coed environment.

Drug Strategies (2003) recommends as a best practice that juvenile justice facilities specifically tailor their services and curriculum to the gender of the clients they serve. Several findings in

the current study point to the existence of potential disparities by the gender of clients served. Coed facilities were less apt to use formal methods of screening and assessment (i.e., using their own methods or no methods) than male-only and female-only facilities. Coed facilities also reported using fewer treatment approaches than male-only and female-only facilities. These differences may be associated with the challenges of a coed environment. Coed facilities may have chosen to present only gender neutral curricula and services, which contain fewer options. Some substance use services may simply not be appropriate when treating both males and females living in the same residential environment.

Future studies need to examine how coed facilities deal with gender specificity in curricula used for substance use services. Additional research needs to be conducted to further delineate and explain the differences in services by the gender of the clients served.

It was interesting, although not surprising, to learn that more than one-half of juvenile justice-affiliated facilities were not accredited. Male-only facilities were least likely to be accredited than other gender-based facility types. Accreditation among juvenile justice facilities is voluntary unless specific states require their facilities to be accredited. Several studies have examined the impact of accreditation status on adherence to recommended services or improved treatment outcomes for juvenile offenders. Brannigan, Schackman, Falco, & Millman (2004) found mixed

results regarding the impact of accreditation on how well facilities followed the recommended substance use treatment guidelines established by Drug Strategies (2003). Brannigan et al. (2004) reported that accredited facilities were more likely than unaccredited facilities to follow some guidelines, while the opposite was true in other studies.

One surprising result from the current study was the low level of pharmacological services offered to incarcerated youth—many of whom are likely to have serious substance use issues. Pharmacological treatment, with adequate compliance to the treatment regimen, has been found to decrease illicit substance use (Myrick & Anton, 1998; Williams, 2005; Anton et al., 2008). One reason for the lack of pharmacological services may be the increased costs associated with offering such services. Another possible reason for not offering pharmacological treatment is the fear of misuse of the medication by juvenile offenders and the associated legal risks. The possibility of legal action (e.g., lawsuits) pertaining to the misuse or adverse reactions to the medications may be a disincentive to providing such services. Lack of pharmacological treatment may also be linked to the lack of medical services and medical personnel in the facilities. Young et al. (2007) found that only 59% of juvenile-affiliated facilities provided medical services. Therefore, approximately 41% of juvenile justice facilities may not be equipped to administer pharmacological treatment and to treat the potential side effects of such treatment.

Family counseling and services are recommended components of effective substance use treatment for adolescents, specifically juvenile offenders (Drug Strategies, 2003; Molidor, Nissen, & Watkins, 2002). The low prevalence of family counseling services in the current study was noteworthy. A small number of facilities reported offering family counseling as part of their substance use services. This finding is corroborated by Young et al. (2007), who reported that approximately 40% of juvenile justice facilities provided family counseling.

According to a study by Knudsen (2009), family counseling was three times less likely to be offered to patients in treatment for substance use than individual counseling in substance use treatment facilities. In the present study, family counseling was most utilized in female-only facilities (55.3%).

The treatment services approach most utilized in the facilities was cognitive behavioral therapy. Cognitive behavioral therapy was the most widely reported treatment approach regardless of the gender of clients served. This treatment approach was used more in male-only facilities than in the other gender-based facility types. Drug Strategies (2003) found, in their national assessment of juvenile justice-affiliated facilities, that 58% of the facilities used this approach in their substance use services. The second most prevalent approach in the current study was 12-step programming. According to the assessment by Drug Strategies (2003), 66% of facilities used 12-step programming in their substance use services. One plausible explanation for this difference in the trend of treatment approaches may be the emerging popularity of cognitive behavioral therapy for clients of all ages. Cognitive behavioral therapy offers several positive features: it helps to increase feelings of personal autonomy in clients (Dobson & Khatri, 2000) and it presents clear treatment guidelines for therapists (Gaudiano, 2008).

It was disappointing to note that only a small number of juvenile justice facilities devoted any time in the substance use curricula to discussing the impact of recovery from violence and trauma or violence prevention. Considering the association between violence, crime, and substance use (Biederman et al., 2006), one would intuitively believe that the majority of facilities would integrate education about violence and violence prevention into their curricula. A noteworthy result from the current study is that less than one-half of male-only facilities devoted no time to covering violence prevention in their curricula. This is surprising considering the disproportionate number of adolescent males who commit violent

crimes (e.g., murder, assault, battery; Federal Bureau of Investigation, 2014b). Juvenile justice facilities may be able to help prevent future juvenile crime by designing and implementing services that effectively deal with both violence and substance use (Vermeiren, Schwab-Stone, Deboutte, Leckman, & Ruchkin, 2003).

Considering the association between anger, substance use, and crime, it is noteworthy that approximately one in four facilities invested no time in the topic of anger management in their substance use curricula. Anger is a contributing factor to substance use in juvenile offenders (Eftekhari, Turner, & Larimer, 2004) and contributes to aggression and juvenile delinquency in male juvenile offenders. Therefore, it is surprising that coed and female-only facilities were more likely than male-only facilities to devote 3 or more hours to anger management.

A similar finding was noted for the topic of stress management. Stress management was minimally covered (less than 2 hours) by approximately one-half of the facilities. A sizable number of male-only facilities reported investing only 2 or fewer hours covering this topic. This finding is of interest because stress is frequently cited as contributing to substance use in adolescents, especially males (Piko, 2001; Skitch & Abela, 2008; Hyman & Sinha, 2009). There may be several plausible explanations for the limited presence of stress management courses in the substance use curricula of many facilities. One explanation could be that stress management may not be perceived as an important topic to be covered in treatment, compared to personal health or the triggers for substance use relapse.

Formally evaluating the outcomes of substance use treatment is an important and recommended best practice in the field. Evaluating the outcomes of substance use education and treatment allow program directors and staff to assess the effectiveness of their services. Formal program evaluation also facilitates revisions and modifications

that may be necessary to improve substance use education and treatment (Drug Strategies, 2003).

It was concerning to note that slightly more than one-half of all facilities did not use any criteria to evaluate the effectiveness of their substance use services. Almost two-thirds of male-only facilities reported not formally evaluating their substance use services. The absence of formal program evaluations in many of the facilities may be due to the costs associated with conducting program evaluations. Another reason may be the specialized training needed to conduct successful evaluations (Drug Strategies, 2003). The lack of a formal evaluation process certainly impedes facilities' ability to improve their substance use services and outcomes. Future research is needed to examine the reasons for the absence of formal evaluations in many of the facilities and the potential ramifications associated with facilities not conducting evaluations of their substance use services.

It was interesting to note that the number of perceived barriers to offering substance use services to juvenile offenders was not associated with the provision of actual services. The study found that respondents from facilities that did not offer substance use services did not perceive more barriers than respondents from facilities that offered substance use services. It is possible that respondents, regardless of the status of substance use services in their facilities, may share the same number of commonly perceived barriers.

The most commonly cited perceived barrier was the lack of qualified staff to conduct substance use services. Male-only facilities, compared to coed and female-only facilities, were more apt to report that a lack of qualified staff was a barrier for providing services. According to the facilities surveyed in this study, the minimum educational requirement needed to provide substance use services to juvenile offenders was a 4-year degree. A sizable number of facilities required that their employees have a 2-year degree or less. The educational requirements to become a counselor (certified or noncertified) vary from state to state—from an associate's degree to master's degree,

depending on the nature of the qualifications (U.S. Department of Health and Human Services, 2005).

## Limitations

The results of this study should be interpreted with a number of potential limitations in mind:

1. The responses elicited may include those the respondents believed the researcher expected or desired to record (social desirability).
2. One state was not included in the study population, which may affect the external validity of the study.
3. Some states' employees acted as liaison between investigator and respondents (via postal mail). This may have introduced bias.
4. The questions on the survey were based on a review of the current literature and opinions of experts. No focus groups were conducted with directors to elicit their ideas prior to the design of the survey.
5. The survey was purposely designed for program directors of substance use treatment in juvenile commitment programs. The survey included specific information related to the study's purpose. Therefore, some information relating to substance use services in juvenile facilities may have been overlooked in the design of the instrument.
6. The directory was not all-inclusive; it was limited to those facilities that were registered with the American Correctional Association.
7. Due to the scope and focus of the study, we clumped all facility types (e.g. residential, group homes, outpatient services) into the three gender-based groups. Therefore, differences may exist in the services provided among the facility types.

## Conclusion

The results of the present study indicate that, in general, coed facilities appear to report providing fewer services than male-only and female-only facilities. The disparities in services by gender of the client served in juvenile justice facilities are of particular concern. In order to provide adequate

services to all adolescents it is important that facilities, regardless of gender served, follow best practice recommendations. An improved level of standardization across all facilities may help in raising the quality of services among facilities. Improving the level of standardization and consistency based on best practice recommendations is important, since juvenile offenders are often treated in several different facilities during their time in the juvenile justice system. Improved standardization across states and facilities may be difficult to establish due to differences in laws, policies, and budget allocation across the states.

Currently, best practice recommendations are lacking for the specific topics and services that should be included in the ideal substance use services program for incarcerated adolescents. What are the components of the ideal program? The lack of universally accepted criteria for substance use services may be a legitimate reason for the current state of variability that exists across states and across facilities. Many facilities report that they do not have a formal evaluation process to determine the outcomes or success of their substance use services. The lack of uniformity in services and the absence of formal program evaluation processes are barriers that are impeding juvenile justice facilities from reaching their full potential.

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# Communication Patterns Among Juvenile Detainees: A High-Risk Population for Transmission of Human Immunodeficiency Virus (HIV) and Other Sexually Transmitted Diseases

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## Abstract

Juvenile offenders are at risk for sexually transmitted diseases (STDs). Social media can be utilized to deliver reproductive health information to help prevent STDs. Since social media use by juvenile offenders may differ from that

of adolescents in the general population, we describe the use of social media reported by juvenile offenders in order to inform intervention and retention strategies for a randomized trial. A convenience sample of 200 juvenile offenders, aged 10 to 18 years, responded to survey questions about their use of social media. Eighty-six



percent met criteria for social media use (SMU), including Facebook, Twitter, YouTube, Google Plus, and MySpace. Among these youth detainees, use of social media was similar to that of a representative sample of youth in the general population. Results suggest that use of social media may be a viable strategy for delivering interventions for HIV and other STDs and for minimizing attrition (loss of participants from a study for various reasons) in randomized trials among juvenile offenders.

## Background

In recent years cell phone and social media use have increased among American adolescents. Based on data gathered in a series of nationally representative surveys entitled "Teens and Technology 2013" and conducted by the Pew Research Center, researchers determined that 78% of teens now have a cell phone, almost half (47%) of which are smartphones (a cell phone having a touchscreen or alphabetic keypad and many of the features of a personal computer; Madden, Lenhart, Duggan, Cortesi, & Gasser, 2013).

Although the landscape of social media preferred by teens is often shifting, Facebook and Twitter are in consistent use by American teens (Madden et al., 2013; Smith, 2014). Cell phones are a main route to the Internet for many adolescents, with one in four reporting that they almost always access the Internet using their phone, and three in four reporting that they access the Internet using their cell phones, tablets, or other mobile devices at least occasionally (Madden et al., 2013). While youth from households with lower socioeconomic status are slightly less likely to use the Internet in general, they are just as likely as those who come from higher socioeconomic strata, to use their cell phones as their main point of access to the Internet (Madden et al., 2013).

Given the pervasive use of cell phones and smartphones among adolescents, emerging interventions targeting this age group are beginning to utilize social media platforms to deliver

health information and emulate health care interactions (Wantland, Portillo, Holzemer, Slaughter, & McGhee, 2004). Web-based interventions and use of social media have been demonstrated to be as, or more effective, than traditional interventions for chronic disease management, as well as for adolescent sexual health and substance abuse prevention programs (Wantland et al., 2004). Use of social media and web-based communication platforms may be more accessible and effective than place-based programs for marginalized and transient populations. For these subgroups, however, general trends in utilization of technology and social media may differ from that of the general population due to access or interest.

Utilization of social media has not been evaluated for the high-risk population of juvenile detainees. The literature shows that these youth often have sex at earlier ages, use condoms infrequently, and may have older and numerous partners (Belenko, Dembo, Rollie, Childs, & Salvatore, 2009; Aalsma et al., 2011). Sexual encounters for these youth often involve substance and alcohol use (Belenko et al., 2009; Aalsma et al., 2011). Moreover, these youth are often beset with significant psychiatric conditions and substance use disorders that further increase risk of sexually transmitted infections and hamper prevention efforts (Belenko et al., 2009; Aalsma et al., 2011). Marginalized adolescents are also less likely than others to have access to health services, resulting in less contact with health resources, including prevention information and HIV/STD testing (Bell, Breland, & Ott, 2013; Danielson et al., 2014). According to the CDC, youth aged 13 to 24 years old accounted for 26% of all new (incident) HIV infections in the United States, despite comprising 17% of the population (CDC, 2012). Most of these infections occurred among men who had sex with men and represented a 22% increase from 2008. In 2013, 21% of all those newly diagnosed with HIV infection were youth aged 13 to 24 years old. Data from the Michigan Department of Health and Human Services (MDHHS) mirror these trends (MDHSS, 2015). In addition, it is

estimated that over 50% of youth do not know they are HIV infected. If juvenile detainees are similar to the general adolescent population in their use of the Internet and social media, delivering HIV/STD interventions through new media technology may be a viable method for delivering interventions and engaging juvenile detainees in randomized trials upon reentry into the community.

The purpose of this paper is to describe the communication patterns and utilization of social media among juvenile offenders. Specifically, we sought information on possession and use of cell phones, computer access, and use of social media. We also asked youth where they typically seek care, as this population may be less likely to have access to health care services upon community reentry (Golzari, Hunt, & Anoshiravani, 2006). In addition to assessing the feasibility of web-based or social media interventions in this group, we note that engaging youth in randomized trials requires follow-up over extended periods, and that social media may play an important role in reducing attrition and improving retention in such trials. In previous studies of youth with asthma, Facebook was successfully used as a means of retention (Ezell, Saltzger, Peterson, & Joseph, 2013). Therefore, the information from this survey could inform intervention delivery, as well as retention in randomized trials and follow-up strategies.

## Method

### Setting

The Wayne County Juvenile Detention Facility (WCJDF) in Wayne County, Michigan, provides detention services to juveniles pending completion of legal proceedings. The 2013 population of Wayne County was 1,775,273, with 24.3% below the age of 18. The ethnic breakdown of Wayne County is 39.6% African-American, 5.6% Latino, 50% White, and 4.8% other. Wayne County encompasses the city of Detroit and is the 18<sup>th</sup> most populous county in the United States.

Juveniles housed at WCJDF are awaiting adjudication, sentencing, or placement. The facility provides educational services via an on-site charter school, as well as on- and off-site medical services, on-site dental services, mental health services, and recreational activities. In addition, counseling and behavior management activities are provided to youth as needed. The average length of stay in the Center is about 2 weeks.

### Participants and Survey Procedure

The study protocol was approved by the Institutional Review Board at the Henry Ford Health System (HFHS) and the administration at the Wayne County Juvenile Detention Facility (WCJDF). Juvenile offenders (aged 10 to 18 years), post-adjudication and currently detained at the WCJDF, were eligible to participate. A convenience sample was obtained by asking classroom instructors of the on-site charter school to allow the research staff member to describe the communication interview to small groups of students. Students could choose to participate by giving their name to the classroom instructor. The trained interviewer then met with the youth to obtain verbal assent prior to the start of their interview. After assent was obtained, the interviewer administered the survey.

The survey consisted of 28 questions and participants had the option of skipping any question they did not feel comfortable answering. The survey contained open- and close-ended questions on participant demographics and lifestyle, communication methods (e.g., e-mail, cell-phone use, or computer use), use of social media, and places where youth sought health care. Questions on social media from the Teens and Technology 2013 survey were also modified and used in this project (Madden et al., 2013).

### Statistical Methods

Basic descriptive statistics, such as percentages, means, and standard deviations, were used to describe the participant characteristics and communication patterns. Participants were

categorized as social media users (SMU) or non-social media users (Non-SMU) depending on their reported usage of the following social media platforms: Facebook, Twitter, YouTube, Google+, and MySpace. To assess the associations of social media usage and participant characteristics, chi-squared tests were conducted for binary and categorical characteristics and a two-sample *t*-test was conducted for age. Multivariate analyses were conducted using stepwise logistic regression with social network usage as the dependent variable. Odds Ratios (OR) and 95% Confidence Intervals were calculated and used to describe the relationship between survey responses and use of social media. All testing was done at the 0.05 level. Statistical analyses were performed using SAS version 9.2.

We also examined our results alongside those of the nationally recognized Pew Internet & American Life Project, which is one of seven projects that make up the Pew Research Center, a nonpartisan nonprofit organization that produces reports exploring the impact of the Internet on families, communities, work and home, daily life, education, health care, and civic and political life (Madden et al., 2013; Lenhart et al., 2011). These side-by-side observations were purely subjective with no formal statistical comparisons.

## Results

For the 200 assenting participants, the mean age was 15.2 (*SD* = 1.3), with 28% being between 10 and 14 years of age (see Table 1). Seventy percent of the sample was male. The racial/ethnic breakdown of the participant pool was 78% Black, 13% White, 7% Latino, and 3% other or mixed

Table 1. Descriptive Statistics and Comparisons Between Social Media Users vs. Non-users

Variable	Users <i>n</i> = 171		Non-Users <i>n</i> = 29		OR <sup>a</sup>	95%CI	<i>p</i> <sup>b</sup>
Age, mean ( <i>SD</i> )	15.2	(1.3)	15.4	(1.6)	--	--	0.395
<b>Age categories, <i>n</i> (%)</b>							
10-14	48	(86)	8	(14)	1.02	(0.42-2.47)	0.957
15-18	123	(85)	21	(15)			
<b>Sex, <i>n</i> (%)</b>							
Female	58	(95)	3	(5)	6.25	(1.82-20.0)	0.011
Male	113	(76)	26	(24)			
<b>Race/Ethnicity, <i>n</i> (%)</b>							
White	23	(92)	2	(8)	Reference		
African-American	131	(84)	25	(16)	0.46	(0.10-2.06)	0.296
Latino/a	11	(85)	2	(15)	0.95	(0.20-4.56)	0.952
Other/Multiracial	6	(100)	0	(0)	Cannot calculate		
<b>Changed residence in last 6 months, <i>n</i> (%)</b>							
Yes	89	(82)	19	(18)	0.52	(0.22-1.22)	0.127
No	81	(90)	9	(10)			
<b>Lived outside city of Detroit, <i>n</i> (%)</b>							
Yes	69	(96)	3	(4)	5.92	(1.72-20.33)	0.001
No	101	(80)	26	(20)			
<b>Report cell phone, <i>n</i> (%)</b>							
Yes	137	(90)	15	(10)	3.49	(1.52-8.03)	0.002
No	34	(72)	13	(28)			
<b>Location of computer access, <i>n</i> (%)</b>							
<i>Home</i>							
Yes	139	(92)	12	(8)	6.15	(2.68-14.15)	0.001
No	32	(65)	17	(35)			
<i>School</i>							
Yes	140	(89)	18	(11)	2.76	(1.19-6.42)	0.015
No	31	(74)	11	(26)			
<i>Friend/relative's home</i>							
Yes	124	(92)	11	(8)	4.32	(1.90-9.82)	0.001
No	47	(72)	18	(28)			
<i>Library</i>							
Yes	76	(86)	12	(14)	1.13	(0.51-2.52)	0.758
No	95	(85)	17	(15)			
<i>Work</i>							
Yes	17	(92)	1	(6)	3.09	(0.70-24.17)	0.259
No	154	(85)	28	(15)			

<sup>a</sup>Odds Ratio and 95% Confidence Interval.

<sup>b</sup>Chi-squared *p* value.

ethnicity. Thirty-six percent of respondents reported living outside of the city of Detroit, while 54% had changed residency in the past 6 months. Among the participants, 171 (86%) reported using at least one social media platform and were categorized as SMUs. Facebook had the highest percentage of users at 81%, followed

by Twitter at 55%, YouTube at 37%, and Google+, and MySpace at 19%, each.

Of the 200 respondents, 152 (76%) had a cell phone. Among those with a cell phone, the majority had the following features: text (99%), Internet (95%), voice mail (98%), applications (88%), instant messaging (81%), and e-mail (80%) (not shown). Most respondents had access to a computer at home (75%), at school (53%), or at a friend/relative's house (67%) (see Table 1). Table 1 also shows the association of respondent characteristics to reported use of social media. SMUs were more likely than Non-SMUs to be female,  $OR = 6.25 (1.82-20.0)$ ,  $p = 0.011$ . A lower percentage of both African American and Latino youth were SMUs compared to Whites, and fewer SMUs than non-SMUs had changed residence in the last 6 months (82% of those who had moved were SMUs vs. 90% of non-SMUs), although these comparisons were not statistically significant. More SMUs lived outside the city of Detroit,  $OR = 5.92 (1.72-20.33)$ ,  $p = 0.001$  than Non-SMUs, and SMUs were more likely to have a cell phone ( $OR = 1.52-8.03$ ),  $p = 0.002$ . Compared to Non-SMUs, SMUs were also more likely to use computers at home,  $OR = 6.15 (2.68-14.15)$ ,  $p < 0.001$ , at school 2.76 (1.19-6.42),  $p = 0.015$ , and at a friend or relative's house,  $OR = 4.32 (1.90-9.82)$ ,  $p < 0.001$ .

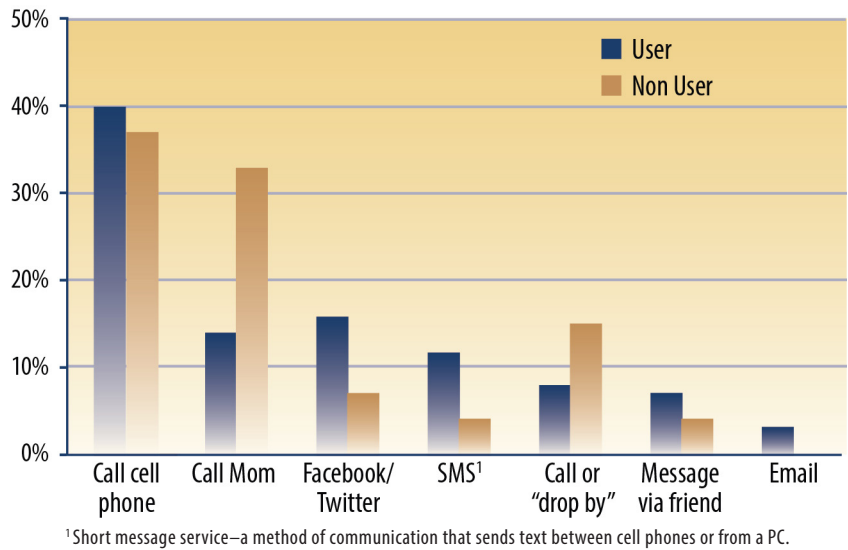
When assessing all participants' characteristics in terms of social network use in a multivariate analysis, the characteristics that remained significant

**Table 2. Results of Multiple Logistic Regression to Describe the Associations Between Demographic and Participant Characteristics with Use of Social Media Among Detained Youth**

Variable	aOR <sup>a</sup>	95%CI	p
Female	4.9	(1.2, 20.3)	0.027
Owns a cell phone	3.1	(1.1, 8.4)	0.025
Computer access			
At home	4.0	(1.5, 10.7)	0.004
At friend/relative's home	4.5	(2.68, 14.15)	0.001
Lives outside City of Detroit	4.5	(1.2, 17.90)	0.030

<sup>a</sup> Adjusted odds ratio.

**Figure 1. Responses to the open-ended question: "What is the best way to reach you?"**



were female gender, having a cell phone, using computers at home and at a friend/relative's house, and living outside the city of Detroit (see Table 2).

Participants were asked, "What is the best way to contact you?" For SMUs, cell phone and social media—Facebook/Twitter, Short Message Service (SMS) were the most frequent choices. Among Non-SMUs, the most frequently selected choices were cell phone, call Mom, and call or drop by (see Figure 1).

We compared some of our responses to those reported by adolescents responding to the Pew Survey (see Table 3). The majority of detainees reported having "profiles" (i.e., information presented about the user such as his/her relationship status, interests, hobbies, etc.) on Facebook (80.5%), as did respondents to the Pew survey (93%). A higher percentage of detainees reported using Twitter (54.5%) than respondents to the Pew survey (12%). Among the SMUs, 64.9% reported visiting social media sites daily. Another 19.3% reported visiting social media sites at least weekly. In the Pew Survey data, 64% of respondents reported visiting the sites at least once per day or several times per day. There were some differences in what user information was made public. Among detainees, 59.7% had a Facebook

Table 3. Reported Usage of Social Media Among Juvenile Detainees and Youth Responding to the Pew Research Report for Selected Items

	Detainees %	Pew %
Do you have profiles with these sites?		
Facebook	81	93
Twitter	55	12
YouTube	37	6
MySpace	19	24
Skype	3	2
Is your profile visible to the public?		
Yes	58	36 <sup>a</sup>
No	39	62
Don't know	1	2
How often do you visit these sites?		
> 1 daily	65	64 <sup>b</sup>
> 1 weekly	19	25 <sup>c</sup>

<sup>a</sup> Derived from 17% reporting "public" + 19% reporting "partially public" in the Pew Report.

<sup>b</sup> Derived from 40% reporting "several times/day" + 24% reporting "about once per day" in the Pew Report.

<sup>c</sup> Derived from 12% reporting "1–2 days/week" + 13% reporting "3–5 days/week" in the Pew Report.

profile that was accessible to the public, while among Pew Survey respondents, a lower percentage reported that their profile was public (17%) or partially public (19%).

We asked youth to list the places they visit for health care (see Table 4). The majority of teens (61%) did not report seeking health care at any particular location. About 3.5% of teens reported visiting teen clinics. Most teens visited public health clinics (13.5%) or hospital emergency rooms/urgent care facilities (23.0%). SMUs did not significantly differ from non-SMUs regarding sites visited for health care (data not shown).

Table 4. Health Care Sites Visited by Youth for Care\*

	All (n = 200)		Users (n = 171)		Non-users (n = 29)		p
	n	%	n	%	n	%	
Teen clinic	7	(3.5)	7	(4)	0	(0)	0.596
Hospital/urgent care	46	(23)	36	(21)	10	(34)	0.150
Public health/community clinic	27	(13.5)	22	(13)	5	(17)	0.557
Treatment facility/Other <sup>a</sup>	4	(2.0)	4	(2.4)	0	(0)	NA
None reported	122	(61)	106	(62)	16	(55)	0.539

\*Youth may have visited more than one site.

<sup>a</sup> Includes facilities for alcohol and drug treatment, and 1 youth that visited a family doctor.

## Discussion

We conducted a survey among 200 youth detained in a county detention facility in order to investigate factors pertinent to interventions that could use social media to target this population. We found that the youth included in this sample appear to use cell phones and social media on a regular basis and as an important means of communication in a manner that is similar to the general population of youth.

We categorized our sample according to reported use of social media. Demographically, SMUs were disproportionately female, possessed cell phones, and, as expected, were more likely to report access to a computer at home, school, or a friend/relative's home. We observed that SMUs tended to live outside of Detroit, were less likely to have changed residence in the last 6 months, and more likely to have computer access. This may indicate a relatively higher level of socioeconomic status in this group, which may be supported by the higher reports of home computers among SMUs. Demographically, a larger percentage of Whites reported using social media than African Americans and Latino youth. These differences were not statistically significant, but stand in contrast to national data that suggested that African American and Latino youth use social media more than their White peers (Lenhart et al., 2011). Cell sizes for Whites and Latinos were too small for this variable to be entered into our multivariate model. For all ethnic groups, more than 80% of detainees could be categorized as SMUs.

We were able to compare some of our survey results to similar results from the Pew Research Center's Internet & American Life Teen-Parent survey (Lenhart et al., 2011). Based on observation alone, the population of detainees had responses similar to that of the Pew report with regard to SMU sites with user profiles, and frequency with which the social media was used. Interestingly, a higher percentage

of youth offenders, relative to Pew survey respondents, had user profiles that were accessible to the public. An explanation for this observation cannot be inferred from our data.

Most youth did not report a place where they seek health care. Few teens had reported using the teen clinics in the community. Among those that responded with a location, hospital emergency departments and public health clinics were the most likely choices, but the type of facility utilized for care did not differ by SMU status.

Our results support the potential for the use of social media and web-based interventions in this population. Internet-based, post-release interventions targeting juvenile offenders are difficult to find in the literature. Non-web-based interventions have been developed and evaluated among incarcerated youth and for youth upon re-entry, usually delivered within the detention facility (Bryan, Schmiege, & Broaddus, 2009). Although not among juvenile offenders, use of cell phones to send a text message reminder has also been evaluated (Cornelius et al., 2013; Cornelius et al., 2012). Cornelius et al. (2013) examined African American adolescents' perceptions of a mobile cell phone-enhanced intervention and development of a mobile phone-based HIV prevention intervention. Focus group and pilot studies showed positive results (Cornelius et al., 2013; Cornelius et al., 2012). Another study provides evidence that youth will accept information on sexual health via social media, although racial/ethnic differences were observed (Divecha, Divney, Ickovics, & Kershaw, 2012). In that study, African Americans (who were 59% of participants) were more willing than Whites to accept sexual health information made available through social media. Latino respondents (who were 51% of participants) were the least willing (Divecha, et al. 2012). A series of focus groups conducted by Selkie, Benson, & Moreno (2011) among youth aged 14 to 19 years in Wisconsin found that youth often used and were willing to use the Internet and social media to obtain information on sexual health, but emphasized

that sites must be accessible, trustworthy, and confidential (Selkie et al., 2011). Robertson, Baird-Thomas, Dill, & Morse (2006) conducted a brief STD/HIV intervention among juvenile detainees in a Mississippi facility. The intervention was conducted in the facility, and so demonstrations of condom application and graphic illustrations of STD infections were not permitted. Results were promising in that knowledge increased. However, some undesirable sexual practices also increased. Investigators recommended booster sessions post-discharge and more emphasis on teaching specific skills, such as condom application, communication, and assertiveness skills (Robertson et al., 2006).

There are several limitations to our study. All youth participating in the study were offenders detained in the WCJDF; however, this is a convenience sample of youth that assented to be interviewed. The detained population for WCJDF is about 80% male and our sample was about 70% male. Our sample size did not allow more comparisons by race or ethnicity, although 80% of our population was African American/Black. In addition, our survey did not have questions specific to health behaviors or sexual health and whether or not youth preferred to receive this kind of information via social media. Our response categories were not always exactly the same as those used in the Pew Report; however, we were able to make some comparisons on sites used, frequency of use, and measures to protect confidentiality.

## Conclusion

The literature on the use of social media in this age group and our survey responses suggest that social media may be a feasible method of delivering information about STD prevention, testing, and treatment resources to youth offenders. We note that while the results of this paper suggest that this method of communication may work well with this population, the evidence is lacking to support these results. To our knowledge, there are no reports in the literature describing the

use and evaluation of social media interventions targeting youth offenders and their sexual health upon re-entry into the community. We will, however, glean from previous publications that provide crucial insight into the development of effective programs for this population. For example, Robertson et al. (2006) developed a brief intervention delivered in a detention facility.

We are currently developing and pilot testing a social media intervention for youth offenders focused on increasing their HIV/STD testing and decreasing their risk behaviors after they have been released into the community. This pilot study will contribute information regarding the efficacy of social media as a means of maintaining contact with youth, providing ongoing education, and minimizing attrition (or loss of study participants for various reasons).

Our results also highlight the underutilization of existing teen clinics by the youth making up this sample. Low utilization of these resources suggests that these youth are not receiving important services that can decrease their engagement in sexual risk behaviors. Social media could provide a means of effective outreach to increase use of available community services. Finally, data on use of Emergency Department and public health clinics by youth also suggest that these may be sites to target and engage high-risk youth in interventions. Addressing sexual health in this population may help to curtail the rising tide of HIV and STDs in adolescent and young adult populations.

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# Meeting Treatment Needs: Overall Effectiveness and Critical Components of Juvenile Drug Court/Reclaiming Futures Programs

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## Abstract

There is a current trend to incorporate evidence-based practices into juvenile drug courts in an effort to enhance substance abuse treatment capacity. Consequently many jurisdictions that have been implementing the Juvenile Drug Court: Strategies in Practice (National Drug Court Institute & National Council of Juvenile and Family Court Judges, 2003), have incorporated Reclaiming Futures (Nissen, Butts, Merrigan, & Kraft, 2006) into their juvenile drug courts. The expectation is that the integrated Juvenile Drug Court: Strategies in Practice and Reclaiming

Futures (JDC/RF) program would lead to increased engagement of youth in juvenile drug court resulting in improved rates of program clients receiving substance abuse treatment. Results of the National Cross-Site Evaluation of JDC/RF indicate that the overall probability of a JDC/RF program client receiving treatment is relatively high, but varies by program. Specifically, JDC/RF programs lacking systems integration were less effective at serving substance abuse treatment needs, regardless of the characteristics of their clients. This finding suggests that all communities should focus on system integration when

delivering services to adolescents with substance abuse problems in the justice system. In addition, JDC/RF programs with greater access to targeted treatment were more effective at serving substance abuse treatment needs. Even though this effect was accounted for by client characteristics, results suggest that targeted treatment should remain a particular focus of juvenile drug courts.

## Introduction

Adolescence is a critical period in human development because significant physical and neurological maturation occur. Substance use during childhood and adolescence can have numerous negative effects that have the potential to significantly impair healthy development, as well as lead to substance abuse, substance dependence, or a substance use disorder (SUD) (Dennis, Babor, Roebuck, & Donaldson, 2002). SUDs among youth in the United States (U.S.) are not uncommon (Swendsen et al., 2012). More than 1.7 million (7%) U.S. youth ages 12 to 17 have an SUD, with significantly higher rates among those involved with the juvenile justice system (Substance Abuse and Mental Health Services Administration [SAMHSA], 2013). Moreover, adolescents involved with the justice system have more severe substance abuse-related issues than their non-involved peers (Tarter, Kirsci, Mezzich, & Patton, 2011). Thus, incorporating effective substance abuse treatment into the juvenile justice system has become critical for achieving effective youth rehabilitation and eliminating lifelong addiction and recidivism. Treatment programs backed by promising research are being implemented in juvenile drug courts nationwide. However, just as no two juvenile court jurisdictions are the same, no two individual juvenile clients are the same. Successful completion of a juvenile drug court program that includes substance abuse treatment by one client does not guarantee successful program completion for everyone. Characteristics unique to the implementation of the juvenile drug court program, as well as characteristics unique to the individual being treated, have an

impact on whether a particular youth will successfully complete juvenile drug court and, thus, successfully complete treatment.

## Juvenile Drug Courts

In 2000, the Centers for Disease Control and Prevention reported that adolescent substance use, which had come to a peak in the 1990s, remained alarmingly high (National Drug Court Institute [NDCI] & National Council of Juvenile and Family Court Judges [NCJFCJ], 2003). Given the aforementioned risks associated with adolescent substance use, this increase was viewed as a major public health crisis. The peak in adolescent substance use occurred roughly a decade after a similar peak in use among adults. Drug-related arrests among adults dramatically increased in the 1980s, in large part due to a drastic increase in accessibility and use of crack cocaine (NDCI & NCJFCJ, 2003) as well as the enforcement of increasingly harsh antidrug laws (Peugh & Belenko, 1999). In response, jurisdictions began creating separate dockets to focus on individuals who had been brought into the criminal justice system as a result of substance abuse. Rather than being exclusively punitive, sentencing practices under these dockets included therapeutic elements focused on treating the underlying dependence that often accompanied criminal activity. As these dockets grew in number, they began to be evaluated. Research conducted on these courts was encouraging, demonstrating a decrease in recidivism among participants of adult drug courts compared to those in non-specialized courts (Hora, Rosenthal, & Schman, 1999).

The demonstrated successes of adult drug courts combined with the reported dramatic increase in adolescent substance use during the 1990s motivated a small number of jurisdictions to experiment with implementation of drug courts targeting juvenile offenders, the first of which began in 1993 (Cooper, 2001). As the number of juvenile drug courts increased, several evaluations were conducted yielding mixed results (Belenko, 2001; Marlowe, 2010; Roman &

DeStefano, 2004), which some indicate were due to poor methodology (Mitchell, Wilson, Eggers, & MacKenzie, 2012). Additional research, however, demonstrated that the inclusion of evidence-based practices increased positive outcomes, including reduction of substance use and crime (Belenko & Logan, 2003; Henggeler et al., 2006; Henggeler, McCart, Cunningham, & Chapman, 2012).

### Juvenile Drug Court: Strategies in Practice

Responding to the unique needs of juvenile drug court programs, a decade after the first juvenile drug court was established the Bureau of Justice Assistance, the NCJFCJ, and the Office of Juvenile Justice and Delinquency Prevention (OJJDP) created the Juvenile Drug Court: Strategies in Practice program (NCJFCJ, 2014; NDCI & NCJFCJ, 2003). The Juvenile Drug Court: Strategies in Practice was developed to serve as a framework for planning, implementing, and operating a juvenile drug court to focus on providing appropriate, individualized substance abuse treatment to adolescents involved in the justice system. While modeled after *Defining Drug Courts: The Key Components* (National Association of Drug Court Professionals [NADCP], 1997), *Juvenile Drug Court: Strategies in Practice* recognizes that juveniles are developmentally different from adults and thus includes specific strategies that incorporate age-relevant practices (e.g., inclusion of family, school-based support) (NDCI & NCJFCJ, 2003). Developers and administrators of *Juvenile Drug Court: Strategies in Practice* expect that juvenile drug courts implementing this program will have improved systems of care, improved provision of effective substance abuse treatment, and improved client engagement in substance abuse treatment compared to drug courts not implementing this program.

In the past decade, there has been a dramatic rise in the number of scientifically rigorous studies indicating the effectiveness of juvenile drug courts. Generally, results have shown that youth in juvenile drug courts do as well as, or better

than, matched youth in community-based treatment programs in terms of reduced substance use, crime, mental health, and family problems (Henggeler et al., 2006; Ives, Chan, Modisette, & Dennis, 2010; Rodriguez & Webb, 2004; Sloan, Smykla, & Rush, 2004). In terms of reduced substance use and crime, youth in juvenile drug courts (particularly those using evidence-based practices) have better outcomes than youth randomly assigned to traditional family court with community service (Henggeler et al., 2006). In addition, results of a 19-site quasi-experimental study show that youth in juvenile drug courts significantly reduced their substance use, victimization, emotional problems, and illegal activity while the economic impact of crime declined (Dennis, 2013). Results of two recently conducted meta-analyses, one of 34 rigorous evaluations of juvenile drug courts (Mitchell et al., 2012) and one of 41 studies of juvenile drug courts (Stein, Deberard & Homan, 2013), indicate that juvenile drug court is associated with a small but statistically significant reduction in recidivism.

This favorable effect of juvenile drug court on recidivism, however, depends on graduation from the juvenile drug court program (Stein et al., 2013), which is a marker of successful completion of substance abuse treatment for juvenile drug court clients. Overall, juvenile drug court program graduates have demonstrated dramatically lower recidivism rates than their juvenile drug court peers who did not graduate. In addition, other related variables such as greater length of time in a juvenile drug court program, or amount of substance abuse treatment received as a result of participating in the juvenile drug court program, are strongly associated with increased likelihood of successful juvenile drug court graduation and decreased likelihood of recidivism (Stein et al., 2013). Because there seems to be an association between amount of substance abuse treatment received, higher program graduation rates, and decreased recidivism, programmatic factors affecting the amount of substance abuse treatment received seem of particular importance.

Juvenile drug courts could implement these programmatic factors consequently increasing the amount of substance abuse treatment provided, increasing graduation rates, and, ultimately, reducing recidivism.

### **The Juvenile Drug Court and Reclaiming Futures Initiative**

The current trend in juvenile drug court treatment is the inclusion of evidence-based practices as reflected in current federal policy. The Office of National Drug Control Policy (ONDCP) supports the expansion of drug courts, including juvenile drug courts, to achieve its aim of increasing public health and safety (ONDCP, 2010). In 2007, OJJDP entered into a public-private partnership with SAMHSA's Center for Substance Abuse Treatment (CSAT) and the Robert Wood Johnson Foundation, to advance the mission of juvenile drug courts by integrating evidence-based practices into substance abuse treatment services (Solovitch, 2009). This initiative required juvenile drug courts to implement the Reclaiming Futures model to support the delivery of evidence-based substance abuse treatment as a component of the juvenile drug court program.

### **Reclaiming Futures Model**

Reclaiming Futures (<http://reclaimingfutures.org/>) is a systems change approach to juvenile justice focused on increasing and improving adolescent substance abuse treatment, as well as improving the way communities intervene with youth (Nissen et al., 2006; Nissen & Merrigan, 2011). The focus of Reclaiming Futures is not the creation of a new program, but rather driving changes within communities to collaborate within existing frameworks to deliver effective substance abuse treatment for juvenile offenders. Each Reclaiming Futures community has a leadership team consisting of a judge, juvenile probation representative, adolescent substance abuse treatment professional, community member, and a project director (Reclaiming Futures National Program Office, 2014). These leaders work collaboratively to administer the program at a local level and are

connected to a national network of leadership teams structured to encourage frequent communication regarding local concerns, as well as broader issues related to adolescent substance abuse. These leaders utilize the Reclaiming Futures six-step model—(a) Initial screening, (b) Initial assessment, (c) Service coordination, (d) Initiation of treatment, (e) Engagement, and (f) Transition (Reclaiming Futures National Program Office, 2013; Solovitch, 2009)—to provide youth in their local juvenile justice system with “more treatment, better treatment, and beyond treatment” (<http://reclaimingfutures.org/model/model-solution>). A coordinated individualized response is emphasized with the first three steps and community-directed engagement is emphasized with the latter three steps. As expected with the implementation of Juvenile Drug Court: Strategies in Practice, it is expected that the implementation of Reclaiming Futures in juvenile drug courts would result in increased engagement of youth in juvenile drug courts and, consequently, in substance abuse treatment. Implementation of both of these models could lead to improved graduation rates, which are critical to juvenile drug court effectiveness (Stein et al., 2013).

A preliminary evaluation of ten Reclaiming Futures pilot sites was conducted at the Urban Institute in Washington, D.C. A survey instrument was used to examine thirteen indices of systematic change over time (Butts & Roman, 2007). Positive changes were found in twelve indices, with the greatest improvements in the areas of treatment effectiveness and the use of screening and assessment tools. An examination of the impact of Reclaiming Futures on receipt of substance abuse treatment and, relatedly, graduation from JDC, is lacking.

### **Juvenile Drug Court Client Characteristics that Affect Receipt of Substance Abuse Treatment and Graduation from Juvenile Drug Court**

Not graduating from juvenile drug court is fairly common. Only slightly more than half of all youth

who initially enroll in a juvenile drug court end up graduating (Stein et al., 2013). As graduation is a marker of having received substance abuse treatment, as well as successful completion of substance abuse treatment, this low graduation rate is concerning. Substance abuse treatment cannot be effective if juvenile drug court clients do not receive it.

Multiple client characteristics have been found to be related to receipt of substance abuse treatment and graduation from juvenile drug court. Among juvenile drug court clients, females graduate at slightly higher rates than males; and ethnic/racial minority youth are less likely to graduate and experience higher rates of recidivism during and after the program than ethnic/racial majority youth (Stein et al., 2013). In addition, juvenile drug court clients who are more severely addicted are less likely to successfully graduate from juvenile drug courts than those who are not as severely addicted (Stein et al., 2013). Although age was generally unrelated to graduation or recidivism, researchers consider its potential impact important (Stein et al., 2013).

Less is known about the impact of juvenile drug court program characteristics on receipt of substance abuse treatment and, relatedly, graduation from juvenile drug court. Juvenile drug court program characteristics, as well as client characteristics, should be considered when examining factors that impact receipt of substance abuse treatment and, relatedly, graduation from juvenile drug court.

### **The National Cross-site Evaluation of Juvenile Drug Courts and Reclaiming Futures**

The National Cross-Site Evaluation of Juvenile Drug Courts and Reclaiming Futures (JDC/RF) is a 4-year evaluation of five JDC/RF programs implemented in five juvenile drug courts located across the country, heretofore referred to as JDC/RF sites. The five JDC/RF sites received grants under the aforementioned JDC/RF initiative to enhance the capacity of existing juvenile drug courts to serve substance-involved youth through

the integration and implementation of both the Juvenile Drug Court: Strategies in Practice and Reclaiming Futures, resulting in a JDC/RF program at each site. The JDC/RF sites represent rural and urban communities and are located in the following regions of the United States: Pacific Alaska Region, Pacific Region, Rocky Mountain Region, Southwest Region, and Great Lakes Region.

This national cross-site evaluation includes implementation, process, and outcome evaluations. It focuses on describing what was involved in the implementation of Reclaiming Futures (e.g., trainings), as well as describing the process of implementation and its influence on the system (e.g., how and what changes were made to the juvenile drug court system). Furthermore, it focuses on evaluating the services provided by the JDC/RF program (e.g., what was provided, who was served, and whether the services were effective), and evaluating the cost-effectiveness of integrating Juvenile Drug Court: Strategies in Practice and Reclaiming Futures.

The national cross-site evaluation uses evaluation-related data from multiple sources. One source is the JDC/RF program clients. The JDC/RF sites were required to establish local-level program monitoring and evaluation, which involved collecting performance-related client-level data (e.g., status in the JDC/RF program). Additional data were obtained from JDC/RF site personnel and other individuals working in youth-serving agencies in the local communities using the following procedures: (a) use of web-based surveys that are administered monthly, bi-annually, and annually; (b) annual qualitative interviews with four individuals per JDC/RF site; (c) bi-annual observations of JDC/RF team meetings; and (d) annual site visits.

### **Purpose of the Current Study**

Using data from the National Cross-Site Evaluation of JDC/RF, the current study addresses three aims. First, we examine the overall effectiveness of JDC/RF programs in providing appropriate levels of substance abuse treatment to program clients.

Some clients receive the level of substance abuse treatment they need from the JDC/RF program. Other clients receive the level of substance abuse treatment they need via referral made by the JDC/RF program to another substance abuse treatment program—often a higher level of treatment than provided by the JDC/RF program. Thus, in this study we examine receipt of treatment needed as reflected in (a) clients' successful completion of the JDC/RF program, (b) clients' continued receipt of substance abuse treatment via continued enrollment in the JDC/RF program, and (c) clients' continued receipt of substance abuse treatment outside of the JDC/RF program via a referral to another substance abuse treatment program. We expect that the JDC/RF programs will be effective in providing appropriate levels of substance abuse treatment to program clients.

Second, we examine whether JDC/RF program effectiveness, as measured by clients' receipt of substance abuse treatment as needed, varies across JDC/RF programs and, if so, whether this variation is explained by JDC/RF program characteristics including (a) administration, (b) collaboration, and (c) quality of substance abuse treatment. Although all of the JDC/RF programs are implementing Juvenile Drug Court: Strategies in Practice and Reclaiming Futures, we expect differences in the nature of the implementation and in the clients served by the JDC/RF programs; as a result, we expect variation across the JDC/RF program in clients' receipt of substance abuse treatment as needed. In addition, we expect that some of this variation will be explained by JDC/RF program characteristics.

Third, we examine whether the effect of JDC/RF program characteristics, as measured by functioning in administration, collaboration, and quality on receipt of needed treatment, is accounted for by program client characteristics including gender, ethnicity/race, age, and substance abuse status at program intake. We expect some, but not all, of the effect of JDC/RF program characteristics on client receipt of substance abuse treatment to be accounted for by client characteristics.

## Method

### Participants

Data from 522 juvenile drug court clients are included in our analysis. Participant characteristics for the entire sample are shown in Table 1. Of the 522 participants, 74.1% were male and all were between the ages of 12 and 18 years old ( $M = 15.4$  years old). Almost two-thirds (64.8%) reported being from an ethnic/racial minority. The majority of participants (81.4%) started using substances between the ages of 10 and 14. At intake into the JDC/RF program, 72.9% had been using substances for at least 3 years. Based on participants' reports of substance use-related symptoms, 90.0% reported symptoms of substance abuse or substance dependence.

### Measures and Procedure

Data used for the purposes of this study were collected from three sources: JDC/RF client characteristic data were collected from juvenile drug court clients participating in the study; juvenile drug court clients' receipt of needed substance abuse treatment (i.e., outcome data) was collected from JDC/RF site representatives; and JDC/RF program characteristic data were collected from local expert informants. Study measures and procedures were reviewed and approved by the University of Arizona's Institutional Review Board (IRB).

### JDC/RF Client Characteristics Measures and Procedures

The first source of data was the JDC/RF clients participating in the study. Each JDC/RF site worked with a local evaluator to collect self-report data from program clients at baseline, or intake, into the JDC/RF program, and follow-up at 3, 6, and/or 12 months post-baseline. All of the JDC/RF sites collected data from program clients, at least at program intake and at 6 months follow-up. Some of the sites also collected data from program clients at 3 months follow-up; some also collected data from program clients at 12 months follow-up. For the current study, of the data

Table 1. Comparisons of JDC/RF Program Client Characteristics at Intake by JDC/RF Program (N = 522)

Client Characteristics at Program Intake (%)	All JDC/RF Programs (N = 522)	JDC/RF Program 1 (N = 144)	JDC/RF Program 2 (N = 74)	JDC/RF Program 3 (N = 100)	JDC/RF Program 4 (N = 71)	JDC/RF Program 5 (N = 133)	F(4,517)	p
<b>Demographic Characteristics</b>								
Biological Sex: Male	74.1	66.0	93.2	68.0	62.0	83.5	8.60	<.001
Ethnic/Racial Minority	64.8	72.2	91.9	36.0	15.5	89.5	65.03	<.001
Age							7.63	<.001
12-14 years old	10.0	4.2	8.1	11.0	25.4	8.3		
15-17 years old	82.8	84.7	91.9	81.0	73.2	82.0		
18 years old and older	7.3	11.1	0.0	8.0	1.4	9.8		
<b>Substance Use Related Symptoms</b>								
Age of First Substance Use							3.65	<.05
Less than 10 years old	8.8	7.6	12.2	7.0	5.6	11.3		
10-14 years old	81.4	82.6	85.1	83.0	73.2	81.2		
15-17 years old	9.8	9.7	2.7	10.0	21.1	7.5		
Years of Substance Use							13.30	<.001
Less than 1 year	1.5	0.7	0.0	0.0	8.5	0.8		
1-2 years	25.5	14.6	20.3	31.0	49.3	23.3		
3-4 years	42.5	43.1	45.9	41.0	31.0	47.4		
5-9 years	28.7	40.3	32.4	28.0	9.9	24.8		
10-19 years	1.7	1.4	1.4	0.0	1.4	3.8		
Intensity of Substance Use							29.04	<.001
Substance Use	10.0	2.1	2.7	4.0	22.5	20.3		
Substance Abuse	23.2	7.6	28.4	18.0	43.7	30.1		
Substance Dependence	66.9	90.3	68.9	78.0	33.8	49.6		

available from juvenile drug court clients, only data collected at program intake are analyzed.

All JDC/RF sites collected data using the Global Appraisal of Individual Needs (GAIN; Dennis, Titus, White, Unsicker, & Hodgkins, 2003). The GAIN is a standardized biopsychosocial assessment used to obtain information for diagnosis, placement, treatment planning, and outcomes monitoring. The GAIN has demonstrated excellent internal consistency on core scales (Dennis, Funk, Godley, Godley, & Waldron, 2004).

We obtained de-identified client-level GAIN data collected at program intake from the JDC/RF sites via a central data repository housed at and maintained by Chestnut Health Systems GAIN Coordinating Center (<http://www.chestnut.org/LI/GAINCoordinatingCenter>). Using these data, we

assessed the program client-level characteristics of interest in the current study. These data include program intake GAIN data collected from October 1, 2009 through December 31, 2013.

### Demographic Characteristics

Program clients' reported gender was coded for whether (1) or not (0) the client was male. Program clients were also asked to report whether or not they were Hispanic and what their race was, including being of multiple races. Clients who reported being Hispanic and/or any race other than White were coded as being of minority race/ethnicity (1). Those who reported being of only White race and not Hispanic were coded as *not* being of minority race/ethnicity (0). Program clients' reported age was coded for ages 12 to 14 (1), 15 to 17 (2), and 18 and older (3).



## History and Intensity of Substance Use at Program Intake

The GAIN includes multiple questions about substance use. Use of each of multiple substances (e.g., alcohol, cocaine) is queried separately. Follow-up questions are asked about the substances that program clients report having used. These follow-up questions include questions about extent of use and age of first use. Additional questions ask about substance use-related problems, such as experience of withdrawal symptoms.

To determine age of first use of substances, we compared a program client's responses to the multiple questions that queried age of first use of each substance the client had reported using at some time in her or his life. Age of first use of substances was the youngest age reported. These responses across clients were recoded to reflect first use of substances before the age of 10 (0), between 10 and 14 years of age (1), and between 15 and 17 years of age (2). All program clients reported engaging in their first use of substances before the age of 18.

Years of substance use was determined by subtracting age of first substance use from current age (age at program intake). The resulting number of years was then recoded to reflect less than 1 year of use (1), 1 to 2 years of use (2), 3 to 4 years of use (3), 5 to 9 years of use (4), and 10 to 19 years of use (5).

Intensity of substance use was determined using the standardized GAIN scales for substance abuse and substance dependence. Those who were determined to have substance dependence were coded as 2; those determined to have substance abuse were coded as 1; and those who did not meet either of these criteria were coded as 0 (indicating substance use without abuse or dependence).

## Receipt of Needed Treatment

Juvenile drug court clients' receipt of treatment as needed was coded from current status in the JDC/RF program, which we collected from JDC/

RF site representatives. Program clients who had successfully completed the JDC/RF program, were currently enrolled in the JDC/RF program, or had transferred to other substance abuse treatment as needed, were categorized as having received or currently receiving treatment as needed. Program clients who dropped out of the JDC/RF program against medical advice, were enrolled in but not participating in the JDC/RF program, or were transferred to juvenile justice, were categorized as having *not* received treatment as needed.

## JDC/RF Program Characteristics Measures and Procedures

The third source of data used for this study was local expert informants. Local expert informants provided data regarding characteristics of the JDC/RF programs. The local expert informants are people who have sufficient contact with the JDC/RF programs and personnel in order to make a knowledgeable assessment of the characteristics (i.e., administration, collaboration, and quality of substance abuse treatment) of their respective JDC/RF program. These expert informants included JDC/RF program staff, other individuals associated directly with the juvenile drug court (i.e., staff of partnering agencies), and individuals at youth-serving agencies within the same community as the juvenile drug court (i.e., substance abuse treatment agencies). The samples of expert informants at each JDC/RF program site were identified using two methods. A portion of the sample was nominated by the JDC/RF Program Directors as individuals most qualified to assess the effectiveness of the local juvenile justice and substance abuse treatment system. To address possible sampling bias, the other portion of the sample was identified by the authors of this study as staff of youth-service agencies in proximity to the juvenile drug court who would be likely to serve youth involved in the juvenile drug court.

The local expert informants were surveyed in December 2012. The survey contained 58 items of the 13 multi-item indices developed by Butts and Roman (2007) for their evaluation of the quality of juvenile justice and substance abuse treatment

systems. These 58 items were supplemented by nine items developed by van Wormer & Lutze (2010) that correspond conceptually to the indices. These indices were designed to measure the “quality of juvenile justice and substance abuse treatment systems” (Butts & Roman, 2007, p. 1). All items were modified to ask about the past 12 months and respondents reported how much they agree or disagree with each item using a 5-point scale ranging from strongly disagree to strongly agree.

The administration indices included: access to services, data sharing, effort toward systems integration (originally referred to as “systems integration” by Butts and Roman [2007]), and resource management. The Access to Services Index reflects the ease with which program clients access services. This index consists of four items from the Butts and Roman (2007) survey. For example, one index item (which was reverse-coded) queries agreement with the statement, “In the past 12 months, youth-serving agencies in my community had problems due to reductions in funding.” The Data Sharing Index reflects the ease with which their youth-serving agencies share information. This index consists of five items from the Butts and Roman (2007) survey. For example, one item in this index (which was reverse-coded) queries agreement with the statement, “In the past 12 months, youth-serving agencies in my community found it difficult to share information due to legal issues.” The Effort Toward Systems Integration Index reflects how hard the youth-serving agencies in the community are working to integrate systems. Because community youth-serving agencies that have already established integrated systems do not have to continue to work hard to integrate systems, but rather focus on maintaining the current system, higher scores on this index suggest the need for *more* integrated systems, or, conversely, a *lack* of systems integration. This index consists of four items from the Butts and Roman (2007) survey. For example, one item in this index queries agreement with the statement, “In the past 12 months, youth-serving

agencies in my community worked hard to make sure that treatment goals for individual youth were consistent across agencies.” The Resource Management Index reflects how effective the youth-serving agencies are at using and sharing resources. This index consists of five items from the Butts and Roman (2007) survey. For example, one item in this index queries agreement with the statement, “In the past 12 months, youth-serving agencies in my community worked collaboratively to use existing funding more efficiently.”

The collaboration indices included: client information, partner involvement, and agency collaboration. The Client Information Index reflects the extent to which the youth-serving agencies share client information to support treatment planning. This index consists of five items from the Butts and Roman (2007) survey. For example, one item in this index queries agreement with the statement, “In the past 12 months, youth-serving agencies in my community were effective at sharing information to improve services for youth.” The Partner Involvement Index reflects the extent to which the Reclaiming Futures partner agencies interact. This index consists of five items from the Butts and Roman (2007) survey supplemented by three items from the van Wormer and Lutze (2010) survey. For example, one item in this index queries agreement with the statement, “In the past 12 months, the Reclaiming Futures partnership in my community was effective in sharing decision-making among various partners.” The Agency Collaboration Index reflects how positive the interagency relationships are. This index consists of five items from the Butts and Roman (2007) survey supplemented by two items from the van Wormer & Lutze (2010) survey. For example, one item in this index queries agreement with the statement, “In the past 12 months, youth-serving agencies in my community tended to see each other as dependable.”

The quality of substance abuse treatment indices included: alcohol and other drug (AOD) assessment, treatment effectiveness, targeted treatment, cultural integration, family involvement,

and pro-social activities. The AOD Assessment Index reflects the use of appropriate AOD screening and assessment tools. This index consists of four items from the Butts and Roman (2007) survey supplemented by two items from the van Wormer & Lutze (2010) survey. For example, one item in this index queries agreement with the statement, "In the past 12 months, the drug and alcohol assessments used in my community provided reliable information." The Treatment Effectiveness Index reflects the extent of success in meeting the mental health and substance abuse needs of youth in the community. This index consists of five items from the Butts and Roman (2007) survey supplemented by one item from the van Wormer & Lutze (2010) survey. For example, one item in this index queries agreement with the statement, "In the past 12 months, the substance abuse needs of youth in my community were adequately met." The Targeted Treatment Index reflects the adequacy of the community youth-serving agencies' access to targeted treatment. This index consists of seven items from the Butts and Roman (2007) survey supplemented by one item from the van Wormer & Lutze (2010) survey. For example, one item in this index queries agreement with the statement, "In the past 12 months, youth-serving agencies in my community had enough access to developmentally appropriate services for youth." The Cultural Integration Index reflects the extent of the cultural competence and responsiveness of the youth-serving agencies in the community. This index consists of three items from the Butts and Roman (2007) survey. For example, one item in this index (which was reverse-scored) queries agreement with the statement, "In the past 12 months, youth-serving agencies in my community had problems due to lack of bilingual staff." The Family Involvement Index reflects the extent to which youth-serving agencies in the community involve youths' families in designing and delivering services for youth. This index consists of four items from the Butts and Roman (2007) survey. For example, one item in this index queries agreement with the statement, "In the past 12 months,

family input was used to define service and treatment goals for justice-involved youth." The Pro-social Activities Index reflects the extent to which youth-serving agencies in the community link youth to pro-social activities. This index consists of two items from the Butts and Roman (2007) survey. For example, one item in this index queries agreement with the statement, "In the past 12 months, youth-serving agencies in my community effectively linked youth to pro-social activities (e.g., recreational and cultural activities)."

Of the 194 local expert informants invited to take the survey, 90 (46%) completed the survey. An additional four individuals partially completed the survey; however, because they completed less than 50% of the survey, we excluded their data from analyses. The response rate was similar across the five programs—48% at Program 1, 40% at Programs 2 and 5, 52% at Program 3, and 45% at Program 4.

We coded their responses and created index variables as per Butts and Roman (2007). Responses were coded from -10 to 10, and all items were coded so that larger values reflect more positive opinions regarding the program characteristic of interest (e.g., data sharing). Within each index and JDC/RF program, item scores were averaged to calculate the index scores for each JDC/RF program. As shown in Table 2, all indices had acceptable internal consistency (Cronbach's alpha ranging from .68 to .92).

### Statistical Analysis

The data were analyzed using multilevel modeling (see Raudenbush & Bryk, 2002 for detailed discussions of this statistical procedure) using the computer program HLM7.01 (Raudenbush, Bryk, & Congdon, 2013). Multilevel modeling simultaneously estimates the effects of variables measured at different levels in hierarchical or nested data. The data from the present study have two levels. The upper-level unit is JDC/RF program. Variables at this level include program characteristics such as the Access to Services Index—one of the

Table 2. Comparisons of JDC/RF Program Characteristics by JDC/RF Program (N = 90)

Program Characteristics	All JDC/RF Programs (N = 90)	JDC/RF Program 1 (N = 14)	JDC/RF Program 2 (N = 14)	JDC/RF Program 3 (N = 35)	JDC/RF Program 4 (N = 15)	JDC/RF Program 5 (N = 12)	F(4,85)	p
<b>Administration Indices</b>								
Access to Services Index ( $\alpha=.69$ )	-1.28	-0.18	0.27	-2.96	-1.08	0.31	3.02	.022
Data Sharing Index ( $\alpha=.89$ )	0.52	0.00	0.93	-0.11	1.47	1.33	0.50	.737
Effort Toward Systems Integration Index ( $\alpha=.72$ )	1.56	2.23	1.25	0.96	2.08	2.19	0.53	.715
Resource Management Index ( $\alpha=.82$ )	1.69	1.50	1.50	0.71	2.80	3.58	1.88	.122
<b>Collaboration Indices</b>								
Client Information Index ( $\alpha=.69$ )	2.95	3.00	4.14	2.33	2.93	3.33	0.94	.444
Partner Involvement Index ( $\alpha=.87$ )	2.83	2.54	2.32	2.59	3.58	3.54	0.59	.668
Agency Collaboration Index ( $\alpha=.76$ )	3.60	3.42	4.34	3.31	3.38	4.05	0.47	.758
<b>Quality Indices</b>								
AOD Assessment Index ( $\alpha=.77$ )	3.06	3.04	3.81	2.12	4.00	3.75	1.70	.157
Treatment Effectiveness Index ( $\alpha=.71$ )	1.79	2.20	2.38	1.12	2.00	2.29	0.76	.558
Targeted Treatment Index ( $\alpha=.74$ )	-0.08	-1.29	1.01	-0.04	-0.38	0.31	1.11	.358
Cultural Integration Index ( $\alpha=.68$ )	1.89	2.98	1.90	1.10	3.33	1.11	1.50	.208
Family Involvement Index ( $\alpha=.92$ )	2.00	0.63	2.59	1.57	2.92	3.02	0.80	.529
Pro-social Activities Index ( $\alpha=.76$ )	0.25	1.07	0.18	-0.14	-0.83	1.88	0.64	.634

Administration Indices. The lower-level unit is program client. Variables at this level include client characteristics such as gender and intensity of substance use at program intake.

Specifically, we used multilevel logistic regression with a Bernoulli binomial distribution to analyze the data. With this analysis, if the logit equals 0, the probability of receiving treatment as needed is *equal to* the probability of not receiving it. If the logit is less than 0 (i.e., negative), the probability of receiving treatment as needed is *less than* the probability of not receiving it. If the logit is greater than 0 (i.e., positive), the probability of receiving treatment as needed is *greater than* the probability of not receiving it.

We estimated first the simple model, one without any client characteristics or any JDC/RF program characteristics. Estimation of this model indicates the overall probability of receiving treatment as

needed and, thus, indicates the average probability that the JDC/RF program clients are receiving treatment as needed. Estimation of the simple model also indicates whether the probability of receiving treatment as needed varies by JDC/RF program. If such variation exists, additional analyses to examine how factors, such as program characteristics, might account for this variance are justified.

We then examined the effects of JDC/RF program characteristics (e.g., Access to Services Index) on the probability of receiving treatment as needed. First, we estimated models for each JDC/RF program characteristic separately in order to examine the overall effect of each program characteristic on program clients' receipt of treatment as needed. We then estimated models to examine whether the effect of each of the influential JDC/RF program characteristics (i.e., those identified as having an overall effect on program

clients' receipt of treatment as needed) could be accounted for by client characteristics. Each of these models contained the JDC/RF program characteristic identified as having an overall effect on clients' receipt of treatment as needed and the client characteristics—gender, ethnic/racial minority status, age, and substance abuse status at program intake. Estimation of these models indicates whether the variation in the probability of program clients' receipt of treatment as needed across JDC/RF programs is explained by the level of quality of the JDC/RF program as indicated by each index (e.g., as indicated by the Access to Services Index), while controlling for the effects of the client characteristics on the probability of clients' receipt of treatment as needed.

## Results

### JDC/RF Client Characteristics

#### *Demographic Characteristics*

Overall, across all five JDC/RF programs, the majority of youth served were male (74.1%) and of ethnic/racial minority (64.8%) (see Table 1). In addition, the majority of youth served (82.8%) were 15 to 17 years old, although youth as young as 12 and as old as 18 years old were also served by these juvenile drug courts.

All of the demographic characteristics of program clients at intake varied by JDC/RF program (see Table 1). Compared to the other programs, Program 2 served the most male (93.2%) and ethnic/racial minority youth (91.9%), whereas Program 4 served the least (62.0% and 15.5%, respectively). Program 2 served the most 15 to 17 year olds (91.9%) compared to the other programs. Program 4 served the smallest percentage of 15 to 17 year olds (73.2%) and the greatest percentage of 12 to 14 year olds (25.4%), as compared to the other programs.

#### *History and Intensity of Substance Use at Program Intake*

Overall, across all five JDC/RF programs, the majority of youth served had substantial

substance use histories and related issues (see Table 1). Ninety percent of youth served reported engaging in their first use of substances before the age of 15, with about 9% having reported engaging in their first use of substances before the age of 10. The majority (72.9%) of youth served by the JDC/RF programs had been using substances for 3 or more years, with 30.4% of the youth having been using substances for 5 or more years. Furthermore, of the youth served, 23.2% reported symptoms of substance abuse and 66.9% reported symptoms of substance dependence.

All of the substance use–related symptoms of program clients at intake also varied by JDC/RF program (see Table 1). A greater percentage of Program 2's clients started using substances at a younger age (12.2%) while a greater percentage of Program 4's clients started between the ages of 15 and 17 years (21.1%) compared to clients of the other programs. Program 1's clients reported using substances for a longer period of time (41.7% with 5 or more years of use) while Program 4's clients reported using for a shorter period of time (11.3% with 5 or more years of use) compared to clients of the other programs. Program 1 had the greatest percentage of clients who reported symptoms of substance dependence (90.3%), whereas Program 4 had the smallest percentage (33.8%) of those who reported symptoms of substance dependence compared to the other programs.

### JDC/RF Program Characteristics

Overall, across all five JDC/RF programs, the JDC/RF programs were rated higher on some characteristics than on others (see Table 2). Overall, the JDC/RF programs were rated highest on client information, partner involvement, agency collaboration, and AOD assessment. These programs were rated lowest on access to services, data sharing, targeted treatment, and pro-social activities.

As shown in Table 2, the JDC/RF programs varied on only one of the program

characteristics—access to services. All of the JDC/RF programs were rated low on access to services; for all programs, access to services was rated at less than 1 on a scale ranging from -10 to 10. However, on access to services, Programs 3 and 4 (-2.96 and -1.08, respectively) were rated lower than Program 1 (-0.18), which was rated lower than Programs 2 and 5 (0.27 and 0.31, respectively).

### Simple Model

Results of the simple model indicate that, on average, JDC/RF program clients are more likely to receive treatment as needed than to not receive needed treatment,  $OR = 5.87$ ,  $logit = 1.77$ ,  $t(4) = 3.32$ ,  $p = .029$ . The probability of a JDC/RF program client receiving treatment as needed is  $.85$  ( $5.87/[1+5.87]$ ). Furthermore, the results indicate that this probability of receiving treatment as needed varies by JDC/RF program,  $variance = 1.35$ ,  $\chi^2(4) = 107.34$ ,  $p < .001$ . Simple percentages indicate that 55.6% of JDC/RF Program 1 clients, 94.6% of Program 2 clients, 96.0% of Program 3 clients, 83.1% of Program 4 clients, and 78.9% of Program 5 clients received treatment as needed.

### Overall Effects of JDC/RF Program Characteristics

Results of the multilevel logistic regressions examining the overall effects of JDC/RF program characteristics on client receipt of substance abuse treatment as needed are presented in Table 3. These results indicate that only two of the program characteristics were associated with receipt of substance abuse treatment as needed. Effort toward systems integration was negatively associated with receipt of substance abuse treatment as needed. Because higher scores on this index suggest the need for a more integrated system, this finding suggests that a JDC/RF program implemented within a system perceived as needing *more* systems integration is *less* effective at serving the substance abuse treatment needs of its youth clients than one implemented within

Table 3. Overall Effects of Individual JDC/RF Program Characteristics on Client Receipt of Treatment as Needed ( $N = 522$ )

Program Characteristics	Logit	OR	t	p
<b>Administration Indices</b>				
Access to Services Index	-0.45	0.63	-1.88	.157
Data Sharing Index	-0.06	0.94	-0.09	.937
Effort Toward Systems Integration Index	-1.95	0.14	-6.35	.008
Resource Management Index	-0.43	0.65	-1.44	.246
<b>Collaboration Indices</b>				
Client Information Index	0.08	1.08	0.09	.934
Partner Involvement Index	-0.59	0.56	-0.91	.431
Agency Collaboration Index	0.58	1.78	0.56	.616
<b>Quality Indices</b>				
AOD Assessment Index	-0.41	0.67	-0.73	.520
Treatment Effectiveness Index	-1.25	0.29	-1.94	.148
Targeted Treatment Index	1.86	2.82	5.70	.011
Cultural Integration Index	-0.62	0.54	-1.51	.229
Family Involvement Index	0.38	1.46	0.81	.476
Pro-social Activities Index	-0.54	0.58	-1.55	.218

a system not perceived as needing more systems integration.

Targeted treatment, the second program characteristic associated with receipt of substance abuse treatment as needed, was positively associated with receipt of substance abuse treatment as needed. This finding suggests that a JDC/RF program implemented within a community where youth-serving agencies are perceived as having adequate access to targeted treatment is more effective at serving the substance abuse treatment needs of its youth clients than one implemented where youth-serving agencies are not perceived as having adequate access to targeted treatment.

Additional findings support this interpretation of the data. Results of a correlational analysis show that perceptions of effort toward systems integration are strongly negatively associated with perceptions of targeted treatment ( $r = -.50$ ,  $p < .001$ ). This finding suggests that as people involved in or familiar with the JDC perceive less adequate access to targeted treatment within their

community, they perceive greater recent effort within their community to integrate systems, or a greater need for a more integrated system within their community.

### Effects of JDC/RF Program Characteristics While Controlling for Effects of Client Characteristics

Results of the multilevel logistic regressions examining the effects of JDC/RF program characteristics on client receipt of substance abuse treatment as needed while controlling for effects of client characteristics are presented in Table 4. These results indicate that only effort toward systems integration has a statistically significant association with receipt of substance abuse treatment as needed unique from the effects of gender, ethnic/racial minority status, age, and substance abuse status at program intake. The overall effect of targeted treatment on receipt of treatment as needed is completely accounted for by the effects of gender, ethnic/racial minority status, age, and substance abuse status at program intake. The effect of effort toward systems integration on receipt of treatment as needed is such that the *greater* the current effort to integrate systems (or the greater the need for a more

Table 4. Effect of Individual JDC/RF Program Characteristics on Client Receipt of Treatment as Needed While Controlling for Effects of Client Characteristics (N = 522)

Characteristics	Logit	aOR	t	p
<b>Model A: Effort Toward Systems Integration Index</b>				
Effort Toward Systems Integration Index	-1.58	0.21	-3.19	.050
Biological Sex: Male	-0.36	0.70	-1.33	.185
Ethnic/Racial Minority	-0.24	0.79	-0.89	.376
Age	-0.10	0.90	-0.36	.719
Substance Abuse Status	-0.13	.88	-0.40	.710
<b>Model B: Targeted Treatment Index</b>				
Targeted Treatment Index	0.49	1.64	1.06	.368
Biological Sex: Male	-0.39	0.68	-1.40	.161
Ethnic/Racial Minority	-0.28	0.75	-0.98	.327
Age	-0.10	0.90	-0.36	.722
Substance Abuse Status	0.10	1.11	0.32	.767

integrated system), the *lower* the probability of receiving treatment as needed.

### Discussion

The JDC/RF model incorporates an integrative approach; an approach that focuses on both the macro (systems level) and micro (individualized treatment; NDCI & NCJFCJ, 2003; Nissen, Butts, Merrigan, & Kraft, 2006; Nissen & Merrigan, 2011). The model aims to embed and integrate different systems of care (e.g., justice, treatment, families, schools) and involve individuals at all levels (e.g., judge, probation officers, counselors, volunteers). The 16 strategies of the Juvenile Drug Court: Strategies in Practice (NDCI & NCJFCJ, 2003), and the key components of Reclaiming Futures' six-step model (Reclaiming Futures National Program Office, 2013; Solovitch, 2009) are distinct, yet there is a great deal of overlap between the two models. For example, two of the Juvenile Drug Court: Strategies in Practice strategies emphasize (a) engaging stakeholders in creating an interdisciplinary, coordinated, and systematic approach to working with youth and their families, and (b) tailoring interventions to the complex and varied needs of adolescents (NDCI & NCJFCJ, 2003). These two strategies are similar to the third step in Reclaiming Futures' six-step model, which emphasizes designing and coordinating interventions that are family-driven, span agency boundaries, draw on community-based resources, and include a mix of services appropriate for each youth (Reclaiming Futures National Program Office, 2013; Solovitch, 2009).

This integrative JDC/RF model was utilized by all of the five JDC/RF programs, though the clients they served varied considerably. As described in the results section, overall, the clients served by the five JDC/RF programs were primarily males from ethnic/racial minority backgrounds, with the majority using substances for 3 or more years beginning at 14 years or younger and presenting with symptoms of SUDs. Yet, substantial and significant variations in client characteristics were documented, illuminating the great variation in

juvenile drug court clients depending on the program and the region of the country in which the juvenile drug court is located.

The first aim of this study was to examine the overall effectiveness of the five JDC/RF programs in providing appropriate levels of substance abuse treatment. Given the similarities between the Juvenile Drug Court: Strategies in Practice and the Reclaiming Futures six-step model, as well as the fact that the five JDC/RF programs all followed the JDC/RF integrated model, one would expect all of the JDC/RF programs to be somewhat similar in their effectiveness. The results of the simple model indicate that clients at all of the JDC/RF programs were more likely to receive treatment as needed (defined as successful completion of the JDC/RF program or continued treatment services via the juvenile drug court or a referral program) than not to receive it.

The rate of client receipt of treatment found in this study seems better than previously found with juvenile drug courts. In their meta-analysis of 41 juvenile drug courts, Stein and colleagues (2013) found that only slightly more than half of all juvenile drug court clients graduate successfully from juvenile drug court. The present study, however, found that JDC/RF program clients had a .85 probability of receiving substance abuse treatment. It is somewhat difficult to compare these rates, as one is of graduation from juvenile drug court and one is receipt of treatment from juvenile drug court, which includes graduates of juvenile drug court, those currently enrolled in juvenile drug court, and those referred to other substance abuse treatment. Regardless, a probability of receiving substance abuse treatment of .85 reflects a high rate of treatment provision in a population that has traditionally been difficult to engage in treatment (e.g., Dembo & Muck, 2010; Stein et al., 2013; Vourakis, 2005).

This high overall rate of substance abuse treatment provision might be related to the Juvenile Drug Court: Strategies in Practice focus on establishing a system for program monitoring and

evaluation to maintain quality of service. This high rate of treatment provision could also be due to other specific strategies aimed at tailoring interventions to the complex and varied needs of youth, such as taking into account their developmental needs, gender, and culture; involving family in the juvenile drug court; and focusing on the strengths of the youth (NDCI & NCJFCJ, 2003). These positive findings might also be related to Reclaiming Futures' focus on screening tools and appropriate assessments—two of Reclaiming Futures' key components in their six-step model for juvenile drug courts focusing on achieving positive change (Reclaiming Futures National Program Office, 2013; Solovitch, 2009).

A more rigorous way to address the questions posed in this study would be to directly compare the rate at which youth receive the substance abuse treatment they need from JDC/RF programs against the rate at which they receive this treatment from other juvenile drug court programs and other intensive outpatient substance abuse treatment programs. The findings of the present study, however, do substantiate that, overall, the five juvenile drug courts utilizing this JDC/RF model were successful in providing their clients the substance abuse treatment they needed.

The second aim of this study was to identify JDC/RF program characteristics related to program effectiveness, as measured by whether clients received services as needed. While results indicated that overall program effectiveness was achieved, program effectiveness varied by JDC/RF program, suggesting that all JDC/RF programs are *not* the same. Results from the present study indicate that the five JDC/RF programs were similar on 12 of the 13 quality indices examined, likely reflecting the fact that all five JDC/RF programs utilized the same JDC/RF model and had similar access to training from the Reclaiming Futures National Program Office and technical and training support offered through the federal agencies supporting the JDC/RF initiative, as well as through drug court associations. The five JDC/



RF programs varied, in particular, in the ease with which program clients accessed services as well as in the types of youth they served. Additional staff training might be helpful in addressing this discrepancy across JDC/RF programs. A modification of the process by which clients access services and/or a more extensive use of youth-serving agencies in the community might also help to address this discrepancy. Taking advantage of such support in relation to challenges to access to services, in particular, could be advantageous for JDC/RF programs struggling with program effectiveness.

Looking more closely at whether the observed variation across JDC/RF program in program effectiveness was affected by program characteristics, only two of 13 program characteristics examined significantly impacted clients' receipt of treatment as needed. The first of these was an effort toward systems integration. Effort toward systems integration reflects how hard the community youth-serving agencies are working to integrate the systems. Because juvenile drug courts and other community youth-serving agencies that have already established integrated systems do not have to continue to work hard to integrate them but rather need to focus on maintaining their current system, more effort toward systems integration suggests a current *lack* of systems integration. The finding of this study, thus, indicates that a lack of systems integration is associated with a lower likelihood that JDC/RF clients receive the substance abuse treatment they need. This finding is consistent with present understanding that systems of care that address the needs of the whole adolescent are necessary to effectively address adolescent substance abuse (National Institute on Drug Abuse [NIDA], 2014). This finding also underscores the importance of the Juvenile Drug Court: Strategies in Practice focus on creating an interdisciplinary, coordinated, and systematic approach as well as building partnerships with community organizations (NDCI & NCJFCJ, 2003). Moreover, this finding corresponds to two of Reclaiming Futures' key

components in their six-step model for achieving positive change in juvenile drug courts—that is, integrated service coordination and transition (connecting youth to services upon completion of the service plan; Reclaiming Futures National Program Office, 2013; Solovitch, 2009). New juvenile drug courts and juvenile drug courts looking to improve program effectiveness should place an emphasis on integrating systems to create systems of care.

The second program characteristic that significantly impacted clients' receipt of treatment as needed was access to targeted treatment. Access to targeted treatment reflects the adequacy of the community youth-serving agencies' access to targeted treatment (such as developmentally appropriate treatment). The finding of the current study showed that JDC/RF programs with relatively greater access to targeted treatment were more effective at serving the substance abuse treatment needs of their youth clients. This finding is consistent with the present understanding that substance abuse treatment should be individualized and tailored to the needs of adolescents in need of treatment (NIDA, 2014). Furthermore, this finding underscores the importance of the Juvenile Drug Court: Strategies in Practice focus on several of the 16 strategies—including tailoring interventions to the complex and varied needs of youth, as well as addressing developmental needs, gender, and culture (NDCI & NCJFCJ, 2003). This finding also corresponds to several of Reclaiming Futures' key components of their six-step model—particularly the initial assessment, which informs the service plan (Reclaiming Futures National Program Office, 2013; Solovitch, 2009). New juvenile drug courts and juvenile drug courts looking to improve program effectiveness should place an emphasis on developing and providing targeted treatment to their clients.

The final aim of this study was to examine whether the effect of system integration and targeted treatment (i.e., program characteristics) on program effectiveness is accounted for by client

characteristics including gender, race/ethnicity, age, and substance abuse status at program intake. Results indicate that systems integration has a unique effect—over and above the effects of the characteristics of the clients—on JDC/RF client receipt of substance abuse treatment as needed. Thus, as both *Juvenile Drug Court: Strategies in Practice* and *Reclaiming Futures* emphasize, all communities should focus on system integration when designing, financing, and delivering services for adolescents with identified substance abuse treatment needs who are involved in the juvenile justice system.

Although the effect of targeted treatment on program effectiveness was accounted for by client characteristics, targeted treatment should remain a particular focus of juvenile drug courts. The overall effect of targeted treatment on client receipt of substance abuse treatment as needed indicates the importance of targeted treatment for program effectiveness. Furthermore, targeted treatment by its very nature is a response to client characteristics. Thus, the interrelatedness among client characteristics, targeted treatment, and program effectiveness is not surprising. Further research examining a possible mediational relationship between client characteristics, targeted treatment, and program effectiveness would illuminate the specific nature and importance of the effect of targeted treatment on JDC/RF, and juvenile drug court, program effectiveness.

There are several study limitations that are worth noting. First, while strategies were implemented to address expert informant respondent bias and

the survey completion rate was similar across sites (40% to 52%), the overall response rate was 46%. Results might be different if the response rate had been higher. Second, this study included five juvenile drug courts, all of which used the JDC/RF model. Given the wide variation in juvenile drug court programs across the county and the clients they serve, these findings should be generalized with caution.

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# I've Got My Own Problems: The Impact of Parental Stressors on Parental Anger

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## Abstract

The current study explores the extent to which youth behaviors and parental stressors influence levels of parental anger toward juvenile probationers ( $N = 88$ ) in one mid-Atlantic county. Results indicate that youth having a prior record, parental substance abuse, an unemployed parent, and parents' perceptions of lower levels of attachment to children are factors related to higher levels of parental anger. Policy implications of these findings for courts and probation units are discussed. Most importantly, juvenile justice officials must recognize the importance of helping parents with their own problems so that they can become more effective in their own lives and serve as agents of change for their court-involved children.

## Introduction and Background

Many theories attempting to explain delinquent behavior include the role of parents (for example, see Agnew, 1992; Akers, 1985; Gottfredson & Hirschi, 1990; Hirschi, 1969; Patterson, 1982; Sampson & Laub, 1993). A variety of parental mismanagement practices have been studied in order to determine their influence on delinquent behavior (Stewart, Simons, Conger, & Scaramella, 2002; Patterson, 1982; Patterson, DeBaryshe, &

Ramsey, 1989; Patterson & Stouthammer-Loeber, 1984). In addition to the influences of parental mismanagement practices, ecological models recognize the importance of the environment in shaping delinquent behavior (Bronfenbrenner, 1986; Bronfenbrenner & Morris, 1998; Garbarino, Bradshaw, & Kostelny, 2005). According to Bronfenbrenner (1986), the development of the child is indirectly influenced through the environment and interaction of parents. Moreover, Bronfenbrenner (1986) contends that parents' places of employment, social networks, and community are three exosystems that are especially likely to affect family functioning and development of the child.

A more recent consideration for understanding delinquency is the examination of parental thoughts, feelings, attitudes, and beliefs, termed parental competencies (Rose, Glaser, Calhoun, & Bates, 2004). Rose and colleagues (2004) developed the Juvenile Offender Parent Questionnaire (JOPQ) to "theoretically and clinically" assess parental competencies; that is, the emotional contributions of parents of court-involved youth (p. 27). Although Rose et al. (2004) developed the parental competency measures, they did not empirically test their scale; however, other researchers have done so (Bradshaw, Glaser, Calhoun, & Bates, 2006; Cook & Gordon, 2012).

The parental competency construct consists of factors such as parental exasperation, parental resignation, anger toward the child, mistrust of the juvenile justice system, parental monitoring, fear of the child, and parent perceptions of the child's exposure to violence (for a thorough discussion of the factors, see Cook & Gordon, 2012).

These parental competencies were tested to determine whether they were predictive factors in the offending patterns of juvenile probationers (Cook & Gordon, 2012). Two main findings emerged, revealing that parental monitoring and anger toward the child were consistently significant predictors of delinquency across estimated models. Although researchers now have a better understanding of the relationship between parental monitoring and delinquency (Bean, Barber, & Crane, 2006; Byrnes, Miller, Chen, & Grube, 2011; Fagan, Van Horn, Antaramian, & Hawkins, 2011; Udell, Donenberg, & Emerson, 2011), less is known about the relationship between parental anger and delinquency. Anger can be a normal emotion experienced by parents, but high levels of anger are likely to have a negative influence on the relationship between the parent and the child. An obvious assumption about the sources of parental anger may include dealing with a difficult child or, as in this case, a court-involved child; however, such narrow reasoning is misinformed and misleading.

Given the lack of information on parental anger specific to court-involved youth, this paper takes a step back and explores various aspects of parents' lives that may provide information about the sources of parental anger. Considering the assertion by Garbarino et al. (2005) that families should be studied from an ecological perspective, this study makes theoretical, practical, and logical sense. In acknowledging how parents' environments contribute to their own levels of anger, consideration of substance abuse, depression, unemployment, single-parent status, mistrust of the juvenile justice system, and parents' perceptions of attachment to the child will be examined. Therefore, the present study is an attempt to

bridge the gap in the literature as it pertains to the sources of parental anger, collectively termed parental stressors from this point forward. In this endeavor, this article provides a review of the literature on parental stressors, methodology, and results, and concludes with a discussion of the findings.

## Literature Review

Parental stress is defined as "the aversive psychological reaction to the demands of being a parent" (Deater-Deckard, 1998, p. 315). Parental stressors can be disruptive to the parenting process, increasing the likelihood of behavioral problems in children, and creating additional stresses for the parent (Webster-Stratton, 1990). Although no exhaustive list of stressors or demands exists, there are certain stressful events that make it increasingly difficult to handle tasks related to parenting. This review provides a discussion of the aforementioned parental stressors and the impact they have on the parenting process.

Consideration of depression as a parental stressor is important because depression is the most prevalent mental health diagnosis among women (World Health Organization, 2012) and depression increases the likelihood that a parent will act irritably toward the child (Patterson, 1982). Moreover, depression affects one's ability to handle daily activities and causes pain for the individual and family members (National Institute for Mental Health [NIMH], 2011). A number of studies have found a solid link between depression and child abuse (McPherson, Lewis, Lynn, Haskett, & Behrend, 2009; Rodriguez, 2008; Rodriguez & Green, 1997; Rodriguez & Richardson, 2007; Whiteman, Fanshel, & Grundy, 1987). Shay & Knutson (2008) found that although depression was a risk factor for child abuse, it was the depressed mother's irritability that was associated with the abuse. It is important to note that irritability is a symptom of depression and that symptoms of depression vary in severity, intensity, and duration among individuals (NIMH, 2011).

Similarly, in a study examining whether parental depression and hostility explain current and future aggressive and conduct problem behaviors in children, Knox, Burkhart, & Khuder (2011) found that parental hostility was a better predictor than depression of current and future aggressive behavior in children. Simon & Lively (2010) found that parental stressors such as divorce, inequitable division of household labor, and unfair compensation for employment are associated with women's "intense and persistent anger—particularly when the event or situation is seen as unjust" (p. 1559) and that these events serve an important role in the etiology of depression. Moreover, women reported more persistent anger than men even after controlling for certain demographic variables (Simon & Lively, 2010).

Substance abusing parents also experience parental role strains such as difficulties in providing consistent caregiving, and emotional attention such as nurturing, limit-setting, and spending quality time with their children (Hogan, 2007). Substance abusing parents also have lower rates of employment (Meara, 2006). Examining the effects of alcohol use, attendance at Alcohol Anonymous meetings, and anger, Kelly, Stout, Tonigan, Magill, & Pagano (2010) found that anger was higher among alcohol users at intake than among the general population. Furthermore, Kelly et al. (2010) concluded that heavy drinking exacerbates anger.

In addition, feelings such as guilt, shame, and worry over drug use have been reported by methamphetamine-using parents (Semple, Strathdee, Zians, & Patterson, 2011). It is plausible that these negative feelings can intensify and create more stress as drug use escalates (Semple et al., 2011). Compounding levels of stress, substance-abusing parents may have believed that their children were unaware of their drug use; however, this is not necessarily the case. In a qualitative study of mostly heroin-using mothers and their children, Barnard & Barlow (2003) revealed that children knew early on that their mothers used drugs, although the mothers themselves believed they

had adequately hidden their drug use from their children. These children felt the strain of not only having a drug-addicted mother but also the burden of being pressured into keeping a family "secret" (Barnard & Barlow, 2003). In addition to the stress that drug use created for the mothers in the study, a number of the children experienced their own set of externalizing problems such as substance abuse and delinquency (Barnard & Barlow, 2003).

As already mentioned, parents suffering from depression and substance abuse experience higher levels of stress, including symptoms such as irritability, hostility, and anger, than parents not suffering from these problems. Such negative emotions potentially lower the quality of the parent-child relationship by diminishing parental attachment to the child. Attachment is the emotional tie between children and parents—the closer the child is to the parent, the less likely the child will want to disappoint the parent by engaging in delinquent behavior (Hirschi, 1969). Support for this perspective has been found in a number of studies (Gault-Sherman, 2012; Hirschi, 1969; Scott, Briskman, Woolgar, Humayun, & O'Connor, 2011; Wells & Rankin, 1988; Wright & Cullen, 2001). From the perspective of the parent, those who have reported higher levels of stress are more likely to also report lower levels of affection toward their children (Guajardo, Snyder, & Petersen, 2009). Typically, studies examining attachment do so from the perspective of the child; however, gaining an understanding of the relationship from the parents' perspective may provide additional information on how levels of attachment are related to parental levels of anger toward the child. Gault-Sherman (2012) found strong evidence suggesting that attachment is a reciprocal relationship between the parent and the child. This finding provides support for the notion that the relationship between the parent and the child is not simply affected by parenting alone; in other words, the behavior of the child has an impact on the type of parenting the child receives (Gault-Sherman, 2012).



The relationship between court-involved families and trust in the justice system is another important relationship—so much so that Rose et al. (2004) identified mistrust of the justice system as a specific emotion experienced by parents of court-involved youth. Mistrust develops among individuals who feel powerless and unable to manage threats (Ross, Mirowsky, & Pribesh, 2001). Ross et al. (2001) found that citizens reported lower levels of trust due to higher levels of neighborhood disorder and that minorities, single mothers, and those with little education were most mistrusting of others. Specific to youth, Leiber, Nalla, & Farnworth (1998) found that those from certain neighborhoods were resentful, resistant, and harbored disrespect for the law, and that these views were a function of race, the family's economic position, and characteristics of their neighborhood.

Trust is also related to the juvenile's understanding of the role of his or her lawyer, with lower levels of trust correlated with lower levels of understanding (Pierce & Brodsky, 2002). Lower intellectually functioning White juveniles were less trusting of their attorneys than higher functioning White juveniles, whereas the opposite was true for Black juveniles: lower intellectually functioning Black juveniles were more trusting of their attorneys than higher intellectually functioning Black juveniles (Pierce & Brodsky, 2002). Interestingly, the researchers found no differences in the amount of time a parent helped with their child's defense based on the age of the child. This begs the question, to what degree are parents involved with their child's court case? One would assume that parental assistance with a low intellectually functioning child would be vital to the child's defense preparation and strategy. This lack of parental involvement may be due to the parent's own level of trust in the juvenile justice system. For parents feeling higher levels of mistrust toward the justice system, the fact that they must comply and cooperate with the system's demands may create additional stress.

Due to the myriad responsibilities placed on single parents, a broken home has also been

acknowledged as a parental stressor (see Caldwell, Horne, Davidson, & Quinn, 2007; Patterson, DeBaryshe, & Ramsey, 1989; Rebellion, 2002). Parenting attitudes and family interactions are influenced by divorce and separation (Webster-Stratton, 1990). Single parents of first-time juvenile offenders have reported significantly higher rates of parental stress than two-parent families before participating in a stress reduction program (Caldwell et al., 2007). The single mothers in the study also reported lower levels of family functioning than mothers from two-parent homes, and lower levels of family functioning were inversely related to parental stress (Caldwell et al., 2007). The authors note that the overrepresentation of single-parent, low-income families in their study may have contributed to the significantly higher rates of parental stress as a result of the added pressures of meeting food, clothing, and housing expenses (Caldwell et al., 2007). Along with difficulty meeting basic expenses, low-income single parents also have an increased likelihood of experiencing stressful living conditions such as poor quality housing; exposure to crime, drugs and violence; and substandard educational resources (Caldwell et al., 2007).

Similarly, unemployment produces devastating effects that are carried over to the family and social service agencies (Keefe, 1984), as well as to parenting (Webster-Stratton, 1990). Moreover, emotions such as grief, anger, guilt, feelings of loss, and a sense of losing part of one's self have been clinically observed in those who are unemployed (Keefe, 1984). Unemployed and unwed mothers of infants have experienced financial stressors such as a reliance on free food, inability to pay their bills, and a lack of health insurance resulting from unemployment (Livermore & Powers, 2006).

In the only study located that estimated a parental stressors model of court-involved youth and the impact on the parents' level of anger toward the child, Bradshaw et al. (2006) explored whether the added stress experienced by the parent would

significantly increase the amount of variation in family variables—such as unemployment, single parenting, household income, number of children in the home, and having another child involved with the justice system—and oppositional and violent behavior among their children. Their analyses revealed that parental stressors were not significantly related to levels of anger; however, the cumulative effects of parenting a child with violent and oppositional behavior exacerbates the level of anger toward the child (Bradshaw et al., 2006). Their finding is somewhat consistent with that of Peterson, Ewigman, & Vandiver (1994), in which increased perceptions of behavioral problems were found to be a risk factor for parental anger. Specifically, behaviors such as deliberately disobeying a parent’s command or talking back were found to make parents the angriest (Peterson et al., 1994).

In summary, this review has shown how parental stress can create poor outcomes not only for the relationship between the parent and the child but also for parenting practices and effectiveness (Guajardo et al., 2009). These outcomes are plausible because, according to the “spillover” hypothesis, situations that parents experience in one relationship can have a “spillover” effect in another, such as the parent-child relationship (Enger, 1988). More specifically, the “spillover” occurs as a result of the behaviors and emotions that are transferred from one relationship to another (Enger, 1988). Anger appears to be the manifest expression of parental stress; and because of the negative effect of stressors on the parent-child relationship and children’s outcomes, the following study is warranted.

### **The Current Study: Research Methods**

In light of the gaps in the research, the purpose of this cross-sectional study is to identify and understand parental stressors that influence parents’ level of anger toward their court-involved children who are on supervised probation. It is anticipated that anger toward the child will be higher among parents who report being unemployed,

single, having a substance abuse problem, being depressed, and having low levels of attachment to their children. Each parent’s level of anger is based on their responses provided on a 67-item parent questionnaire about their beliefs, thoughts, feelings, attitudes, and behaviors toward their children.

During a 5-month period, 115 juveniles were placed on probation in this jurisdiction; however, only 90 parents were approached for participation in the study. Excluded cases consisted of those in which the juvenile was to be supervised by another jurisdiction; detained in a residential facility or post-dispositional detention program; placed in the care of the Department of Social Services; or was non-English speaking. These juveniles were excluded to maintain a traditional probation caseload. Eighty-eight of the 90 parents approached by the researcher consented to participate. By consenting to participate in the study, parents agreed to complete a questionnaire and allow the researcher to collect pertinent study information from their child’s official probation records over the course of 1 year. Parents were given an option as to the manner in which the questionnaire could be completed: the researcher offered to read the questions aloud or respondents could complete the questionnaire on their own. Sixty parents (or the child’s primary caretaker, referred to as the parent) opted to have the researcher read the questions aloud; the other 28 parents self-administered the questionnaire. Juvenile probationers were never approached. The Institutional Review Boards from both the Department of Juvenile Justice and the university granted approval for the research.

### **Measures**

The parental competencies survey included questions surrounding the thoughts, feelings, attitudes, and beliefs of the court-involved child using a 4-point scale (completely false [1], mostly false [2], mostly true [3], and completely true [4]). In addition, parents responded to questions concerning stressors such as depression,

substance abuse, employment status, family structure, level of attachment to their children, and other demographic variables. Youth variables were collected from probation files.

**Independent variables.** This study examined six parental stressors: unemployment (0 = no, 1 = yes), being a single parent (0 = no, 1 = yes), having an alcohol or drug problem (0 = no, 1 = yes), depression (0 = no, 1 = yes), perceptions of attachment to the child, a single item measure asking "How close do you feel to your child?" (1 = not at all close, 2 = sometimes close, 3 = close, 4 = very close), and mistrust of the justice system. Mistrust of the justice system comprises 8 items measuring the extent to which the parent trusts the juvenile justice system. The items include "The court system is against my child," "The court system treats my child poorly because of who he or she is," "The court is out to get my child," "The court misunderstands what it is like for my child," "I think they are making too big a deal out of what my child has been accused of," "Sometimes I get the feeling that everyone in the court see people as guilty," "My child is being unfairly accused," and "The police do not treat people like us very well." Response categories consist of a 4-point scale ranging from completely false (low) to completely true (high) and yielded a Cronbach's alpha of .880.

**Control variables.** This study controlled for the following two youth behaviors: whether the juvenile has a prior record (0 = no, 1 = yes) and the parent's report of negative home behaviors. Negative home behaviors, a single-item measure, includes three specific behaviors: (1) arguing and/or fighting in the home, (2) violating curfew, and (3) not obeying the rules of the home (1 = never, 2 = sometimes, 3 = always). These two youth variables are included in the analysis due to their potential influence on parental anger; after all, according to the anger toward the child construct, the child's behavior and being involved with the court makes parents angry (Rose et al., 2004). Other demographic variables were entered into the multivariate model with little to

no effect; therefore, they were excluded from the model.

**Dependent variable.** Anger toward the child is the dependent variable and was formed through exploratory factor analysis, specifically the principal axis factoring extraction technique (see Cook & Gordon, 2012). In this study, anger is defined as "irritation, inflammation, and strong passion of displeasure excited by a sense of antagonism toward the child, child's behavior, and involvement with the court" (Rose et al., 2004, p. 30) and includes the following five items: "I get angry when I think of the bad things my child has done," "My child's backtalk makes me very angry," "Sometimes I think my child does things to make me angry," "My child has an attitude," and "My child irritates me when he or she misbehaves." Response categories range from completely false to completely true on a 4-point scale.

The respondents were female (74%) between the ages of 31 and 50 (74%) and non-White (77%). The majority reported having at least a high school diploma or the equivalent (83%) and half reported being a single parent. Most respondents were employed, with a mean income of \$2,186.25 in the past month. The majority of the respondents did not report a history of arrest, substance abuse, or depression. However, when asked about the history of arrest of family members, respondents reported that 35% of mothers, 46% of fathers, 35% of siblings, 7% of grandparents, 15% of aunts, and 27% of uncles had been arrested. Youth in the study were mostly non-White (78%) males (67%), with a mean age of 15.3.<sup>1</sup>

## Results

**Bivariate Analyses.** Three significant bivariate relationships were produced between the parental stress variables and parental anger: substance abuse ( $p < .03$ ), being unemployed ( $p < .04$ ), and feeling low levels of attachment toward the child ( $p < .001$ ). Mistrust of the juvenile justice system

<sup>1</sup> Additional characteristics of both populations are available upon request from the author.

approached significance ( $p < .06$ ). The direction of the relationships were in the expected direction, indicating that being unemployed and feeling lower levels of attachment to the child were inversely related to anger (meaning that parents who were unemployed, and those who reported lower levels of attachment to their child, also reported higher levels of anger toward their child), whereas having a substance abuse problem was positively related to anger.

**Multivariate Analyses.** Using ordinary least squares (OLS), the analysis examined parental stressors on parental levels of anger toward the child. To test for multicollinearity, variance inflation factor (VIF) was used. The lowest VIF was 1.044 and the highest VIF was 1.220, indicating no problems with multicollinearity (O'Brien, 2007). The relationship between parental stressors and parental levels of anger toward the child are presented in Table 1. The model was statistically significant ( $p < .001$ , adjusted  $R^2 = .36$ ), revealing four statistically significant determinants of a parent's level of anger toward the child: whether the juvenile had a prior record, whether the parent had a substance abuse problem, whether the parent was unemployed, and the level of the parent's attachment to the child. The relationships between each of the variables were in the expected directions.

Whether the juvenile had a prior record is positively related to anger. *T*-tests were used to determine whether there were differences in age, race, and gender of youth with and without a prior record. The only significant relationship produced was between age and prior record (age was recoded to above and below the mean age of 15). Probationers aged 16 and above ( $M = .62$ ,  $SD = .49$ ) were more likely than those aged 15 and below ( $M = .20$ ,  $SD = .41$ ) to have a prior record and the difference was statistically significant,  $t(86) = -4.286$ ,  $p < .001$ .

Due to the interrelatedness of the variables in a number of previously cited studies (co-occurring disorders, depression and unemployment, and

Table 1. An Examination of the Relationship Between Parental Anger and Parental Stressors

Variable	Parental anger	
	b(SE)	$\beta$
Negative home behaviors	.050(.064)	.074
Prior record	.290(.147)	.178*
Single parent	.019(.143)	.012
Substance abuse	.600(.220)	.257**
Employment status	.402(.171)	.216*
Depression	.130(.188)	.064
Attachment	-.493(.084)	-.569***
Mistrust of the justice system	-.081(.103)	-.072
$R^2$	.36	
<i>F</i> test	6.849***	

$p < .001$ \*\*\*

$p < .01$ \*\*

$p < .05$ \*

substance abuse and unemployment, for example), this study tested a number of interaction effects but none produced significance.

## Discussion

The purpose of the current study was to explore the relationship between parental stressors and their effect on parental anger among parents of juvenile probationers. It has been acknowledged that the thoughts, feelings, attitudes, beliefs, and behaviors of parents of court-involved youth are important factors to consider for compliance and rehabilitative efforts (Bradshaw et al., 2006; Cook & Gordon, 2012), particularly when striving to enhance parent-child relationships (Bradshaw et al., 2006). The current study revealed four significant predictors of parental levels of anger toward the child: a youth's prior record, parent reporting a substance abuse problem, parent being unemployed, and parent feeling low levels of attachment toward the child.

As for the contributions of youth behaviors, having a prior record significantly predicted parents' anger toward children. This finding is not surprising given the context of the study. In other words,

anger toward the child embodies the notion of anger as a result of both the child's behaviors and involvement with the court (Cook & Gordon, 2012; Rose et al. 2004). As far as prior involvement with the court, this was at least a second offense; it may be that the prior offense was handled through intake rather than adjudicated in court, but regardless, the initial offense was a matter dealt with by juvenile justice officials. This finding indicates that not only are parents angered by their children's behavior, but they may be further angered by the fact that the behavior rose once again to a level requiring court intervention. Previous research has shown that parents of delinquent youth reported high levels of anger toward the child (Bradshaw et al., 2006).

As expected, unemployed parents report higher levels of anger than parents who are employed. This finding is also not surprising given that, according to Keefe (1984), unemployment contributes to feelings of anger. Also, McLoyd (1990) found that financially distressed parents were more depressed, irritable, and explosive than those who were financially stable. Moreover, McLoyd (1990) contends that financial hardship weakens one's ability to manage problems and difficulties. As for the parents in this study, being unemployed likely contributes to their sense of failure to meet their parental and/or financial obligations. Unemployed parents may also experience increased levels of anger because they possess fewer job skills than those who are employed, which also renders them less marketable. Although this study did not consider why these parents were unemployed, a number of possible reasons for parental unemployment in general have been cited by other researchers. These include psychological intimate partner violence and posttraumatic stress disorder (Kimerling et al., 2009), substance abuse (Meara, 2006), a lack of transportation, lack of child care options, housing instability, medical and legal problems, and a lack of their basic needs being met (Gutman, Ketterlinus, & McLellan, 2003).

The analysis also revealed that a parental history of substance abuse was a determinant of anger toward the child. Previous research has shown that levels of anger are higher among alcohol users than nonusers (Kelly et al., 2010) and that stress is exacerbated by substance abuse (Semple et al., 2011). In a review of welfare reform, Meara (2006) found that substance abusing mothers receiving Temporary Assistance to Needy Families (TANF) had less work experience, worse employment records, and lower earnings than non-substance abusing mothers. It may be that unemployed parents are less marketable as a result of their histories of substance abuse. That said, a post hoc analysis revealed no significant interaction effect in this study between being unemployed and a reported substance abuse problem.

The study also found that lower levels of attachment indicate higher levels of anger towards the child. High levels of stressful events have also been shown to negatively affect the quality of parent-child attachment (Vaughn, Egeland, Sroufe, & Waters, 1979). Although Guajardo et al. (2009) did not specifically test for anger in parents, their analysis revealed that parental stress was related to over-reactivity toward children, and that stress was inversely related to children's internalizing and externalizing behaviors. In and of itself, parenting teens can be a challenging task, but when further compounded by other factors that parents must deal with, such as delinquent behavior, court involvement, problems in school, and lying, these behaviors can create a wedge between parents and children. Certainly, lying is a negative behavior that understandably angers most parents. In fact, lying to the parent has been shown to affect the parent-child bond (Warr, 2007). Specifically, Warr (2007) found that "lying—particularly prolonged lying—appears to loosen if not sever the bond between parents and children, and frequently results in distrust and anger on the part of the parents" (p. 619). Although this study did not control for lies told by children, it is not outside the realm of the day-to-day interactions between children and their

parents. The current study's findings are consistent with previous research, which shows that feeling close to a child is particularly important for a parent and influences his or her responsiveness to the child (Warr, 2007).

## Conclusion

The current study is not without limitations. This study suffers from having limited generalizability due to its relatively small sample size ( $n = 88$ ) and social desirability bias of the responses on the parent questionnaire. Although confidentiality was assured regarding responses on the questionnaire, under- or over-reporting may have occurred. Due to the large amount of unexplained variance, caution should be taken when interpreting the findings. In addition, the dichotomous measures of some of the variables may be too constrictive and not capture the full range of possibilities. The binary restriction may explain why depression did not produce significance as expected given previous findings (Knox et al., 2011; Patterson, 1982; Simon & Lively, 2010). The same may also be true of single parent status. The restriction of yes/no has been criticized in the literature (Rebellion, 2002; Wells & Rankin, 1988) and, specifically, Rebellion (2002) found that other factors such as divorce or separation and remarriage provide better measures to capture a broken home. Since the purpose of this exploratory study was to determine whether parental stressors contribute to parental anger toward juvenile probationers, these findings make a contribution to the literature. Future studies should examine the effects of parental stressors over time, rather than simply providing a cross-sectional analysis. Furthermore, this study did not consider other factors that may have contributed to or insulated a child from increased levels of parental anger. For example, substance abusing women receiving TANF have also displayed significantly higher rates of victimization, chronic medical problems, psychiatric symptoms, and legal problems (Gutman et al., 2003) than those not receiving this

subsidy. It may be that these factors negatively contribute to levels of parental anger.

Despite these limitations, the current study illustrates that addressing parental anger may be beneficial because of the potential for angry parents to impede the juvenile's treatment process (Caldwell et al., 2007; Cook & Gordon, 2012). It is critical that court officials recognize and respond to negative parental thoughts, feelings, attitudes, and behaviors and obtain services that can strengthen parents as individuals and families as units. Through each stage of a juvenile's involvement with the system, juvenile justice leaders and practitioners should create opportunities for proactive and effective family involvement and eliminate barriers that would inhibit such involvement (Pennsylvania's Balanced and Restorative Justice Implementation Committee, 2009). Considering the findings in this study, addressing parental needs such as anger, substance abuse, and unemployment through the resources of the juvenile court may be indirectly beneficial in addressing reoffending patterns of probationers.

Courts have the authority to refer families to social service and mental health agencies when problems present themselves. It is also crucial that probation officers and other professionals working with families obtain pertinent information that can be used to address extant problems such as anger (regardless of the source), substance abuse, or unemployment. After all, if the juvenile court claims the ability to "help" parents with their children, they must also be willing to help parents with their own problems. Providing support for the involvement of the family, research has shown that family-based counseling, such as multisystemic therapy (MST) and functional family therapy (FFT), strengthens parenting skills while reducing delinquent behavior (DeVore, 2011; Timmons-Mitchell, Bender, Kishna, & Mitchell, 2006).

Both MST and FFT are based on the recognition that behavior is influenced by multiple systems such as family, schools, and communities (DeVore,

2011). In their work on delinquency prevention, Hawkins & Weis (1985) contend that the inclusion of multiple systems is an appropriate avenue for intervention. Family-based counseling programs have also been found to be cost effective given other indirect benefits, such as improved family relationships and behaviors, reduced reliance on social welfare services, and reduced productivity as a result of substance abuse (Dembo et al., 2000). In addition, anger management programs specifically designed for parents have highlighted positive outcomes such as reduced levels of anger, family conflict, verbal and physical aggression, and increased levels of reasoning with their children (Fetsch, Schultz, & Wahler, 1999).

Furthermore, family intervention services developed to reduce reoffending among juveniles found that addressing parental stress resulted in significant improvement in communication between parents and their children (Caldwell et al., 2007). These findings underscore the importance of parental participation in competency

groups and intervention services, and provide further support for studying behavior from an ecological perspective. Through participation in such family-based programs, parents can receive the specialized attention they need to address their problems in order to effectuate the necessary changes in their lives and their children's lives. Ideally, families experiencing high levels of parental stress can get the help they need to mend the damage to the parent-child relationship, facilitate behavioral changes within the juvenile, and live resourceful, self-reliant, and productive lives.

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# Development, Delivery, and Evaluation of a Pilot Stress Reduction, Emotion Regulation, and Mindfulness Training for Juvenile Justice Officers

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## Abstract

Prior research indicates that human service care providers experience higher levels of chronic workplace stress and burnout than workers in other professions. Despite the documented need for support, there remains a dearth of research on appropriate training interventions for these workers. In addition, although human service work requires interpersonal connection and can be intrinsically rewarding, research on stress and burnout has overshadowed the study of empathy and meaning to help providers in human service settings. Juvenile justice officers (JJOs), who have the important and stressful job of working closely with incarcerated youth populations, have been especially understudied. This article explores stress among JJOs and training interventions through a review of the literature and presentation of original case study data. The case study includes qualitative analysis of (a) interpersonal stress through a new lens of empathy and meaning and (b) the development and delivery of a pilot training program targeted to help JJOs reduce stress and facilitate empathy and meaning. The conclusion addresses opportunities to support JJOs in managing interpersonal stress and finding meaning in their work.

## Introduction

A robust body of research indicates that professionals working as human service care providers experience higher levels of chronic workplace stress and burnout than those in other professions (Zammuner, Lotto, & Galli, 2003). There has been significantly more research on stress and interventions to reduce it among human service care providers in the fields of education, social welfare, and health care than for those in law enforcement and criminal justice, such as the population considered in this case study: juvenile justice officers, or JJOs. Chronic workplace stress is linked to a variety of poor health and psychosocial outcomes, including accelerated aging (Epel et al., 2004), coronary heart disease and high blood pressure (Dickerson & Kemeny, 2004), mental health distress (Lazarus, 1966), and job burnout (Jackson & Maslach, 1982; Schaufeli, Leiter, & Maslach, 2009). Despite the well-researched prevalence and consequences of workplace stress, more research is needed on interventions to support these providers (Edwards, Burnard, Coyle, Fothergill, & Hannigan, 2000).

JJOs have the difficult and important job of working with the most troubled youth in every county across the country. These youth need professional rehabilitation and role modeling, which can lead

to stress among JJOs who do not have appropriate training (Abrams, 2006; Krisberg, 2005). Most JJOs are required to attend annual trainings that focus on how to respond to physical assault, identify gang tattoos, and accurately complete ever-changing documentation forms. But many counties do not provide training for the emotional exhaustion and stress that arise from working with youths who have myriad psychosocial issues, including substance use, intergenerational trauma and incarceration, and diagnosed and undiagnosed comorbid mental illness.

This article presents a qualitative single case study of a 16-hour pilot stress management training program for JJOs ( $n = 16$ ) through development, delivery, and evaluation. The study assessed the basic feasibility of a pilot training program that was designed specifically for JJOs. The pilot program was run with two separate groups of JJOs in a single-county juvenile hall and detention center in the fall of 2012. An assessment of the training needs of JJOs was collected through participant observation and focus groups ( $n = 50$ ) from the fall of 2011 through the fall of 2012. The content of the pilot program was adapted from an evidence-based training program that integrated Western psychological and Eastern contemplative practices. The training program was adapted to focus on the development of knowledge and skills to reduce stress, bolster meaning and purpose, and enhance empathy among JJOs. Importantly, the case study incorporated the voices of JJOs about their work experiences, which along with their evaluation and feedback on the delivery of the pilot training program, helped to shape the curriculum. The pilot training program provided an opportunity to establish the basic efficacy of an adapted emotion regulation and mindfulness meditation training program that addressed JJOs' description of specific stressors.

### Literature Review

This literature review provides background on JJOs, the importance of their work, prior stress

reduction efforts from a national study of stress reduction training programs, and a definition of interpersonal workplace stress reduction training. The literature in each of these areas informed this intervention and study design.

### Research on Juvenile Justice Officers

The limited extant research on human service care providers in the criminal justice setting reveals rates of chronic workplace stress and burnout that surpass the levels of stress experienced by those in other human service settings (Dowden & Tellier, 2004; Keinan & Malach-Pines, 2007.) Although little is known about stress among adult corrections and probation officers, even less is known about stress among frontline JJOs (Abt Associates, 2004; Lopez & Russell, 2008; Steiner, Roberts, & Hemmens, 2003).

JJOs work in shifts to monitor locked units 24 hours a day, 7 days a week (Abt Associates, 2004; Keinan & Malach-Pines, 2007; Steiner et al., 2003). In many cases, JJOs spend more time with incarcerated youth than do probation officers, teachers, mental health counselors, and judges (Marsh, Evans, & Williams, 2010; Krisberg, 2005). The most significant research on JJOs emerged from a qualitative research study on youth inside juvenile justice settings (Abrams, 2006; Abrams & Anderson-Nathe, 2013). Abrams' research suggests that rehabilitation is best facilitated when youth perceive JJOs as present and invested, acting in "proxy parental" roles (Abrams, 2006; Abrams & Anderson-Nathe, 2013). In short, Abrams' work sheds light on youths' experience of their relationships with JJOs.

**Rehabilitation and role modeling.** While the exact practices required for rehabilitative treatment are difficult to quantify, building positive relationships, role modeling, one-on-one counseling, and overall empathic engagement are important aspects (Curtis, Reese, & Cone, 1990). In addition, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) emphasizes the importance of training JJOs so they can effectively "change

juvenile offenders' behavior by providing them with opportunities to experience positive relationships with healthy adults in appropriate settings" (Roush & McMillen, 2000, p. 2).

Although rehabilitation is nationally mandated, there are no nationally standardized training programs for JJOs. Each county facility may have a different objective for staff training; for facilities with youth who have greater mental health needs, there are often additional psychologically based training opportunities. Some counties prioritize JJOs' roles in rehabilitation and empathic engagement with youth or provide additional mental health training; other counties may focus on training in safety and discipline, leaving the rehabilitation role to social workers and therapists (Krisberg, 2005). All counties require both discipline and rehabilitation, and these roles can seem conflicting. These conflicting role expectations and a lack of support raise concerns about the stress burden among officers.

***Incarcerated youth.*** JJOs have direct and intensive contact with a vulnerable subgroup of youth (Abrams, 2006). The majority of the youth who are held inside the juvenile justice system have already been involved in child welfare and mental health systems and are disproportionately youth of color and low socioeconomic status. Many also have mental health issues, educational struggles, and families with histories of domestic violence and intergenerational experience of incarceration (Abrams, 2006; Department of Corrections and Rehabilitation Division of Juvenile Justice [DCRDJJ], 2013).

### **National Institute of Justice Stress Interventions**

The sources of workplace stress in the field of criminal justice have been studied primarily through the use of large-scale surveys of officers (Lopez & Russell, 2008). These surveys point to the unique stress of working in violent environments, and reveal a shared stress with those working in other human service care settings. Surveys show that stress results from a lack of job role clarity

and professional autonomy (Gould, Watson, Price & Valliant; 2013). Much less is known about training interventions to manage stress for this population (Inwald, 1982; Griffin, Hogan, & Lambert, 2012; Lopez & Russell, 2008). The most significant literature on training programs in criminal justice settings resulted from a multisite study funded by the National Institute of Justice (NIJ).

In 2000, the NIJ funded a series of stress-reduction training programs to address concern about rising levels of stress among correctional officers (Abt Associates, 2004). This stress was associated with physical and mental health issues precipitating burnout, absenteeism, and mental health disability among correctional officers nationally (Lambert, Altheimer, & Hogan, 2010). The NIJ funded the development of stress-reduction programs in primarily adult criminal justice facilities, but also in some juvenile justice facilities, across 11 states. There were no uniform expectations regarding what was to be covered in the training programs. In most cases, the facilities contracted with professional local trainers to conduct pre-existing stress-management programs. Other programs were designed in-house by the institutional management. All of these funded stress-reduction programs were evaluated by an external agency, Abt Associates (2004). The Abt evaluation has invaluable reflections about what correctional staff thought about the programs and thus provides useful clues for the development and delivery of the DREAM (Developing and Reconnecting to Empathy and Meaning) pilot intervention.

### **Assessment of NIJ Stress Interventions**

The follow-up written surveys and phone calls collected for the Abt evaluation suggested that these programs were largely unsuccessful with correctional officers. Most fundamentally, correctional officers did not feel the stress-reduction training programs addressed their unique stressors and needs. Specifically, they expressed dissatisfaction with outside trainers who had little to no correctional experience. These outside trainers

lacked an authentic understanding of the correctional setting and failed to build trust and rapport with the staff (Abt Associates, 2004). The officers reported that they felt the content of the training did not build skills to manage psychological distress; instead, there was an overemphasis on physical wellness and “self-care” strategies concerning eating, smoking cessation, and exercise. This negative response to the health and behavior focus of stress training interventions may relate to the fact that the majority already knew the health risks of poor diet, smoking, and lack of exercise. Finding time to exercise, overcome nicotine addiction, and change unhealthy eating habits can feel like additional “to dos” for overburdened workers (Edwards et al., 2000).

Another interpretation of the negative feedback from officers is that these training programs were not well matched to interpersonal stresses, needs, and motivations of the officers. In addition, a number of training programs tried to build social support for workers by including their families in social activities. This was felt to be an undesired social intrusion and burden upon correctional officers’ limited free time. Officers reported not wanting to mix family and work life. Because correctional officers were not offered compensated work time to attend voluntary trainings, these trainings suffered from high attrition rates. Officers did not want to spend additional time at work. These trainings were designed and delivered without taking into account correctional officer input, and so they did not always appear to meet the needs of the correctional officers. In short, the Abt evaluation provides some important lessons about what not to do when developing stress-reduction trainings for this population. These evaluations should ideally develop a needs assessment and respect the free time of officers.

### **Other Stress Reduction Programs in Criminal Justice Settings**

There are other researchers trying to assess and develop interventions in the criminal justice arena. Many of these approaches have used

large-scale surveys among adult and juvenile officers to examine predictors of job stress (Minor, Wells, Angel, & Matz, 2010). This has included the development of new scales to assess job stress and an appraisal of the role of “treatment” or “punishment” based approaches (Griffin et al., 2012; Lopez & Russell, 2008). A prison social climate survey among others has sought to capture various domains of work life for officers. These scales have, meaningfully, identified the adult and juvenile officers’ appraisals of their environment as the most important variable to predicting job stress (Liou, 1995). There have been conflicting and inconclusive results regarding the influence of background demographics such as gender, ethnicity, education, or time in the position on burnout (Gerstein, Topp, & Correll, 1987; Maslach, 1982).

### **Person-Centered Approaches to Stress**

The basic premise of stress reduction training for individuals hinges on the “challenge versus threat” stress appraisal model (Lazarus & Folkman, 1984). Our individual appraisal of the same conditions (work environment) can elicit threat- or challenge-based stress responses, corresponding to the individual’s unique perception of the stressors (Akinola & Mendes, 2012; Blascovich, Mendes, Hunter, & Salomon, 1999; Lazarus & Folkman, 1984). When individuals appraise their resources as sufficient to meet the demands, the stress is a challenge that functionally helps rally their psychological and physiological responses to manage difficult situations (Akinola & Mendes, 2012; Blascovich et al., 1999; Lazarus, 1966; Lazarus & Folkman, 1984). However, when they perceive the demands as outweighing the resources available, they may feel distressed by threat. Applying this model to the workplace would lead one to examine the worker’s appraisals of workplace demands in relation to the worker’s perceived resources. Transforming appraisals of threat into appraisals of challenge requires improving individual-level appraisal of their resources in the work environment. The development of this case study pilot training program

focuses on teaching person-centered (emotion regulation, mindfulness, and communication) skills that build up individual-level resources.

**Stress and emotion regulation.** Emotion regulation is a term that describes how we manage our emotional communication to meet expectations in our personal, public, and professional lives. There are several forms of emotion: (a) physiological, (b) subjective experiential, and (c) expressive (i.e., facial expressions and corresponding behaviors). Our emotional response arises from the coordination of these forms, some of which influence behaviors and facial expression, and others of which are merely physically and subjectively experienced (Gross, 2002; John & Gross, 2007).

Emotion regulation is the way we manage these behaviors, and it can be used during different stages on the timeline of emotional response (Gross, 2002; Levenson, Ekman & Friesen, 1990). Although the physiological and subjectively felt experience of an emotion occurs in less than a second, the emotion timeline has distinct stages: appraisal, felt experience, and behavioral response. The first stage is our appraisal of the environment. This is occurring automatically all the time; our appraisal of the environment is constant, but our emotional response only arises when we perceive that something significant or important to our well-being is occurring (Ekman, 2007; Gross, 2002). The appraisal is a critical moment of assessment that can influence our emotional response; it plays a role in determining whether we experience threat- or challenge-based stress. An over-aroused emotional response creates the felt experience of stress (Lazarus, 1966; Blascovich, Mendes, Hunter & Salomon, 1999). Thus learning to understand, identify, and manage our emotions before they become over-aroused is important in teaching individuals to manage stress. Our unexamined emotional responses can lead to feeling exhausted, drained, and without resources. Emotions happen automatically without a need for thought. Emotion regulation requires bringing thought back into the picture of the emotional experience.

**Institutional approaches to stress reduction.** It is important to note that, in addition to individual approaches to managing stress through emotion regulation, there has been a significant body of research on how to improve worker satisfaction and reduce stress from changes at an institutional level (Glazer & Beehr, 2005; Liou, 1995). Institutional level changes include alterations to work hours, modification of physical space of the environment, clarification of job roles, increasing safety and other practices to generally improve work culture and morale (Baron & Pfifer, 1994). The threat to personal safety is a critically important issue when JJOs are unsafe; however, there are many parts of the work environment that can contribute to feeling stressed by the locked-in nature of criminal justice work (Liou, 1995). These institutional level approaches are valuable and important, but require a great deal of momentum and time and are outside the scope of this study and pilot training program.

### Training Skills

The majority of the training curriculum was drawn from Cultivating Emotional Balance (CEB). CEB is a 42-hour secular emotion and mindfulness skills training designed to help participants improve emotional regulation through the identification, understanding, and cultivation of constructive emotional experiences. The training consists of overarching conceptual knowledge and experiential exercises drawn from Western scientific research on emotion regulation and traditional Eastern attention-focus (Shamatha) and contemplative heart practices (Four Immeasurables) practices (Wallace, 2010).

CEB is designed to provide useful skills for individual development and interpersonal communication across nonclinical populations. CEB encourages participants to set their aspirations for exceptional mental health (genuine happiness) through attentional, emotional, cognitive, and conative (motivational) balances (Wallace & Shapiro, 2006). CEB specifically builds skills for interpersonal communication through the



development of emotional self-awareness and the ability to identify emotion in others.

The efficacy of CEB has been evaluated through a randomized controlled trial of schoolteachers. The CEB curriculum was found to reduce trait-negative affect, rumination, and depression and to increase trait-positive affect and mindfulness (Kemeny et al., 2012). CEB's unique combination of building emotion regulation and mindfulness skills was well matched to meet the learning objectives of the pilot training program. However, it needed to be adapted and abbreviated from its original 42-hour format to include specific skills of emotion regulation, mindfulness exercises, psychoeducation, and communication.

### Case Study Methodology

The study was carried out in two phases: a preliminary observation and focus group phase, and a phase that focused on the delivery and evaluation of a pilot training program. Each data collection phase was accompanied by new literature reviews. At each phase of the study, these data were consistently reappraised through the process of iterative analysis to look for new themes, categories, and concepts (Holloway, Brown, Suman, & Aalsma, 2013; Lofland & Lofland, 2006). This iterative process was applied to transcripts of field notes from participant observation and focus groups with open and axial coding to translate rough categories of observation into concepts that relate to the overarching research questions about stress, empathy, and meaning (Holloway et al., 2013; Strauss & Corbin, 1994, 1997; Abrams, 2006; Gilgun, 2010). Literature reviews were completed at each phase of the study to provide background and context for questions and concepts arising from the data.

### Participants

Participants were juvenile justice peace officers working directly with the youth; these JJOs work in shifts to supervise the youth for 24 hours a day inside the Youth Service Center in San Mateo

County. Approximately 50 JJOs participated in some phase of the study.

In phase one, 20 JJOs completed demographic information surveys and an additional 11 JJOs participated in focus groups but did not receive surveys. There were at least five direct conversations between the researcher and JJOs on working, during participant observation. More than 20 JJOs were observed in their work environment (but were not asked to complete surveys). In phase two, 16 JJOs participated in two separate trainings. These JJOs received the demographic information surveys. A total of 36 JJOs completed the surveys. All participants were over the age of 18, spoke English, and held at least a college degree.

There are approximately 80 JJO staff in San Mateo. The demographics show a group of JJOs who already have many years of job experience in this role and who plan on staying 10 years or more in the job, most likely until retirement. Although prior research shows weak, if any, relationships between age, education, ethnicity, or marital status and the experience of stress (Lambert et al., 2010), the following basic demographic characteristics were collected in order to describe the sample: age, years in this job, years of relevant experience, educational level, marital status, number of children in the home, ethnicity, and intent to leave job. Gender was not included in the demographics; the Department of Corrections states that there is an even split in the gender of the JJOs and gender was not included on

the demographic sheets. Ethnicity was listed with these options with the opportunity to choose as many as applied: White, African American, Latino, Asian, Asian Pacific Islander, Native American, and Other. Percentages in Table 1 add up to more than 100 because of multiple ethnicities selected per participant.

**Table 1. Demographics**  
N = 36

Average Age	39
Married	47%
Divorced	11%
Child in the Home	41%
>4 years on the Job	98%
>8 years on the Job	52%
Staying 10 years or more	75%
White	70%
African American	25%
Latino	45%
Native American	9%
Other	9%

## Study Design

The qualitative case study was carried out in three phases: a preliminary observation phase, a focus group phase, and a phase that focused on the delivery and evaluation of a pilot training program. Phase one observations were framed by the question: How are stress and empathy manifested in these stressful settings? In phase two, focus groups were conducted to develop more concrete baseline descriptions of juvenile detention workers' experiences of workplace stress, empathy, and meaning and factors that might relate to these experiences. Each data collection phase was accompanied by new literature reviews.

### Pre-Pilot Analysis of Phase One Data

The principal stressors are listed in Figure 1 below.

*Figure 1. Code book for stressors.*

**Work Structure and Hierarchy** are defined as the content and communication of organizational policies and rules from the institution; hierarchy implies rules/expectations that are passed down from management.

**Cynicism and Negativity** are defined as pervasive feelings of negativity and a depersonalized stance toward the work and work environment—feeling chronically unsupported and viewing the workplace as toxic.

**Lack of Communication** is defined as a lack of trust among coworkers, managers, and top-level administration; information is not passed along as it should be.

**Coworker-Related Stress** refers to stress caused by coworkers who communicate poorly, have negative attitudes, are perceived as lazy, or gossip.

**Frontline Work Stress** refers specifically to the aspect of the job role that involves providing direct one-on-one care to youth (rather than being behind a computer or in an office). This includes being inside the locked environment and facing unpredictable circumstances with the youth.

**Role Expectations** is defined as the degree to which the JJOs know what is expected of them in their jobs and whether they feel they are succeeding in their roles.

It is important to note that the training developed for phase three described in this paper does not address systemic and organizational obstacles experienced by workers—including poor responsiveness to workers' concerns from high-level

management or lack of rewards for doing rehabilitative work with the youth as described in **work structure and hierarchy**, or the physical demands of being in a locked environment and having a schedule that rotates every 6 months as described in **frontline work stress**. Addressing these issues would require other kinds of job interventions and institutional change.

Rather, this pilot training intervention is intended to target person-centered skills that may address **lack of communication, coworker-related stress, role expectations, and cynicism** as the felt response to stressors. Although results from prior phases of this study suggest these skills and responses are salient, they have not been a focus of intervention efforts to date. Moreover, addressing these stressors and experiences of stress requires the development of specific knowledge and skills related to emotion regulation, mindfulness exercises, psychoeducation, and communication.

### Empathy and Engagement Data

Analysis of empathy and engagement, motivation for the job, and meaning in work provided additional data to shape the pilot training (see Figure 2). This analysis explored descriptively specific answers to focus group questions about positive coping strategies. These codes were applied to content that responded to questions specifically about (a) Empathy and Engagement, (b) Motivation for the Job, (c) Meaning in Work, and (d) Success. Every JJO in the focus group was

*Figure 2. Codebook for coping.*

**Empathy and Engagement** is a code applied when a worker describes relating to the youth emotionally or with cognitive curiosity and demonstrates engagement in this interpersonal part of the work.

**Motivation for the Job** describes the JJO's motivation for the job; the answers relate to why people were originally drawn to this work.

**Meaning in Work** is applied when a JJO describes that they feel good about the work they do and what they are able to achieve with the youth, and that they feel good in general.

**Success** describes the JJO's assessment of their feelings about whether they have made some progress or done their job well.

asked about their initial motivation to start the job and what success felt like.

In terms of motivation, all participants stated they began the job to “help youth” in one fashion or another. When asked to assess whether they felt continued motivation and/or meaning, it was clear that the JJOs had realized the limitations of what they could do and were mainly focused on safety and basic respect, as reflected in the excerpts below. JJOs described struggling with a response to the success questions; they often reverted to adhering to the most basic job role expectations, such as safety. JJOs alluded to the fact that they were reluctant to hope for more than this.

The intrinsic motivation that brought these JJOs to their work was thus capitalized upon when structuring the training program. Specifically, the training was designed to provide support for this motivation and to help foster meaning within the limitations of their jobs. Supporting the motivation was coupled with building skills to manage the key experience stressors.

### Pilot Curriculum Development and Evaluation

**Participants.** The pilot training program was delivered to two groups of JJO staff who had not participated in prior phases of research. The first group included six JJOs and the second included 10, for a total of 16 participants (See Figure 3.) All participants were over the age of 18, spoke English, and held at least a college degree.

**Recruitment.** For the 2-day pilot stress skills training, JJOs were informed that they had an opportunity to participate in a stress training in order to earn credits toward annual peace officer requirements.

Figure 3. Phases of Study

Phase One	Curriculum Development	Phase Two
<ul style="list-style-type: none"> <li>Participant Observation <math>n = 40</math></li> <li>Focus Groups <math>n = 11</math></li> </ul>	<ul style="list-style-type: none"> <li>Phase One Data of Stressors</li> <li>Cultivating Emotional Balance</li> </ul>	<ul style="list-style-type: none"> <li>Delivery of Training                             <ul style="list-style-type: none"> <li>Group One <math>n = 6</math></li> <li>Group Two <math>n = 10</math></li> </ul> </li> <li>Evaluation of Training                             <ul style="list-style-type: none"> <li>Focus Groups <math>n = 16</math></li> <li>Online Evaluation <math>n = 9</math></li> </ul> </li> </ul>

### Trainers

In consideration of the Abt findings (Abt Associates, 2004) about the desire for trainers with knowledge of the correctional experience, both trainers had professional experience working within the juvenile justice system. The principal researcher ( $n$ ) had a clinical background that was helpful in managing emotional disclosure during the training, as well as a professional background working in emotionally demanding jobs as a social worker. Ekman has been leading Cultivating Emotional Balance trainings since 2001, and is familiar with delivering the emotion-regulation skills training. McKenna has been providing mindfulness trainings to incarcerated youth since 2002. He is familiar with the stresses and strains of working with this population in the juvenile justice system, and has extensive experience as a teacher of mindfulness skills. The design of the pilot training program drew from the phase one data on sources of stress matched to relevant literature on stress-reduction intervention. Additionally, in collaboration with the administrative staff of the San Mateo Department of Probations, the training was certified by the state. The state certification allowed the JJOs to participate with full pay and work coverage and to receive training credits toward their annual requirements.

**Post training phase two focus groups.** There were three focus groups ( $n = 11$ ), with training participants divided into groups of five, four, and two at the end of the second day of training. Each focus group lasted approximately 1 hour and was audio recorded. The semi-structured interview protocol was based on the learning objectives (see Table 2). The interview protocol was a starting point; however, the semi-structured design meant that the JJOs were also free to guide the conversation according to the topics and themes they introduced.

The content of the focus groups was transcribed and reviewed and was used

to answer key questions about the feasibility of the training. Specifically, JJOs were queried about what worked in the training, which skills were used, what would be important to cover in future trainings, and what was enjoyable and not enjoyable about the training.

**Table 2. Evaluation Focus Group Questions**

1. How might you integrate what you learned from this training into your home and work life?
2. What will you take away from this training?
  - a. Would you recommend this training to a colleague?
3. What parts of this intervention are useful to these workers?
  - a. Mindfulness exercises. (Experiential)
  - b. Identification/reconnection to motivation and meaning. (Experiential/Didactic)
  - c. Psychological education on burnout. (Didactic)
  - d. Development of a vocabulary of emotion, emotion timeline, and triggers. (Experiential/Didactic)
  - e. Practicing the felt experience of emotion. (Experiential)
  - f. Professional Empathy Training. (Didactic and Experiential)
4. What, if anything, do you feel was useful in this training?
5. What are your suggestions for how to improve the training?
6. Do you have any additional thoughts or suggestions?

**Online evaluation.** To determine the extent to which the training achieved its learning objectives, an online evaluation of the training was e-mailed to all participants. A 5-point Likert scale (with responses ranging from strongly disagree to strongly agree) was provided to collect responses to questions about the training. The questions about the learning objectives are listed in Table 3.

### Summary of Learning Objectives

Table 4 summarizes the learning objectives for this training program.

**Emotion regulation.** Emotion regulation refers to the way we manage our cognitive appraisals and expressed behaviors during the timeline of an emotional response (Gross, 2002; Gross & Levenson, 1997). Although the physiologically and subjectively felt experience of an emotion occurs in less than a second, the emotion timeline has distinct stages: appraisal, felt experience, and

**Table 3. Online Evaluation**

Please indicate the extent to which you agree with the statements below about learning objectives.

1. I understand more about emotions and stress as a result of the training.
2. I can use the information and practices about professional empathy in my everyday work and home life.
3. I can use the information and practices about self-compassion in my everyday work and home life.
4. I learned meditation relaxation skills I can use in my everyday work and home life in the second day of training.
5. The Micro Expression Training Tool online will be useful in my everyday work and home life.
6. The training helped me reconnect to my motivation for doing the work I do.
7. I would recommend this training to other staff.

**Table 4. Summary of Learning Objectives and Skills**

Emotion Regulation	<ul style="list-style-type: none"> <li>• Identification of facial expressions and micro expressions of emotion</li> <li>• Familiarization with the physical sensations of emotion in the body</li> <li>• Emotion timeline</li> </ul>
Mindfulness exercises	<ul style="list-style-type: none"> <li>• Self-compassion, compassion for others, loving kindness</li> <li>• Anchoring in the body and the breath</li> <li>• Setting the intention, motivation, and meaning</li> <li>• Many moments of awareness</li> </ul>
Psychoeducation	<ul style="list-style-type: none"> <li>• Burnout, depersonalization</li> <li>• Genuine happiness, meaning</li> <li>• Function of emotion</li> </ul>
Communication Skills	<ul style="list-style-type: none"> <li>• Empathic listening, honestly expressing</li> <li>• Case study vignettes of youth</li> <li>• Case study vignettes of coworkers</li> </ul>

behavioral response. Building skills of emotion regulation requires becoming aware of the timeline of emotion and building a familiarization with the felt and displayed expressions of emotions in self and others (Kemeny et al., 2012; Saxbe, Yang, Borofsky, & Immordino-Yang, 2013.) Building emotion regulation skills can help to manage the over-aroused emotional response that leads to stress (Lazarus 1966; Blascovich et al., 1999). This learning objective was included to meet the JJOs' areas of need because emotion-regulation skills are an implicit part of stress management skills. Emotion regulation includes building emotional awareness to identify emotions and emotional

resonance before one feels overwhelmed. Emotion regulation skills also help to enhance the ability to read and interpret emotional communication signals, which could improve overall communication, coworker interactions, and empathy.

**Mindfulness practices.** Mindfulness-based trainings have been at the forefront of stress reduction interventions and wellness in the last decade (Keng, Smoski, & Robins, 2011; Goyal et al., 2014). Mindfulness meditation practices have demonstrated a variety of beneficial effects among veterans; clinical populations with depression, anxiety, and chronic pain; medical providers; and school-aged children (Goyal et al., 2014). Specifically, mindfulness practices have been found to reduce stress, depression, and anxiety, and to increase activation in brain regions responsible for regulating attention and positive affective states, including empathy and other prosocial emotions (Davidson et al., 2003; Lutz, Slagter, Dunne, & Davidson, 2008; Grossman, Niemann, Schmidt, & Walach, 2004; Hofmann, Sawyer, Witt, & Oh, 2010). The learning objective of mindfulness was included in this study to meet the JJOs' need for relaxation and reframing to promote meaning and empathy as a way to manage feelings of cynicism.

There are many techniques and skills that are taught as part of mindfulness meditation. Mindfulness-based programs build on the core premise that mindfulness teaches participants skills to create a space of reflection between their thoughts and their responses (Kabat-Zinn, 1990). One of the most basic and widely used techniques is a focus on breath to increase attention and promote relaxation. Using this technique, participants learn to pay attention to the present moment without judgment through a focus on their breath and/or their body and, consequently, to relax (Kabat-Zinn, 1990; Wallace & Shapiro, 2006). Regular breath practice trains the mind to develop an everyday awareness of habitual patterns of negative self-thoughts and behavior, referred to as meta-cognitive awareness (Davidson & McEwen, 2012; Hayes, Strosahl,

& Wilson, 1999; Keng et al., 2011). Simple breath practices are believed to help bring the attention of the mind to the present moment instead of letting the mind ruminate in negative or cynical thoughts.

Another mindfulness meditation technique is setting a clear intention through mindfulness practices. The intention should connect to a person's meaningful life aspirations. Human service workers, for example, can use this intention practice to connect (or reconnect) to the intrinsic rewards of altruism and being of service. Setting the intention in this training was used to help bolster JJOs' reported initial motivation to "help kids." Practicing the skill of connecting to the core altruistic motivation to be of service could clarify job expectations, mitigate cynicism, and encourage empathy with youth.

Also under the umbrella of mindfulness meditation is compassion-focused training to develop skills for paying kind attention to self and others. Compassion practices are delivered through a guided visualization during a sitting meditation practice that focuses on the aspiration (for the self or other) to be free from suffering and the causes of suffering. Self-compassion practices help with self-soothing during times of difficulty and bolster feelings of efficacy and resilience (Gilbert & Irons, 2005; Neff, Kirkpatrick, & Rude, 2007). Compassion for others extends these feelings of kind attention to the suffering and struggles of others, including clients and coworkers. In this case, such a stance of compassion helps to provide an avenue of care and concern for a youth even when the JJO is unable to actually intervene. Compassion-focused trainings with care providers start by practicing compassion for the self, then move on to practicing compassion for the clients who are suffering (Klimecki, Leiberg, Lamm, & Singer, 2012; Neff et al., 2007; Shapiro, Brown, Thoresen, & Plante, 2011). The DREAM training taught both self-compassion and compassion for others.

**Psychoeducation.** Psychological education, or psychoeducation, is a therapeutic intervention providing information that has been demonstrated to be helpful for clinical and non-clinical populations. Psychoeducation is provided either through passive materials (flyers and handouts) or in a teaching format (i.e., a live instruction) and covers issues such as depression, drinking, stress, and more psychological and behavioral topics (Donker, Griffiths, Cuijpers, & Christensen, 2009). Psychoeducation about workplace stress has been effective among human service care providers (Kagan & Watson, 1995). There were many elements of psychoeducation woven throughout the training when skills such as compassion, meditation, or empathic communication were being taught. However, specific topics of “Burnout,” “Genuine Happiness,” and the “Function of Emotion” were delivered to provide a working understanding of the underlying mechanisms of these topics (although no skills were taught). Educating training participants about the scientific basis of the training helps to encourage buy-in and investment (Kravits, McAllister-Black, Grant, & Kirk, 2010).

**Communication.** Meaningful communication requires skills of empathic listening, empathic speaking, and honestly expressing and understanding the perspective of the person communicating (Halpern, 2003; Hochschild, 1983). Developing these communication skills also functions to build skills of empathy through the accurate identification of the communicated emotions, as well as the practice of considering the context of the emotional experience (Eisenberg, 2000). This empathic attunement can help providers set healthy emotional boundaries between the emotional experience of coworkers or clients and the self (Halpern, 2007). The empathy training included in the pilot program was built from the emotion-regulation skills of identification of emotion, expression in the self and others, and the vignettes that were role-played by the JJOs. Role-play vignettes developed from case study examples have frequently been used to teach

empathy to medical professionals. Role-playing with patient actors is used in many training programs to train and evaluate the interpersonal skills of medical students. These vignettes create an opportunity to practice empathic listening and communication and to explore challenging emotional responses (Fine & Therrien, 1977). These skills target cynicism and coworker stress through building more in-depth empathic consideration.

### Delivery, Content, and Pacing

The learning objectives and delivery of the curriculum included exercises and opportunities for coworker interaction, discussion, and peer support. Peer support has been identified as a useful tool for managing work-related stress and burnout. This peer-support model can potentially ameliorate some cynicism and coworker stress through healthy communication among coworkers (Peterson, Bergström, Samuelsson, Åsberg, & Nygren, 2008).

Within the limited hours that can be allocated by already busy staff, the program was condensed into two daylong trainings, held 2 weeks apart, with daily homework to integrate the skills into everyday life. The training included guided meditation and instruction of content, including psychoeducation, group discussion, and dyadic exercises. These exercises aimed to teach participants about stress, emotion, burnout, and empathy, and to help them practice emotional-awareness skills and a mindfulness and stress-reduction practice. Each training took 7 hours total, including 1 hour for lunch and two 15-minute breaks.

The first day of training introduced a general framework of understanding emotion, emotional skills, psychoeducation focusing on burnout, and mindfulness practices. A 2-week break occurred between the first and second training sessions to allow JJOs to practice their new skills at work and at home. The second training day encouraged them to reflect on their experiences of integrating these emotional skills and mindfulness practices during their 2 weeks off. The second day also included professional empathy, micro-expression

training, and reconnection to meaning in their work. Role-play of case study vignettes were used to develop professional empathy toward youth and coworkers. The mindfulness practice of intention was developed to help JJOs reconnect to their motivation for the work.

Results from data collected through focus groups, observations, and online evaluations are presented and indicate that participants were satisfied with the training.

### Analysis

Field notes collected during the training demonstrated the basic feasibility of covering the materials in the given number of hours and maintaining the interest and attention of JJOs. JJOs readily volunteered to respond to questions from the facilitators, no participants left early or chose not to participate, and all participants contributed verbally to the discussions at some point during the training. In addition, JJO investment in the training was demonstrated by their willingness to disclose personal information to their coworkers and facilitators about their struggles with stress at work and at home.

### Post-Training Phase Two Focus Groups

Presented below are data from the semi-structured focus groups that were held at the end of the second day of training. In these groups, JJOs were asked which skills worked, how to improve the training, and their overall reflections. The responses are divided below to illustrate the responses to these questions. An additional section presents participants' satisfaction with the training.

**Skills That Worked.** Overall, JJOs reported that the empathy training using vignettes, the mindfulness skills including breathing exercises, and the motivation exercises were especially helpful. The excerpts included below represent key points made by the JJOs.

We can use the whole class in the everyday life; you can use the face training with coworkers and kids. (JJO#7)

Using vignettes to practice empathy skills resonated with the JJOs, especially when they focused on skills to use in communication with coworkers. Note: Some words are added in brackets for clarification.

[I will] Try to have more empathy to not blame the other person and use more 'I' statements. (JJO#5)

JJOs stated that the "many moments of awareness" mindfulness exercises were skills they felt they could use to respond to everyday stress anytime:

The meditation can be really effective and useful when not wanting to flash [get angry] at work, if I can remember to use it. (JJO#6)

I know I did the breathing at work the other day... my adrenaline was up, and I went in the other room and just took a couple of deep breaths and closed my eyes and tried to forget the smell in the bathroom, ... I took a couple of deep breaths and tried to like relax. So I did that. And that helped a lot actually. So I think that's maybe what I'm getting from it. (JJO#4)

Using the data collected from phase two about the JJOs' motivation was a useful way to encourage them to consider their motivation and make the meditation practice of setting the intention feel authentic.

**How to Improve the Training.** There were three primary suggestions for improving the training. These were (a) have the training days closer together; (b) provide more materials to review between trainings and after the training; and (c) include management, so they can be part of the conversation about emotion, stress, and empathy. The excerpts included below illustrate these points more explicitly.

The scheduling was tough to organize with the department; the classes were 2 weeks apart, and this made it difficult for the participants to remember the lessons from day one to day two of training.

I would have liked to take the class back to back, Monday and Tuesday, because my memory is shot. Having the two weeks makes it hard to remember. I remember the trigger stuff but forgot other things. (JJO#3)

There was a strong desire to have take-away materials to help support and remind JJOs of key skills they could practice from what they had learned. They are accustomed to using printed materials to guide their jobs, and this could be included in their everyday procedures.

I want a worksheet to take with me, for people at a desk everyday for 8 hours it is much easier. When you are dealing with being at this place for so long, you need to do this more than one week, one week can be affected by anything. (JJO#6)

Almost every JJO who gave feedback stated they believed this training, or some version of it, should be shared with other staff and especially with management. This reflects a desire for building better communication and helping resolve some of the cynicism toward the work.

I think that would benefit the management ... being able to, you know, learn those skills. I think that would help them. (JJO#4)

It can be for everybody, this training is for everybody. Everybody can benefit from this. Okay, management might benefit a little more when it comes to like the empathy part, you know? They might be able—they might need that a little more than us, but it's beneficial to both parties. (JJO#6)

### ***Satisfaction, Positive Affirmation of Training.***

The overall reaction from staff was positive; they reported telling coworkers about the training and suggesting they take it. The training was felt to be appropriate for JJOs' needs, useful in reconnecting them to a sense of meaning and finding motivation, and helpful in preventing severe loss of meaning and frustration among highly distressed coworkers.

I've already told people, 'This is good.' You've got all of this stuff you're stressing over, and you go in there, and they teach you how to deal with all of the stress. You can actually use those techniques at work. And at home. (JJO#3)

The JJOs felt the training was designed for them and their needs, and this made them feel connected to the content.

This one [class] was like pretty good ... I think it's because it's more for us. Usually all the other trainings is for like—it's job related, and you have to do this, and you have to learn CPR. You have to do defensive tactics, but it's not about us. (JJO#2)

They also confirmed that reconnecting to their initial motivation was beneficial to their connection to the work and observed that this kind of training could prevent more serious stress-related "blow-outs" among staff.

So maybe even if this class was offered like once a year, just even like what you guys have done already, just reminding us of all the extra stresses we have and what we should be doing for ourselves. Do you know what I mean? Just getting that refresher once a year. I think for the first time of you guys doing this, I think it was really good. (JJO#8)

We were joking about it before the class. We said if more people had the training, we'd have less postal syndrome, coming in and shooting up the place and stuff like that to the next extreme level because that's at a point where they don't know any of us and they don't have nothing else to do. They're at the end of a line. You know, with the skills we have here, you know, you learn to cope with things. You don't go that far. You deal with it better. We focus on the options. (JJO#4)

***Online Evaluation of Training.*** Nine out of 16 participants (56%) completed the online evaluation. The instructions for the statements in Table 5, below, were: Please rate the extent to which you agree with the statements below about learning objectives: Strongly Agree, Agree, Neither Agree or Disagree, Disagree, or Strongly Disagree.

This table highlights the relevance of the course materials, especially the content related to mindfulness and empathy for the JJOs in their work and home life. The high likelihood of recommending the course to others further suggests the relevance of these topics across the juvenile justice setting. In addition, many JJOs suggested that this training would especially benefit management.



Table 5. *Online Evaluation of Training*

Online Evaluation Questions	Agree and Strongly Agree	Neither Agree or Disagree
I understand more about emotions and stress as a result of the training.	88%	22%
I can use the information and practices about professional empathy in my everyday work and home life.	100%	
I can use the information and practices about self-compassion in my everyday work and home life.	100%	
I learned meditation relaxation skills I can use in my everyday work and home life in the second day of training.	100%	
The online Micro Expression Training Tool will be useful in my everyday work and home life.	88%	22%
The training helped me reconnect to my motivation for doing the work I do.	55%	45%
I would recommend this training to other staff.	100%	

### Additional Field Notes and Observations

Observations from reviewing the daylong transcripts and notes on the delivery of the training provided some additional insights regarding JJOs' needs and how the training met them.

Significantly, coworker issues were frequently reported as a source of stress in the baseline data collection and in discussions during the training. During the training, many instances of group support were observed. Specifically, one JJO shared a deep sadness and concern about a female youth who had committed suicide on the unit. The JJO was visibly upset in discussing this story. He explained that he had had a good relationship with the youth and had seen her that morning; he had been stressed out and did not feel he was really focused on what she was saying. This story made the entire training room quiet. But before the trainer could reflect on the story and intervene, another JJO said she also experiences stress and encouraged the JJO to try to always be present for the youth. Two more JJOs then chimed in and said they shared this same concern of worrying they are not always present for all the needs

of the youth and could miss something important. There were multiple instances of JJOs using the training space to share important and difficult issues and to be responsive to coworkers. These spontaneous expressions of coworker support were an unanticipated benefit of the training.

### Recommendations For Future Training

Until a more robust training and evaluation are completed, the feedback received on the current training will be used to develop a curriculum that improves on its training and delivery. The content that had the greatest reported benefit was the role-play empathy training, facial expression training, and the guided mindfulness meditation practices. In addition, the delivery of the training through a live collaborative setting provided an important, and currently missing, arena for peer support. The areas for improvement focus on the delivery of the training: scheduling the training days closer together, providing more follow-up materials, and engaging management to participate in the training.

Strengthening empathy in the professional setting involves building on the inherent capacities of individuals and on skills that can be cultivated. These skills include (a) emotion regulation, (b) mindfulness exercises, (c) psychoeducation, and (d) communication skills. These skills are essential for establishing relationships that lead to ongoing engagement with the emotional needs of others. Human service care providers such as JJOs can cultivate skills of empathy to help them shift their focus from sympathetic distress to genuine interest in other people.

The next step of this training would incorporate the feedback about the delivery and content and develop a randomized controlled trial to evaluate the impact of this training across multiple juvenile justice centers. Research questions for future development and evaluation include: (a) Does an empathy training impact feelings of motivation and meaning in work? (b) Will the training impact youths' experience of care? (c) Will the training

improve well-being and reduce stress? (d) Will the training impact communication among JJO colleagues and management?

Future evaluation of this training will include more robust self-report survey data and feedback from the youth about relational skills of JJOs before and after the training. Delivering and evaluating this training will produce standardized materials that can serve as a blueprint for juvenile justice centers nationally. A preliminary needs assessment to determine the basic stressors and coping skills of the officers will help to adapt the training to meet the specific needs within each juvenile justice center.

### Limitations

There are several limitations of the current case study. These include (a) the limited sample size, (b) the lack of a control or comparison group for the pilot training, and (c) the need for more rigorous evaluation tools, such as a larger group, to provide sufficient power for surveys and evaluation of JJOs by incarcerated youth.

At the outset, it is also important to note several features related to the study setting itself that shaped some of the data collection procedures and participation. Managers of the facility provided shift coverage and pay to encourage JJOs to participate in the focus groups, as well as in the trainings. The participation in the focus groups was voluntary, raising the possibility that participating workers may have differed in important ways relative to non-participants.

Importantly, the initial study plan included further survey assessments, follow-up trainings for more JJO staff and managers, and additional qualitative data collection at the camp and the juvenile hall and detention center to increase the overall sample size. One month after the end of the first training session, in December of 2012, there was an unfortunate and unanticipated incident that resulted in legal proceedings against the chief of the San Mateo Juvenile Probation Department, who was fired that same month.

Although the study contact was the deputy chief, the entire department was reorganized and the deputy was transferred. I was unable to continue any form of research in the detention center or camp setting. I was unable to develop a new contact in the detention center despite many attempts. These events were an unanticipated obstacle to further study follow-up, which would have included comparison surveys with JJOs who did not participate in the training group and which, ultimately, affected the total number of study participants.

There were also sources of participant nonresponse due to a technical issue involved in using online formats. The JJOs could not use online survey formats during work hours due to a firewall preventing Internet access during work shifts. Therefore, JJOs had to complete any online survey work at home, where they were less likely to use free time to follow up. An experience sample method survey was also developed, and provided for participants to track and monitor everyday experience of emotion, sleep, stress, and behavior between days one and two of the training. Unfortunately, the program is run through an online host, and the firewall prevented the JJOs from tracking their daily data. I was not aware of the firewall when designing the online components of the training; as a result, they were not filled out and were not included in the study. The experience sample method has been used in research to collect reliable information on everyday emotional and stress experiences for richer data.

### Conclusion

This article describes the development, delivery, and evaluation of a pilot training designed to address the unmet interpersonal needs of the understudied population of JJOs. The focus groups, online evaluations, and field notes suggest that the adaptation of Cultivating Emotional Balance achieved basic feasibility for this population.

This population of JJOs needs an opportunity for debriefing and social support, which was partially met during the course of the training. The training was able to engage workers with content that felt relevant to their work and personal lives. In the free text space one JJO wrote:

Trainings are usually boring and I find myself not following along; this class was extremely different in that I wanted to learn what was being taught and will use it again in the workplace and my personal life.

In summary, the responses from the online evaluations suggest that the participants learned from and found the skills beneficial but were more equivocal about whether the training allowed them to connect with their core motivation and meaning. Meaning in work is an important new area for further research inquiry (Cartwright & Holmes, 2006; Chalfosky, 2003). The future

directions for this work include the replication of this training intervention at different juvenile detention sites, with a larger sample size and experimental design to truly evaluate any improvement in self-reported experiences of stress and coping. JJOs are an important, understudied population because of the opportunity they have to serve as role models and provide youth with meaningful rehabilitation. In order to provide this level of connection and engagement, JJOs must be provided with training skills to manage stress and emotional exhaustion as pilot tested in this small study.

### About the Author

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# APPENDIX

## TRAINING MATERIALS

### Curriculum, Day One

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#### 9:00-9:45am – Why Are We Here? Why Are You Here?

(Chris) Welcome and Scope

Short Guided Meditation Practice: Land in Body (Chris)

Group Introductions: (Eve) Self Intro and Group Introductions

Group Discussion: What Are You Here for and What Do You Want to Take Away? Setting an Intention (Eve)

Instruction on Agreements for Confidentiality (Chris and Eve)

#### 9:45-10:00am – Opening Meditations

Guided Meditation Practice: Setting an Anchor Down into the Body (Chris)

#### 10:00-11:00am – Group Instruction: Definition and Function of Emotion and Stress

Instruction on Characteristics, Definitions, and Functions, Physiology of Emotion-

Group Activity Example of Emotion Words and Faces

Psycho Education on Chronic Stress, Burnout, Empathy, Threat, and Challenge Fight-Flight-Freeze (Eve)

Psycho Education on Research of Positive Psychology–Happiness, Motivation in Work and Meaningful Life (Eve)

Group Discussion

#### 11:00-11:15am – Break

#### 11:15-Noon – Instruction of Mindfulness and Practice of Meditation

Instruction on Short Moments of Awareness Many Times (Chris)

Group Discussion on Aspiration to Help - Benefit of Helping Others, Motivation for This Work, Meaning of Positive Experiences, and Importance of Mindful Awareness (Chris)

Guided Meditation Practice Felt Experience of Emotion (Body Scan) (Chris)

#### Noon-12:30pm – Emotion Regulation

Group Instruction Regulation: Decreasing Regrettable Emotional Episodes, Increasing Choice and Meta-Cognition (Eve)

#### 12:30-1:30pm – Lunch

#### 1:30-1:45pm – Guided Meditation Practice of Full-Body Awareness (Chris)

#### 1:45-2:00pm – Working With Emotion Episodes

Group Activity: Mapping the Timeline of Emotion (Eve)

#### 2:00-3:00pm – Building Emotion Awareness

Dyad Exercise: Learning the Facial Expression/Memory of Anger and Fear (Eve)

#### 3:00-3:15pm – Break

### **3:15-4:00pm – Emotion Awareness/Regulation**

Group Discussion of Dyad Exercise of Emotion Experience (Eve)

Instruction on Resonance-Mirror-Empathy, Setting Boundaries - How To Regulate Emotion in Order to Deal With Emotion Better, Meta-Cognition vs. Cognitive Fusion

### **4:00-4:45pm – Cultivating the Wakefulness Necessary to Observe and Regulate Emotion**

Short Guided Meditation Practice (Chris)

Instruction on How to Use Short Moments of Awareness Many Times, Choosing an Anchor for Meditation

Guided Meditation Practice: Close with a Dedication – Compassion and Loving Kindness

## **Curriculum, Day Two**

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### **9:00-9:15am – Morning Practice**

Guided Meditation Practice (Chris)

### **9:15-9:45am – Professional Empathy and Boundaries**

Instruction and Group Discussion on Depersonalization, Working with Vulnerable Populations, Emotions of Disgust

Instruction on Professional Empathy Affective/Emotional Empathy and Cognitive Perspective

### **9:45-10:30am – Reflection on Practice and Managing Emotion with RAIN**

Group Discussion of Last Two Weeks of Integration of Mindfulness

Instruction on How to Recognize, Allow, Investigate, and Non-Identify Emotional Needs and Wants, Empathy, and Acceptance (Chris)

### **10:30-10:45am – Survey**

### **10:45-11:00am – Break**

### **11:00-11:45am – Practice Empathy Skills**

Dyadic Activity Using Vignettes to Practice Empathy with Coworker/Youth,

Group Discussion on Cooperation Versus Cynicism, and Perspective Taking with Youth and Coworkers

### **11:45am-12:30pm – METT**

Group Activity: Using Online Micro Expression Training Tool to Learn Facial Expression of Emotion

### **12:30-1:30pm – Lunch**

### **1:30-2pm – Meditation**

Guided Meditation: Practice of Body Scan (Chris)

### **2:00-2:30pm – Metta/Self Compassion**

Instruction in Practicing Compassion for Self and for Others (Chris)

### **2:30-2:45pm – Break**

### **2:45-3:30pm – Reflections - Evaluation**

Group Discussion: What Are the Emotions, Stress and Motivations That Are Emerging?

Plans for Future Practice? What Worked? What Didn't?



### **3:30-4:00pm – Future Practices**

Instruction: Working With Reactivity, Difficult Emotions and Rumination, Didactic Instruction, Formal Versus Informal Practice (at Home versus in Class) (Chris)

Group Discussion: Reconnect to Aspirations/Motivations for This Work and Meaning in Work (Eve)

Short Guided Meditation Practice, Dedication of Merit to Self, Self-Compassion (Chris)

# Does Permissive Parenting Relate to Levels of Delinquency? An Examination of Family Management Practices in Low-Income Black American Families

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*Keywords: delinquency, parents*

## Abstract

This study examined the longitudinal trajectories of the delinquency of adolescents (11 to 18 years old) in relation to permissive parenting regarding *family rules, curfews, and parental monitoring*. The longitudinal analysis identified how these relationships develop and change through adolescence. Using data from the Mobile Youth Survey, a 14-year longitudinal study of high-poverty, primarily Black American youths living in Alabama ( $N = 4,800$ ), the relationship between delinquency and permissive parenting was analyzed using linear growth models. Findings showed that males with minimal family rules, minimal curfew expectations, and minimal parental monitoring were

at the greatest risk for delinquency. For females, no significant relationship between parental monitoring and delinquency was found over time. In addition, while holding curfew and family rules constant, adolescents with lower levels of parental monitoring exhibited higher levels of delinquency at age 11, which decreased slightly throughout adolescence.

## Introduction

Originally described by Baumrind (1967), permissive parenting is an indulgent parenting style in which parents make few demands on their adolescents, have low expectations for adolescent's self-control, yet allow adolescents considerable

self-regulation. Even though parenting styles may transform over time (Schroeder & Mowen, 2012), permissive parenting has been associated with poor academic achievement (Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Huey, Saylor, & Rinn, 2013; Shumow, Vandell, & Posner, 1998), decreased psychological health and quality of life (Milevsky, Schlechter, Netter, & Keehn, 2007; Niaraki & Rahimi, 2013), and juvenile delinquency (Chan & Koo, 2011; Hoeve, Dubas, Gerris, van der Laan, & Smeenk, 2011). Permissive parenting provides little structure and often places youths at risk for poor psychosocial outcomes and increases adolescents' propensity to engage in delinquent acts. Empirical literature points toward the long-lasting effects of delinquency, which is of particular concern for those living in impoverished conditions. Multiple studies have shown that delinquency is associated with adult criminality (Cernkovich, Lanctot, & Giordano, 2008; Dilalla & Gottesman, 1989; Huesmann, Eron, & Dubow, 2002; Juon, Doherty, & Ensminger, 2006; le Blanc, 1992).

While measures of parenting style have been developed (see Darling & Steinberg, 1993), there has been little research examining family management practices that may be defined as permissive. Furthermore, at least one study of parenting strategies found that permissive parenting style may not be as harmful as originally thought (Bolkan, Sano, De Costa, Acock, & Day, 2010). The current study examines the confluence of permissiveness and family management practices on delinquency. Delinquency is of specific interest given research that indicates 1 in 3 Black American men and 1 in 18 Black American women will go to prison in their lifetime, compared to 1 in 9 of all men and 1 in 56 of all women (Bonczar, 2003). Because a greater than average proportion of Black American adolescents live in poverty (U.S. Department of Health and Human Services, 2012), delinquency is both an issue of race and poverty. We hypothesize that fewer family rules, absence of family curfews, and lower levels of parental monitoring are associated with greater

delinquency in a sample of Black American adolescents living in highly impoverished neighborhoods.

## Background

Family management practices include the practices parents use to socialize adolescents to comply with social norms and to enforce that compliance. Research has shown that as adolescents get older, family management practices such as parental monitoring decrease as parents apply fewer restraints on adolescents' behavior (Wang, Dishion, Stormshak, & Willett, 2011) and adolescents are increasingly exposed to influences outside the family. This decrease in family management practices is problematic because fewer and weaker family management practices are associated with adolescent delinquency (Harris-McKoy & Cui, 2013; Patterson & Stouthamer-Loeber, 1984). Permissive parenting is also associated with delinquency (Chan & Koo, 2011; Hoeve et al., 2011); however more research is needed to examine the confluence of these two constructs.

Reiss (1951) first proposed that delinquency resulted because of the failure of personal and social control; that individuals are unable or unwilling to abide by established rules. Furthermore, the absence of socialization agents, such as family members, may lead to the development of antisocial behavior among youths (Hirschi, 1969). Moreover, while individuals may learn patterns of behavior from socialization agents (Choi, Harachi, Gillmore, & Catalano, 2011), the existence of rules that establish guidelines for adolescent behavior (Zimmerman & Rosenthal, 1974) also helps to prevent delinquency (Hawkins & Weis, 1985; Mason, Kosterman, Hawkins, Haggerty, & Spoth, 2003). Therefore, when caregivers provide and enforce structure in the form of family rules, the behavior of adolescents may be positively impacted, resulting in an increase in pro-social behavior and a decrease in delinquency.

Curfews are among the rules that help adolescents avoid delinquency (McDowall, Loftin, & Wiersema, 2000; Sasse, 1999). Curfews may be imposed by parents or they may be legislated by communities. The implications of curfew laws on communities and juveniles have been debated (Adams, 2007). However, curfew laws have been shown to reduce both violent and property crimes (Kline, 2012). Despite the research on curfew laws, there has been little examination of curfews imposed by parents. By setting curfews, parents ensure that they are able to keep track of their adolescents by asking questions that often come along with conversations about curfews (e.g., what time will you be home? and where are you going?) or by enforcing a time that their adolescents will be home, allowing them to monitor their adolescents. Similarly, parental monitoring is one way that family rules are imposed (Stattin & Kerr, 2000). Like other family rules that establish guidelines for adolescent behavior (Zimmerman & Rosenthal, 1974), curfews may influence adolescent behaviors, including reducing delinquent behaviors. By observing and monitoring youths, parents are able to set boundaries and may prevent or restrict substance use (Barnes, Hoffman, Welte, Farrell, & Dintcheff, 2006; Steinberg, Fletcher, & Darling, 1994) and association with delinquent peers (Church, Tomek, Bolland, Hooper, Jagers, & Bolland, 2012), for example.

Parental monitoring is a set of interrelated parenting behaviors, specifically concerning the knowledge of the child's whereabouts and activities (Dishion & McMahon, 1998). Parental monitoring is one aspect of enforcing family rules. Higher levels of parental monitoring are associated with lower levels of delinquent behavior (Fosco, Stormshak, Dishion, & Winter, 2012; Hoeve et al., 2009). Compared to stricter parents, permissive parents tend to monitor adolescents less, resulting in adolescents who are more likely to engage in risky behaviors (Borawski, Levers-Landis, Lovegreen, & Trapl, 2003). Therefore, when parents are cognizant of their child's activities, youths are less likely to exhibit problem behaviors.

Males and females have differing trajectories of delinquent and criminal behavior, with males tending to exhibit greater delinquency as they enter adolescence and young adulthood, and females exhibiting fewer problem behaviors (Miller, Malone, & Dodge, 2010). One explanation for these opposing trajectories is the socialization of gender differences, a process often undertaken by parents. Males, especially those in Black American households, are often viewed as being more mature than females (Hooper, 2013). The increased delinquency of males may be related to the tendency for males to receive less parental monitoring than females (Barnes et al., 2006). Therefore, permissive parenting in regard to their male adolescents may account for the differences in males' and females' rates of delinquency.

The current study was designed to analyze the relationship between permissive parenting and the delinquency of adolescents throughout adolescence. The longitudinal investigation provides increased insight into this relationship, as it can detail the relationship between individuals as opposed to larger samples, as would be typical of a cross-sectional investigation. A single research question was posed: To what extent does permissive parenting affect delinquency throughout adolescence?

## Method

### Sample and Procedures

The Mobile Youth Survey (MYS) is a 14-year longitudinal study of adolescents living in low-income neighborhoods in the Alabama port city of Mobile and the neighboring town of Prichard (Bolland, 2004; Bolland et al., 2013). Data were collected annually from adolescents between the ages 9.75 and 19.25 between 1998 and 2011, resulting in over 36,000 data points from more than 12,000 adolescents. In 1998, the immediate response rate was approximately 50%; however, the eventual response rate of those identified as eligible participants in 1998 was between 72% and 78% (Bolland, 2004).

The MYS was a multiple cohort design in which new cohorts were added annually. Adolescents were encouraged to participate on a yearly basis, provided the age requirement was met. Due to the size of the study itself, a brief description of the MYS methodology is reported here. Full details of the methodological and sampling procedures are available elsewhere (Bolland, 2004; Bolland et al., 2013). Within the identified target neighborhoods (i.e., low-income) in Mobile and Prichard, the MYS research team identified homes using census data where adolescents meeting the age requirements (between 9.75 and 19.25) resided. After identification, investigators attempted contact with both adolescents and/or their adult caregivers. The purpose of the survey was presented and adolescents were invited to participate. The MYS was administered in a group setting, where an MYS researcher read items aloud to groups of 10 to 20 adolescents. Answers were marked by participants in an answer booklet. While group administrations were typical, those having difficulty with the survey worked one-on-one or one-on-two with an intern to complete the survey. The survey administration procedure took approximately 1 hour and each participant received \$10 prior to 2005 and \$15 in subsequent years for his or her time (Bolland, 2004).

Although every attempt was made to follow the adolescents across all ages of data, many adolescents participated in the MYS only briefly (i.e., 1 or 2 data points). Because we did not want our parameter estimates biased by these adolescents, their data were excluded from the analysis. In addition, data points at the ages of 9, 10, and 19 were excluded from the analysis due to the low frequency of these ages. The final sample used for this study contained 4,800 adolescents with 3 or more data points in the MYS between the ages of 11 and 18. Among the 4,800 participants, 2,497 were male (51.2%) and 2,383 were female (48.8%). The sample consisted predominantly of Black American youths ( $n = 4,725$ , 96.8%), with few Hispanic youths, ( $n = 144$ , 3.0%) and even fewer White American youths ( $n = 11$ , 0.2%). As this

sample was targeted to low-income adolescents, a majority qualified to receive free or reduced-cost lunches at some point during their participation in the study.

In an analysis of school system records, demographic characteristics and functional characteristics of MYS participants (e.g., school violations and resulting disciplinary actions and achievement test scores) were not found to be significantly different from those in the population that did not participate (Bolland, 2012). Thus, the use of both active and passive sampling strategies resulted in a representative sample of adolescents living in the targeted low-income neighborhoods.

### Measures

**Delinquency.** Adolescent delinquency was measured by 19 self-report items, which targeted engagement in risky or delinquent behaviors. A composite measure was generated using self-report measures of the following behaviors: carrying a gun, carrying a knife, pulling a gun or knife on someone, cutting, stabbing, or shooting someone, as well as arrest history and gang involvement.

First, participants were asked four questions regarding whether they had ever carried a gun, carried a knife, pulled a gun or knife on someone, or cut, stabbed, or shot someone, (yes = 1, no = 0). Each of these four items also was followed up with questions regarding recency of the behaviors. For both the gun and knife *carrying* questions, four additional items were asked regarding engagement in the previous year, the last 90 days, the last 30 days, and the last 7 days. Only two additional recency items were asked regarding gun or knife *pulling* and cutting, stabbing, or shooting someone, specifically the past 90 days and the past 30 days. These recency items were measured using the trichotomous scale options “no,” “yes, just once,” or “yes, more than once.”

Two items assessed participants' arrest history, whether they had ever been arrested (yes = 1, no = 0), and whether they had been arrested within

the last year (no = 0; yes, just once = 1; yes, more than once = 2). Participants' gang involvement was measured using three items: whether they had ever been involved in a gang; whether they were currently involved in a gang; and whether they hang out with gang members; each measured dichotomously (yes = 1, no = 0).

The final summative scale had a range between 0 and 28 points, with higher values indicating greater delinquency. As this scale was created for use in this study, a principle components analysis was conducted to determine the viability of creating a single summative score. A single summative scale accounted for 51% of the variance in the items, with an eigenvalue of 3.08, with all other eigenvalues less than 1. The single summative scale then appears to be valid for use, with a high reliability of the items, Cronbach's alpha  $\alpha = .80$ .

**Permissive parenting.** Permissive parenting, in this study, is operationalized through three adolescent self-report scales: *family rules*, *curfew*, and *parental monitoring*.

**Family rules.** Family rules were measured using three self-report items on the MYS. Participants responded "yes" (coded as 1) or "no" (coded as 0) to the following items: "Does your family have rules about when you do your homework?," "Does your family have rules about dating?," and "Does your family have rules about fighting and hitting people?" A principle components analysis was conducted on the three items to determine the validity of utilizing a single summative scale. A single summative scale, ranging from 0 to 3, accounted for 55% of the total variance in the items with an eigenvalue = 1.64. All other eigenvalues were below 1. On this scale, higher scores indicated more perceived family rules by the adolescent. Although a single summative scale appears valid, the internal reliability was relatively low ( $\alpha = .59$ ), yet still acceptable (Robinson, Shaver, & Wrightsman, 1991).

**Curfew.** Curfew was measured using a scale adapted from Lamborn, Mounts, Steinberg, & Dornbusch (1991) and includes four dichotomous

self-report items (e.g., "Are you allowed to stay out as late as you want on school nights?" and "Are you allowed to stay out after dark on school nights?") that were reverse scored and summed to create a scale ranging from 0 to 4, in which higher scores indicated more perceived presence of a curfew by the adolescent. Internal reliability for the adapted scale was acceptable ( $\alpha = .71$ ).

**Parental monitoring.** Parental monitoring was measured using a six-item self-report scale adapted from Lamborn et al. (1991). Participants responded to two dichotomous items (e.g., "Does your mother or father know who you hang out with?"), three trichotomous items, (e.g., "How much does your mother or father really know about how you spend your time?"), and one item with four response options (e.g., "How much does your mother or father really know about where you go at night?"). To create a summative scale with the items, each of the responses was recorded to comparable values; that is, all response codings ranged between 0 and 2 for each item. This resulted in a summative scale that ranged between 0 and 12, with higher numbers indicating greater perception of parental monitoring by the adolescent. Internal reliability for the adapted scale was good ( $\alpha = .74$ ).

**Age and gender.** Age was measured as age in years at the time of each survey administration, as reported by the participant. The ages in this study ranged between 11 and 18, with age centered at age 11 for ease of interpretation of parameter estimates in the model. Gender was self-reported and coded dichotomously (males = 0, females = 1).

### Data Analysis

A multivariate analysis of variance (MANOVA) was conducted to generate the means for the three permissive parenting variables (family rules, curfew, and parental monitoring) and to determine whether significant gender differences exist. The longitudinal analysis modeled the longitudinal trajectories of delinquency of the adolescent in relation to permissive parenting.



Growth models are particularly robust to missing data points (Singer and Willett, 2003); however, those adolescents with only one or two data points would contribute solely to the group parameter estimates, as individual parameter estimates would not be estimated for them. Therefore, these adolescents, who comprised more than 50% of the full sample in the MYS, were removed prior to analysis. In this way, the parameter estimates are based on those with 3 or more data points. Imputation methods were not implemented for the final data set ( $n = 4,800$ ), as the complexity of the MYS data base would require significant time to impute missing observations.

For this study, two linear growth models were estimated. The first model estimated was the unconditional growth model, with delinquency as the dependent variable. The unconditional growth model, using Singer and Willett's (2003) notation, is as follows:

$$\text{Level 1: } Y_{ij} = \pi_{0i} + \pi_{1i} * \text{age} + \epsilon_{ij}$$

$$\text{Level 2: } \pi_{0i} = \gamma_{00} + \zeta_{0i} \\ \pi_{1i} = \gamma_{10} + \zeta_{1i}$$

Second, a conditional growth model was estimated with delinquency as the dependent variable. To create the conditional growth model, the three permissive parenting variables (family rules, curfew, and parental monitoring) were added to the Level 1 portion of the model as time-varying predictors. The model was too complex to allow for estimation with all three permissive parenting variables as random effects. In our attempts at estimation, it was noted that only a single random effect could be added to the intercept and slope. Not enough computational memory was available to estimate the additional random effects. Parameter estimates of the model did not significantly change based on which variable was chosen to be included as the additional random effect. Therefore, parental monitoring was chosen as the additional random effect, as it had the largest range. Gender was added to each of the Level 2 models to test for any moderating effects

of gender. Both the unconditional and conditional growth models were estimated using Proc Mixed in SAS 9.3 with Full Information Maximum Likelihood and an unstructured covariance matrix.

## Results

Descriptive measures for the three permissive parenting variables were computed. The overall mean for the perception of family rules was 2.83 ( $SD = 1.83$ ) on a range from 0 to 5; the overall mean for the perception of curfews was 2.17 ( $SD = 1.37$ ) on a range from 0 to 4; and the overall mean for the perception of parental monitoring was 8.34 ( $SD = 2.92$ ) on a range from 0 to 12. The mean values represent moderate to high values on each of the scales. Significant gender differences were found within the three variables using a MANOVA, Wilks' Lambda = .95,  $F(2,21121) = 372.53$ ,  $p < .001$ . Females reported significantly higher levels of perceived family rules than males,  $F(2,21123) = 736.49$ ,  $p < .001$ . The female average was 3.17 ( $SD = 1.80$ ), while the male average was 2.50 ( $SD = 1.80$ ). Females also reported significantly higher perceived levels of curfew than males,  $F(2,21123) = 276.56$ ,  $p < .001$ . The female average was 2.32 ( $SD = 1.34$ ), while the male average was significantly lower at 2.02 ( $SD = 1.38$ ). Finally, females reported significantly higher levels of perceived parental monitoring than males,  $F(2,21123) = 659.63$ ,  $p < .001$ . The females average almost one point higher ( $M = 9.32$ ,  $SD = 2.67$ ) than the males ( $M = 8.34$ ,  $SD = 2.92$ ) in the sample. Males perceived significantly more permissive parenting in the sample, as all of their sample means were lower.

The unconditional growth model of delinquency was estimated first, with parameter estimates displayed in Table 1. Delinquency was found to be significantly greater than 0 at age 11,  $\gamma = 3.62$ ,  $t(4871) = 39.52$ ,  $p < .001$ . Delinquency significantly increased as the adolescent aged,  $\gamma = 0.35$ ,  $t(4789) = 16.11$ ,  $p < .001$ . Delinquency was relatively low at age 11 (3.62 out of 28 points), yet significantly increased every year between the ages of 11 and 18.

Table 1. Estimated Model Parameters for Permissive Parenting and Gender on Delinquency

Model Parameter	Unconditional Growth (Model 1)		Reduced Conditional (Model 2)	
	Estimate	SE	Estimate	SE
<b>Fixed Effects</b>				
Intercept	3.622**	0.092	13.328**	0.367
Gender	--	--	-3.600**	0.351
FR	--	--	-0.376	0.031
PM	--	--	-0.588**	0.036
Gender*PM	--	--	0.209**	0.369
Curfew	--	--	-0.940**	0.065
Gender*Curfew	--	--	0.178**	0.601
AgeC	0.350**	0.022	-0.278**	0.071
AgeC*PM	--	--	0.301**	0.008
AgeC*Curfew	--	--	0.078**	0.014
AgeC*Gender*FR	--	--	0.025**	0.010
AgeC*Gender*PM	--	--	-0.020**	0.005
<b>Random Effects</b>				
Var (Intercept, $\zeta_{0i}$ )	13.307**	0.800	50.294**	3.406
Var (AgeC, $\zeta_{1i}$ )	0.472**	0.043	0.357**	0.038
Var (PM, $\zeta_{2i}$ )	--	--	0.246**	0.025
Residual ( $\epsilon_{ij}$ )	23.558	0.303	21.053**	0.297
<b>Fit statistics</b>				
Deviance	127,437.9		120,691.7	
AIC	127,449.9		120,729.7	
BIC	127,488.9		120,853.0	

Note. FR = Family Rules; PM = Parental Monitoring; AgeC = Centered Age; AIC = Akaike Information Criterion; BIC = Bayesian Information Criterion; \* $p < .05$ . \*\* $p < .01$ .

Next, the permissive parenting variables (family rules, curfew, and parental monitoring) were added to the unconditional growth model along with gender. The full model was estimated, with non-significant parameter estimates removed through backwards elimination. The remaining significant effects are displayed in Table 1.

First, the effects of delinquency at age 11, the intercept, will be discussed. Males with no level of perceived family rules, no level of perceived curfew, and no level of perceived parental monitoring reported the highest levels of delinquency, which were significantly greater than 0 at age 11,  $\gamma = 13.33$ ,  $t(4861) = 36.28$ ,  $p < .001$ . Females

at these same levels, however, were significantly different from their male counterparts,  $\gamma = -3.60$ ,  $t(5789) = -9.46$ ,  $p < .001$ . Females with no level of perceived family rules, no level of perceived curfew, and no level of perceived parental monitoring reported significantly lower levels of delinquency than their male counterparts at age 11.

At age 11, a significant negative relationship was found between perceived family rules and reported delinquency at age 11,  $\gamma = -0.38$ ,  $t(5789) = -12.29$ ,  $p < .001$ . Adolescents reporting greater perceived family rules also reported significantly lower levels of delinquency. This effect was consistent for both genders.

There was a significant negative relationship for males between perceived curfew and reported delinquency at age 11,  $\gamma = -0.94$ ,  $t(5789) = -14.53$ ,  $p < .001$ , with females showing a significantly weaker negative relationship at this age than males,  $\gamma = 0.18$ ,  $t(5789) = 2.94$ ,  $p = .003$ . Adolescents reporting higher levels of perceived curfews reported significantly lower levels of delinquency at age 11, with reported delinquency lessening more for males with the same perceived curfews as females.

A significant negative relationship was also found between perceived parental monitoring and reported delinquency at age 11 for males,  $\gamma = -0.59$ ,  $t(4032) = -16.32$ ,  $p < .001$ , with this negative relationship significantly weaker for females,  $\gamma = 0.21$ ,  $t(5789) = 5.67$ ,  $p < .001$ . Adolescents reporting greater levels of perceived parental monitoring reported lower levels of delinquency at age 11, with males reporting significantly lower levels of delinquency than females at the same level of perceived parental monitoring.

Next, the change in delinquency over time will be discussed. Adolescents with no level of perceived family rules, no level of perceived curfew, and no level of perceived parental monitoring report a decrease in reported delinquency over time,  $\gamma = -2.78$ ,  $t(5789) = 3.92$ ,  $p < .001$ . These adolescents also reported the highest levels of delinquency at age 11, therefore a decrease over

time is not surprising. There were no differential gender effects for this relationship.

The negative relationship between family rules and delinquency was consistent over time for males, but a significant negative relationship over time was found for females,  $\gamma = 0.03$ ,  $t(5789) = 2.47$ ,  $p < .001$ . The level of perceived family rules decreased delinquency for males, but this effect was stable between the ages of 11 to 18. However, although females with higher levels of perceived family rules had lower levels of delinquency at age 11, females with higher levels of perceived family rules also exhibited less of a decrease in delinquency over time. That is, the level of perceived family rules had a greater negative impact on delinquency for females at age 18 than for females aged 11 to 17; however, males' perceived family rules did not have a differential impact on delinquency as they aged.

The presence of perceived curfews also had a significant negative effect on delinquency over time,  $\gamma = 0.08$ ,  $t(5789) = 5.65$ ,  $p < .001$ . Those with greater levels of perceived curfews had lower levels of delinquency at age 11, yet also exhibited less of a decrease in delinquency over time. Higher levels of perceived curfews were less impactful in reducing delinquency as the adolescents aged. This effect was identical for both genders.

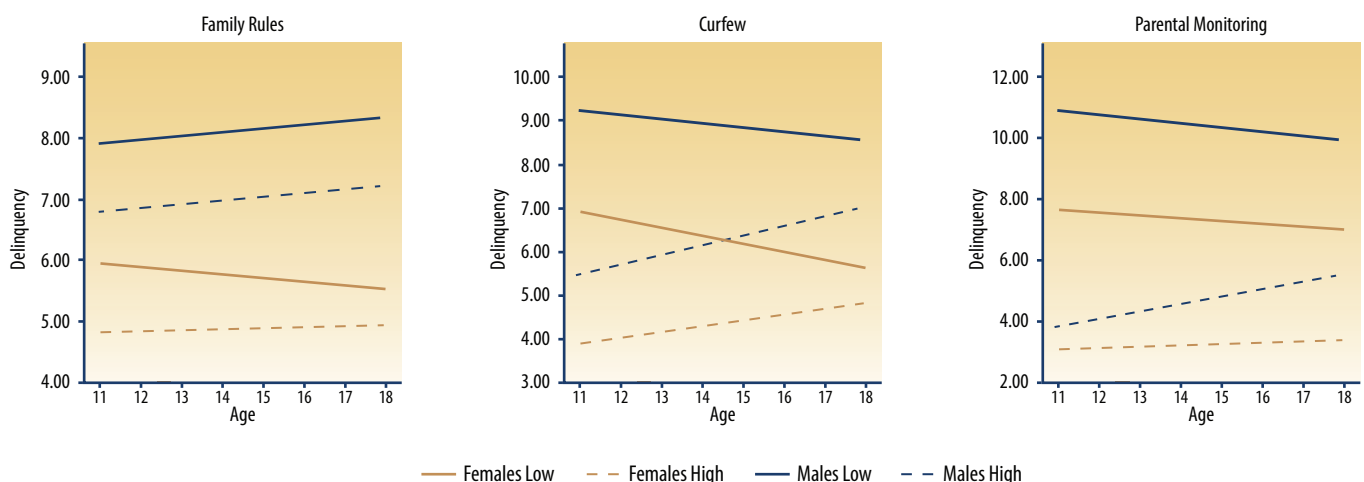
Higher levels of perceived parental monitoring had a significant negative effect on delinquency

over time,  $\gamma = 0.30$ ,  $t(5789) = 3.87$ ,  $p < .001$ , with females exhibiting a significantly weaker negative relationship over time than males,  $\gamma = -0.02$ ,  $t(5789) = -3.74$ ,  $p < .001$ . Males with higher levels of perceived parental monitoring had lower levels of delinquency at age 11, yet decreased in their delinquency at a slower rate than males with lower levels of perceived parental monitoring. Females reported this same trend; however, the rate of decrease was significantly greater. That is, females with greater levels of reported family rules had a greater decrease in delinquency over time than males with an identical level of reported family rules.

The plots of the trajectories of delinquency over time in relation to the three permissive parenting variables are displayed in Figure 1 to better visualize the relationships between the variables. The trajectories plot changes in delinquency as the independent variable of interest is altered, while holding the other two parental monitoring variables constant at their average value.

While holding curfews and parental monitoring constant, overall, adolescents with fewer perceived family rules had higher levels of delinquency throughout adolescence. For males, higher levels of perceived family rules had higher lower levels of delinquency, with an increase throughout adolescence for males with both high and low levels of perceived family rules. Females

Figure 1. Trajectories of delinquency based on permissive parenting and gender.



with higher levels of perceived family rules also had lower levels of delinquency than those with lower levels of perceived family rules. However, females with lower perceived family rules had a decrease in delinquency over time, yet females with higher family rules were stable in their levels of delinquency across adolescence. Females with high perceived family rules had the lowest levels of delinquency throughout.

While holding family rules and parental monitoring constant, overall, adolescents with lower levels of perceived curfews reported higher levels of delinquency. Males with higher levels of perceived curfews had lower levels of reported delinquency than those with lower levels of perceived curfews, yet reported an increase in delinquency as they aged. Males with lower levels of perceived curfews, however, exhibited a decrease in delinquency over time, yet they remain higher in their delinquency levels throughout adolescence. Females with higher levels of perceived curfews reported lower levels of delinquency, yet exhibit an increase in delinquency over time. Although females with higher levels of perceived curfews reported higher levels of delinquency at age 11, delinquency levels decreased throughout adolescence. Females with high levels of perceived curfew had the lowest levels of delinquency throughout.

While holding curfew and family rules constant, overall, adolescents with lower levels of perceived parental monitoring had higher levels of delinquency. Males with higher levels of perceived parental monitoring report lower levels of delinquency, yet report an increase in delinquency over time. Although their levels of delinquency were higher throughout adolescence, males with low levels of perceived parental monitoring reported a decrease in delinquency over time. Females with higher levels of perceived parental monitoring had lower levels of delinquency throughout adolescence at a fairly stable level throughout as compared to females with lower perceived parental monitoring. The lower perceived parental monitoring resulted in higher

delinquency levels, yet there was a decrease in delinquency as the adolescents aged. Females with high levels of perceived parental monitoring had the lowest levels of delinquency throughout adolescence.

## Discussion

The purpose of the current study was to examine the confluence of permissiveness and family management practices on delinquency. As hypothesized, permissive parenting was associated with greater delinquency. For the current study, permissive parenting was operationalized by examining family rules, curfew, and parental monitoring. Adolescents with fewer perceived family rules, few perceived family curfews, and less perceived parental monitoring reported higher levels of delinquency, which supports current literature (see Harris-McKoy & Cui, 2013).

Males who had no curfew, no family rules, and no parental monitoring reported the highest levels of delinquency. Females with no curfew, no family rules, and no parental monitoring reported significantly lower levels of delinquency than their male counterparts, yet still engaged in relatively high levels of delinquency. Prior research has explored boundary setting for at-risk youths. When allowed to go unmonitored and unfettered, youths tend to engage in more delinquent activity. Youths who have boundaries tend to perform better in school (Smokowski, Bacallao, Cotter, & Evans, 2015), engage well interpersonally (Hashimoto, Onuoha, Isaka, & Higuchi, 2011; Piko & Balazs, 2012), and report better relationships with their parents (Smetana, Crean, & Campione-Barr, 2005) than those with fewer boundaries. The current study supports those findings.

Interestingly, when examining family rules, a significant age effect was found with only the females in the sample. For both the male and the female samples, the increase in family rules was associated with a significant decrease in delinquency, as one would expect. However, no significant relationship between the number of

family rules and delinquency across adolescence was evidenced in the male sample. Females with more family rules, on the other hand, experienced the same decline in delinquency as females with fewer family rules. Though the presence of family rules seemed to lead to declines in delinquent behaviors, the number of rules may not be the important factor. Rather, it seems the presence of rules themselves decreases delinquency among females. Adolescents with fewer family rules had higher levels of delinquency throughout adolescence. Not surprisingly, males exhibited significantly higher levels of delinquency than females, but both groups of males (those with fewer and those with more family rules) increased delinquent behavior throughout adolescence at the same rate.

Delinquency significantly decreased over time for females with fewer rules, and those with more rules had significantly lower delinquency that remained fairly stable throughout adolescence. It appears that family rules hold stronger influence over females than males in mitigating delinquent behavior. However, prior research has also shown that parents respond differently to sons and daughters (Biblarz & Stacey, 2010), and this may also hold true for the enforcement of family rules, a construct not examined in the current study. Still, given the typical pattern of delinquency by gender, and what is known of parenting styles, these results are not unexpected.

When curfew was examined for both males and females, curfews did have a significant effect over time. However, when examining males and females by level of curfew (i.e., more stringent and less stringent curfews), adolescents with more stringent curfews tended to engage in more delinquent behavior as they aged. The literature suggests juvenile curfew laws have become a pervasive and popular strategy for controlling juvenile crime. Public opinion is solidly behind the use of curfews, and the primary basis for this support is the notion that curfews make streets safer. However, Adams (2003) conducted a systematic review of curfew policies and did not find support

for the argument that curfews prevent crime and victimization. Juvenile crime and victimization are most likely to remain unchanged after implementation of curfew laws. The current study supports Adams' findings.

Parental monitoring has been shown to be a significant contributor to youth delinquency and a lack of monitoring has been shown to lead to delinquency (Baumrind, 2005; Wright & Wright, 1994). The current study found that adolescents with lower levels of parental monitoring had higher levels of delinquency. The current study supports prior research in that a significant negative relationship was found between parental monitoring and delinquency. Males seem to have responded more negatively to greater parental monitoring than females, in the sense that males exhibited a significant increase in delinquency over time, while females exhibited fairly stable levels of delinquency over time. Both males and females with low levels of parental monitoring significantly decreased their delinquency over time, yet remained significantly higher in their levels of delinquency throughout adolescence than those with higher levels of parental monitoring. Males seemed to respond to high levels of parental monitoring by becoming more delinquent when compared to females. In some Black American families, young males are seen as being more mature or competent than their female counterparts (Hooper, 2013). Parents who excessively monitor young males may violate cultural expectations and unintentionally stimulate delinquent behavior (Hooper, 2013).

### Limitations and Strengths of the Study

While adolescent perceptions are arguably important and influential over behavior, it must be noted that the measures used in this study are limited to self-reports from adolescents. More specifically, study constructs (parental monitoring, family rules, curfew, and delinquency) are derived from responses from the adolescents' perspectives. Parental reports of these same items may not be consistent with the child's

perspective or with that of other family members. Nonetheless, and consistent with other researchers' recommendations, understanding the child's or adolescent's view of parental monitoring and its relation to their behaviors is an important area of study.

The current analysis relies on correlational relationships, therefore it does not establish causation. Thus we cannot conclude that permissive parenting causes changes in delinquency. Similarly, we cannot conclude that levels of delinquency influence parental decisions about curfews and questioning and monitoring their adolescent's activities, friends, and whereabouts. We can conclude, however, that levels of delinquency are directly and significantly related to these factors of perceived permissive parenting.

This study is both limited and strengthened by the characteristics of the sample. The MYS sample consists of mainly Black American adolescents who live in similar highly impoverished conditions, all within one metropolitan statistical area. Because of the homogeneity of the sample, it is difficult to draw conclusions that can then be generalized beyond Black American adolescents who are living in impoverished conditions. However, because of the homogeneity of this sample, we are essentially removing the effects of race and socioeconomic status, which may contribute to changes in delinquency.

An additional limitation worth noting is that of our measure of delinquency. Our composite measure of delinquency weights each of the delinquency measures equally. That is, each delinquent act is treated the same way in the analysis. For example, shooting someone is not weighted differently from carrying a gun. Furthermore, we acknowledge that many of these acts of delinquency are not independent of each other. For example, someone who has shot someone else most likely also indicated that he or she pulled the gun *and* carried it as well. We hypothesized that adolescents engaging in more severe delinquent behaviors will have higher delinquency

scores. Finally, the measures of permissive parenting used in this study are not complete. That is, there may be other factors influencing parenting or permissive parenting that might relate to delinquency.

While there are several limitations, a strength of the current study is the longitudinal nature of the research design. The longitudinal design, coupled with the large sample size, allows for more complex inferences to be made regarding the associations among the study variables. Although we cannot establish true causality, we can examine the correlational patterns over time.

### Implications

The current study examined family management practices and perceived permissive parenting in a low-income sample of Black American youths. The primary outcome of the current study, delinquency, is of particular interest because previous research indicates 1 in 3 Black American men and 1 in 18 Black American women will go to prison in their lifetime, compared with 1 in 9 of all men and 1 in 56 of all women in the general population (Bonczar, 2003). Family functioning and accompanying family practices may be one of the most significant forces shaping youths. The current study provides support for the notion that family practices, while intended to be helpful, can sometimes lead to an increase in delinquency, which is opposite of the intent.

While the purpose of the current study was to examine permissiveness and its association with delinquent behavior, surprisingly, the results point toward the harmful effects of authoritarian parenting. Parents who exert too much control over their adolescents, known as authoritarian parents, have adolescents who engage in delinquent activities similar to those of permissive parents (Thompson, Hollis, & Richards, 2003). When authoritarian parenting behavior manifests itself in an excessive number of rules and potential rule enforcement, delinquent behavior may exist or increase. That is, excessive rules and rule

enforcement often results in a paradoxical outcome: delinquent behavior among adolescents (Baumrind, 2005). Yet, in this study, the presence of more family rules, stricter curfews, and greater parental monitoring were all associated with decreased delinquency. Thus, the nuances and differences between authoritarian and permissive parenting is most certainly an area for further examination. Future research should focus on determining which parenting practices are associated with each parenting style and to what degree.

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# Employers' Perceptions on the Disclosure of Juvenile Records

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**Keywords:** *disclosure, employer, juvenile record, juvenile confidentiality, adjudication*

## Abstract

This exploratory study surveyed a national convenience sample of 475 employers to examine whether and when juvenile offenders should disclose their records when seeking employment. The majority of employers recommended disclosure during the job interview. Key factors that employers considered important in this decision were the nature of the offense and the nature of their business. Qualitative analysis of employers' comments to an open-ended question revealed six distinctive dispositions toward the hiring of adjudicated youth, ranging from youth advocacy to zero tolerance. Implications for practice and future research are also discussed.

## Introduction

The original intent of a separate juvenile system was to rehabilitate, rather than criminalize, young offenders (Greenwood & Turner, 2011; Henning, 2004; Lawrence, 1998). The juvenile justice system operates on the prevailing principle that young

offenders should be treated differently from adult criminals because of their vulnerability and different degree of culpability (Belair, 1997; Bonnie, Johnson, Chemers, & Schuck, 2013; Farrington, Loeber, & Howell, 2012; Lawrence, 1998). A key feature of this differential treatment is the discreet handling of young offenders' records (Shah, Fine, & Gullen, 2014). Juvenile court hearings and records are generally closed to the public to safeguard young offenders from the stigma that can obstruct their prospects for developing a career and achieving success in the future (Jacobs, 2013).

The increasing rates of juvenile crime in the 1980s and 1990s eroded public trust in the rehabilitation potential of young offenders, which, in turn, put pressure on state legislatures to support strategies that treated violent juvenile offenders as adults (Belair, 1997; Farrington et al., 2012; Henning, 2004; Mendel, 2011). The number of juvenile court delinquency caseloads quadrupled between 1960 and 1997 (Hockenberry & Puzanchera, 2014). Furthermore, the juvenile arrest rate increased by 24% between 1985 and 1996 (Snyder, 2012).

During this period, the juvenile court shifted away from its original intent of rehabilitation and toward the criminalization of juvenile offenders (Bonnie et al., 2013; Shah et al., 2014).

Although juvenile arrest rates have declined since the mid-1990s and the standard practice in most states is to protect juvenile records from public inspection, all states have exceptions (Joint Legislative Task Force, 2012; Shah et al., 2014). Some states prohibit public access to juvenile records, some give complete public access to juvenile records, and some states allow certain types of juvenile records to be publicly available (see Shah et al., 2014). The most common exception endorsed by many states is to make juvenile records accessible to school officials, court personnel, law enforcement officers, probation officers, victims, and parents or legal guardians (Shah et al., 2014).

States have increasingly made juvenile records public, which has undermined juvenile confidentiality (Altschuler & Brash, 2004; Shah et al., 2014) and jeopardized the opportunities for these youth to make a successful transition to a prosocial life (Bonnie et al., 2013). Both formal and informal employment practices and licensing determinations routinely breach juvenile confidentiality (Belair, 1997; Gowen, Thurau, & Wood, 2011; Henning, 2004). For example, Henning (2004) observed widespread illegal dissemination of her clients' records at both local and national levels, resulting in school expulsions and evictions from public housing.

### Sealing and Expunging Records

In many states, juvenile records remain open to public inquiry unless the young offenders request the court to seal or expunge them (expungement is the physical destruction of a record). Although sealing the records closes them to the public, sealed records can still be accessible to certain court or law enforcement personnel (Shah et al., 2014). Former juvenile offenders who wish to have their records sealed

or expunged can file a petition in court. Laws governing whether and when juvenile records can be sealed vary considerably by state and the decision is contingent on a number of factors, including the seriousness of the offense, length of time since conviction, existence of pending criminal matters, and age of the petitioner (Joint Legislative Task Force, 2012; Shah et al., 2014).

Expungement provides a fresh start to former offenders by creating a legal framework that allows them to deny having a juvenile record. If the court approves a petition and seals a record, the court then treats that adjudication as if it never occurred (Joint Legislative Task Force, 2012). Juvenile offenders can legally inform prospective employers, landlords, and licensing agencies that no records on the conduct in question exist (Joint Legislative Task Force, 2012). Youth with sealed records can deny the existence of past convictions unless they seek employment with law enforcement agencies, organizations responsible for children and vulnerable adults, school districts, or seaports (Shah et al., 2014).

### Desistance From Crime

A history of involvement in the juvenile justice system negatively impacts a young person's long-term employment prospects by imposing a stigma that threatens identity transformation, reduces the likelihood of employment, depresses wages, and increases the probability of job turnover, all of which in turn increase the likelihood of recidivism (Altschuler & Brash, 2004; Apel & Sweeten, 2010; Uggen & Wakefield, 2008).

Although juvenile arrest rates and juvenile court delinquency cases have decreased for all offense categories (i.e., property, person, drugs, and public order) since the mid-1990s (Hockenberry & Puzanchera, 2014), the rate of recidivism has remained stable (Mendel, 2011). Education, stable employment, marriage, and other prosocial identity transformations are strong correlates of desistance, the underlying process that causes offenders to stop committing crimes (Laub

& Boonstoppel, 2012; Laub & Sampson, 2001; Sampson, Laub, & Wimer, 2006).

Employment opportunities are an essential component of helping juvenile offenders to integrate into a community, develop a sustained prosocial identity, and decrease the likelihood of recidivism (Haslewood-Pócsik, Brown, & Spencer, 2008). Given that juvenile confidentiality is neither automatic nor absolute and varies considerably by state, juvenile offenders and those working to support their rehabilitation face a dilemma in deciding whether, when, and how to disclose the juvenile record. Choosing not to disclose a record that employers might never learn about could improve the chances for employment, but failure to disclose could threaten the process of identity transformation because one's honesty is being questioned and the risk of being exposed is lingering.

### This Study

Most studies of offender rehabilitation focus on the demand side (i.e., the offenders) rather than the supply side (i.e., the employers; Haslewood-Pócsik et al., 2008). Few studies have examined employers' perceptions of the disclosure of juvenile records. In this exploratory study, we surveyed a national convenience sample of employers in the United States who have hired or supervised entry-level employees in order to examine three questions:

- (1) Should juvenile offenders disclose their records when applying for jobs?
- (2) If juvenile offenders were to disclose, when should they do so?
- (3) What factors do employers prioritize when hiring juvenile offenders?

We hypothesized that most employers are not sure of what to suggest regarding disclosure because no common code of practice exists among employers on this topic, and variations in state laws regarding juvenile confidentiality complicate this issue. If employers were to recommend disclosure, we hypothesized that they would suggest juveniles do

so during the job interview. Informed by Haslewood-Pócsik et al. (2008), we expected employers to be concerned with the severity of the offense as this is an indicator of risk when hiring juvenile offenders. Finally, we hypothesized that employers who had worked with juvenile offenders in the past would be more willing to employ them again.

## Method

### Participants

Participants were 475 employers from the United States who had hired or supervised entry-level employees. Thirty percent of participants had hired someone with a criminal history. Approximately 50% of respondents were business owners, 42% were supervisors, and 8% were human resource personnel. Fifty-one percent of respondents were males, 46% were females, and 3% did not disclose their gender. Respondents represented a broad range of industries including finance (18%), manufacturing (15%), retail (14%), nonprofit (9%), health care (8%), and hospitality (8%). See Table 1 for a complete list. Businesses and companies varied in size from more than 500 employees (11%) to under 25 (60%). Ten percent of participants indicated that they would "very likely" hire someone with a criminal history, 48% reported "likely," 25% said that they are "not likely" to hire someone with a criminal record even if that individual qualified for the job, and 16% were "not sure" of what they would do in that situation.

### Survey Instrument

We created a survey specifically for this study to assess employers' attitudes about the disclosure of juvenile records from prospective employees. To ensure content validity, a 15-item survey was administered to a panel of six doctoral students who were taking a graduate-level survey design course. Panel members learned about the purpose of this study, the research questions, and the disclosure of juvenile records. Panel members then independently examined the appropriateness of survey items. They also identified problematic items that did not reflect the domain of

Table 1. *Characteristics of Survey Respondents (n = 475)*

Description	n (%)	“Definitely disclose”
<b>Gender</b>		
Male	240 (51%)	162 (55%)
Female	219 (46%)	122 (42%)
Other	16 (3%)	10 (3%)
<b>Position in business</b>		
Owner	238 (50%)	160 (54%)
Supervisor	202 (42%)	114 (39%)
HR	35 (8%)	20 (7%)
<b>Business sectors represented</b>		
Finance	89 (19%)	59 (20%)
Manufacture & Construction	74 (16%)	49 (17%)
Retail	66 (14%)	31 (11%)
Engineering & Electronics	54 (11%)	36 (12%)
Nonprofit	43 (9%)	24 (8%)
Health care	36 (8%)	24 (8%)
Hospitality	37 (8%)	26 (9%)
Clerical	30 (6%)	25 (9%)
Arts	15 (3%)	5 (2%)
All others <sup>a</sup>	28 (6%)	13 (5%)
<b>Size of company/business</b>		
0 – 3	140 (29%)	94 (32%)
4 – 10	89 (19%)	57 (19%)
11 – 25	46 (10%)	30 (10%)
26 – 100	67 (14%)	37 (13%)
101 – 500	59 (12%)	35 (12%)
Over 500	74 (16%)	41 (14%)
<b>Education required for entry-level jobs</b>		
Non-high school graduate	71 (16%)	42 (14%)
GED	65 (14%)	33 (11%)
High school diploma	191 (40%)	128 (44%)
Associate	29 (6%)	17 (6%)
Bachelor	55 (12%)	34 (12%)
Masters & Ph.D.	17 (3%)	13 (4%)
Equivalent years of experience	18 (4%)	13 (4%)
Others	29 (6%)	14 (5%)

Note. <sup>a</sup>“All others” include legal, daycare, auto, agriculture, and janitorial. Percentages of “definitely disclose” were calculated within the total number of participants who favored disclosure. For example, of the 240 male participants, 162 of them said, “definitely disclose,” which is 68% of male participants (162/240) and 55% of all those who answered “definitely disclose” (162/294). We reported the latter number.

interest (i.e., disclosure). We revised the survey after panel members provided their feedback on the survey instrument, then we pilot tested the revised survey to 34 employers in a mid-size city in the Pacific Northwest. Feedback from the pilot test group was used to revise troublesome items; the pilot test group and their responses were not included in the analysis reported here. The final instrument comprised 13 items and two sections: (a) *About You and Your Business* (six items) and (b) *About Disclosure* (seven items). See Table 2 for the complete survey.

Table 2. *Survey Used to Solicit Employers’ Perspectives on Disclosure for This Study*

Items
<b>A. About You and Your Business</b>
1. What industry do you work in?
2. The number of employees at your worksite is approximately . . .
3. What is the entry-level wage at your worksite?
4. What is the minimum level of education/experience required for entry-level work in your company/business?
5. What is your position relative to entry-level employees? If you selected other, what is your job title?
6. What is your gender?
<b>B. About Disclosure</b>
7. Have you hired anyone with a criminal history?
8. Would you hire applicants who have been involved in the juvenile justice system (assuming that they are qualified for the job)?
9. How important are the following factors in your decision to hire young adults who have been involved in the juvenile justice system?
a. A second chance to those who have turned their lives around
b. Your company’s policy
c. The type of position available
d. The type of crime that was committed
e. Liability issues for your business/company
10. Should youth disclose their juvenile records when applying for a job?
11. If they were to disclose their records, when should they do so?
12. Please rate your level of agreement to the following statements about a youth’s disclosure of involvement in the juvenile justice system:
a. Honesty is always the best policy.
b. I would terminate the individual if I find out later.
c. My business requires termination if the youth lied on the application.
d. One’s job performance is more important than what s/he did in the past.
e. There is too much risk involved in hiring someone who had a juvenile record.
13. Is there anything else you would like to add about a youth’s disclosure of juvenile record when seeking employment?

## Procedures

We contracted Zoomerang, a third-party online survey company, to deploy the survey to employers in the United States who had hired or supervised entry-level employees. Based on Zoomerang’s estimated population size of 100,000 employers who subscribed to its network, Dillman’s (2000) recommendation of a sample size between 384 (for a 5% sampling error) and 1,067 (for a 3% sampling error) was used to determine the target sample size of 500 for this study. Zoomerang screened subscribers’ e-mail addresses and job titles to ensure that participants represented the targeted population. Participants also had to affirm that they had hired or supervised entry-level employees before they were able to complete the survey. Five days after Zoomerang launched the survey to employers in its network, 526 employers responded; 51 skipped the disclosure question, which was the most important question in this study, so we deleted those cases from our sample, yielding the final sample of 475 participants. No confidential information was collected. Zoomerang delivered survey results to the researchers after we paid the contracted fee.

## Data Analysis Plan

We used descriptive statistics to analyze responses to the first 12 questions and an eclectic combination of qualitative coding methods (Saldaña, 2013) to analyze responses to the open-ended question.

**Quantitative data.** We used SPSS 22 for Mac (IBM, 2013) to examine descriptive survey data. We ran frequency counts and used chi-square tests of independence to investigate relations between employers’ attitudes on disclosure and factors such as gender, business sector, and company size.

**Qualitative data.** Twenty-seven percent ( $n = 127$ ) of respondents answered the open-ended question, “Is there anything else you would like to add about a youth’s disclosure

of juvenile record when seeking employment?” Responses ranged from a five-word sentence to a 179-word paragraph. The first author cut-and-pasted the open-ended comments to an Excel spreadsheet for maintenance and qualitative coding. Each participant’s response had its own cell in Excel and was treated as an independent unit or block of data to code (Saldaña, 2013). The first author independently conducted the First Cycle coding using an eclectic combination of descriptive, structure, holistic, in vivo, and value coding (Saldaña, 2013) to name, identify, and index key and repeating topics that were related to our three research questions. This inventory of codes served as the basis for the Second Cycle coding.

Next, the first author used pattern coding (Saldaña, 2013) to categorize the codes that emerged during the First Cycle coding into more meaningful and parsimonious constructs, focusing on employers’ attitudes on disclosure and the hiring of formerly adjudicated youth. Table 3 shows a simple text chart that contains two examples of the open-ended comments from employers, the codes that emerged during the

Table 3. A Sample Display of Our Coding Process

Employer’s Open-Ended Comments	First Cycle codes	Researchers’ Interpretation	Second Cycle code
“Although many people disagree with me, I feel that youth are still malleable, flexible, and in a position to learn from role models. My experience working in Corrections has led me to believe that it is better to give youth a chance than to watch them succumb to self-fulfilling prophecies and then try to rehabilitate them as adults when their personalities and habits are more concrete and inflexible.”	youth are malleable	These employers emphasized the importance of giving youth second chances to turn their lives around no matter what happened in the past and advocated for the rehabilitation of juvenile offenders.	The Advocates
	need role models		
need second chance			
can turn around			
“Everyone has made mistakes in the past, and if you don’t give those people a chance at an honest living they might end up living the life of a criminal.”	need second chance		
	prevent recidivism		



First Cycle coding, the researcher’s interpretation of the comments and codes, and the major theme that emerged in the Second Cycle coding.

The first author identified four major categories during the Second Cycle coding: the Advocate, the Risk Averse, the Zero Tolerance, and the Law Abiding. The first author then shared the coding process, the four categories that emerged, and their definitions with the second and third authors. Next, the second and third authors independently coded employers’ open-ended comments using the categories and definitions provided by the first author. Subsequently, all three coders met to assess whether the original four categories and definitions were sufficient to capture employers’ open-ended responses. Two additional categories emerged from this discussion—the Strategist and the Self-Assessor—as the original four categories were deemed to be limited. Five employers’ responses were not comprehensible, so we coded these as Not Applicable (e.g., “I work in criminal justice, I am biased”). We recoded the open-ended responses using the six categories and their definitions. Our inter-rater agreement, as calculated by taking the mean level of agreement across all pairs of reviewers (i.e., reviewers 1 and 2, 1 and 3, and 2 and 3), was 66.41%. We then met for the final time to discuss our areas of disagreement until we reached consensus. Table 4 displays the number of employers in each category and the representative quotes.

## Results

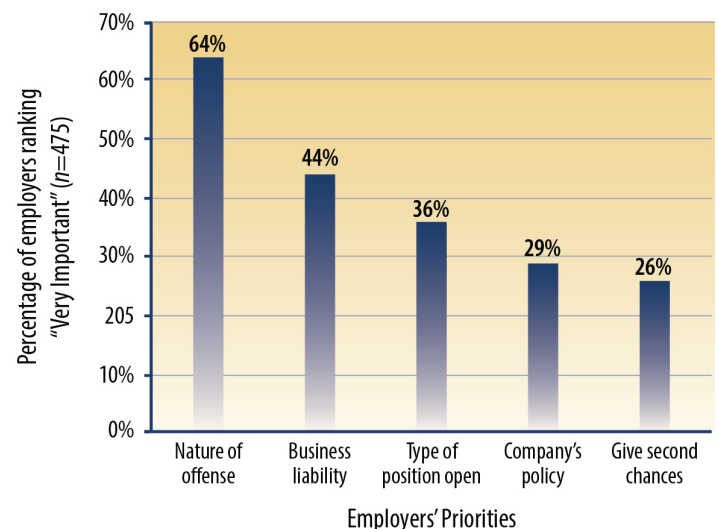
Employers who had hired adjudicated youth in the past were 12 times more willing to hire them again in the future,  $\chi^2(1, n = 397) = 63.20, p < .001$ . Employers considered all of the following factors important in their decision to hire formerly adjudicated youth: (a) nature of the offense, (b) business liability, (c) job position being applied, (d) giving youth a second chance, and (e) company’s policy. Figure 1 illustrates the percentages of employers who rated these factors as “Very important.” When asked for their level of agreement to certain issues regarding youth’s

Table 4. Qualitative Coding Results of Employers’ Attitudes on Disclosure and the Hiring of Adjudicated Youth (n = 127)

Categories	f	Representative Quotes
Advocate	16	“Everyone has made mistakes in the past, and if you don’t give those people a chance at an honest living they might end up living the life of a criminal.”
Self-Assessor	42	“I would want to know the reason and consider age at the time and whether s/he has changed. Circumstances must be considered, as well as a one-timer vs. a career criminal and those just caught in the system who should not even have a record.”
Strategist	25	“Honesty is the best policy. Hiring decisions would be made on the nature of the offense and the position.”
Risk Averse	25	“In my business I cannot afford to hire someone who has a past record due to that individual’s direct contact with the public. The liability issues are extremely high and would most likely jeopardize my insurance coverage.”
Zero Tolerance	5	“Unfortunately there are so many applicants that a black mark such as this would probably bar the youth from the interview.”
Law Abiding	9	“Juvenile records are sealed and that is for a reason. As an adult they are being given a second chance. I as a Supervisor would not want to know about a juvenile record.”
Not Applicable	5	“There is usually a 3 month probation period in most companies so if a youth hasn’t turned it around, it would show up then.”

Note. f = Frequency.

Figure 1. Percentages of respondents who rated “Very Important” on factors that influence their decisions to hire juvenile offenders.



disclosure of juvenile records (item 12 on the survey, see Table 2), 98% of respondents believed that honesty is always best. While 75% of employers indicated that their companies required termination for lying on a job application, only 54% said that they would terminate an employee if they learn about the juvenile record later. Meanwhile, 83% of respondents believed that one's current job performance is more important than his or her past conduct, and 35% of respondents agreed or strongly agreed that there was too much risk involved in hiring formerly adjudicated youth.

### Whether and When to Disclose

In response to whether young offenders should disclose when applying for a job, 62% of employers said "Definitely disclose," 11% said "No," and 27% were "Not sure." See Table 1 for the breakdown of those in favor of disclosure by gender, business sector, and size. As for when to disclose, 45% recommended disclosing "On the job application," 48% suggested "During the interview," 1% said to do so "After hired," and the remaining 5% said "Never disclose."

We ran chi-square analyses to evaluate the relationships between participants' attitudes toward disclosure and their (a) gender, (b) position in the business, (c) business sector, (d) business size, (e) past experience with hiring someone with a criminal record, (f) willingness to hire someone with a criminal record in the future, and (g) requirements for an entry-level position in the company. Disclosure was significantly related only to business size,  $\chi^2(1, n = 346) = 6.76, p < .05$ . Employers in businesses with fewer than 25 employees were 2.18 times more likely to recommend disclosure than employers in larger companies. Attitudes toward disclosure were independent of gender, position in business, business sector, past and future hiring decisions, and entry-level requirements.

### Dispositions Toward Disclosure and Hiring Juvenile Offenders

Six categories of employers emerged from the qualitative coding of the open-ended comments: Advocate, Self-Assessor, Zero Tolerance, Risk Averse, Strategist, and Law Abiding. The Advocates emphasized the importance of giving second chances to former young offenders to help them turn their lives around. One employer said, "I believe anyone can change if they want to and be judged by their current actions versus their past." These employers believed that youth are malleable and saw themselves in the position of contributing to the rehabilitation of adjudicated youth by hiring them.

The Self-Assessors expressed a strong desire for disclosure because they wanted to evaluate the circumstances and determine whether the youth deserved a second chance. These employers believed that youth should disclose and show evidence of contrition and rehabilitation. One employer said, "I'd be willing to hire an individual that was in the juvenile justice system if that individual truly learned from their mistakes and are looking to move their life forward."

Risk-Averse employers were most concerned about the severity of the crime, protecting their safety and that of their business and client. As one respondent said, "Much of the decision as to hiring youth who have been in the juvenile justice center would depend on the type of crime. I would not want my company to be exposed to violent criminals of any age." Another employer stated more directly, "I wouldn't want to subject myself or others to a possibly violent person or my business to a thief." For these employers, safety was their primary concern, not the rehabilitation of the young offenders.

The Strategists were most concerned with the fit between the job position and the nature of the offense. "It would be extremely important of what the juvenile was convicted of and what position he was applying for." These employers favored disclosure because they wanted to know the

type of offense in order to assess the applicants' fit with the business and job. In particular, they believed that disclosure was necessary when the offense was relevant to the job. As one employer explained, "I wouldn't want to put someone who has a history of stealing in charge of money."

Employers who were Law Abiding believed that juvenile confidentiality should be absolute and that disclosure should not be a factor in the hiring process. As one employer explains, "In California a youth's criminal record is confidential. Just as an employer cannot ask a female applicant if she is married and/or planning to start a family, an employer should not inquire as to whether an applicant has a juvenile arrest record."

Employers in the Zero Tolerance category strongly believed that anyone who had committed an offense was not deserving of employment opportunities. If the Advocates represent one end of the continuum of employers' opinions about hiring adjudicated youth, then Zero Tolerance employers are on the opposing end. One employer in this category asked rhetorically, "Why would I give special treatment to a criminal when there are so many non-criminals looking for work?" This employer's attitude toward adjudicated youth was reflective of this group of respondents.

## Discussion

We conducted this study to understand employers' perspectives about whether and when juvenile offenders should disclose their histories when seeking employment. We also wanted to know what employers care about when hiring adjudicated youth. While we expected to find most employers unsure of what to recommend due to the confidential nature of juvenile records, only a quarter of respondents indicated that they were "unsure." Very few employers were aware of or showed a regard for juvenile confidentiality laws. Three out of every five employers recommended disclosure, equating the act with honesty, a sign of contrition, and the youth's readiness for a new beginning. Some employers wanted to make sure that the crime was nonviolent and to assess the fit between the

job position and the youth's past conduct. Other employers preferred disclosure because they simply did not want to hire anyone with a juvenile record. As we predicted, most employers suggested disclosure to occur during the job interview so the youth could discuss what happened and how they had turned their lives around.

## Limitations

Results of this study should be interpreted in light of two key limitations: social desirability bias and the lack of survey questions on juvenile confidentiality. First, due to the socially sensitive nature of this topic, participants might have responded with choices that were socially acceptable or representative of what they should do rather than what they actually would do. Employers could still discriminate even if they reported a willingness to give former juvenile offenders a second chance. Second, we did not ask participants if they were aware of juvenile confidentiality laws in their state or where they were geographically located. Only nine of the respondents who wrote additional comments referenced legal mandates regarding juvenile confidentiality and only 5% ( $n = 24$ ) of participants remained firm on their suggestion to "Never disclose." Since we did not explicitly ask participants if they were aware of juvenile confidentiality laws in their states, we cannot determine if those who recommended disclosure knew that they cannot legally make that recommendation in certain circumstances.

## Employers' Concerns

Consistent with prior research (e.g., Haslewood-Pócsik et al., 2008), employers who had hired adjudicated youth in the past were more likely to hire them in the future, but many of them were still concerned about two things: (a) evidence of rehabilitation, and (b) type of offense.

**Evidence of rehabilitation.** Although stable employment could offer offenders an incentive to start anew, many employers were not willing to offer employment until they saw evidence of rehabilitation. Eight out of 10 employers

indicated that current job performance was more important than the past and were willing to disregard past records if there was clear evidence that the youth had turned or were trying to turn their lives around. Several employers used the term “one-timer” versus “career criminal” as one way to distinguish youth who had realized that the past was a mistake and were trying to move on from the ones who had not.

**Type of offense.** Consistent with findings of Haslewood-Pócsik et al. (2008) on employers’ perception of hiring adult criminals, respondents in this study were particularly concerned about the nature of the offenses. In particular, they distinguished between violent (e.g., sex offense, armed robbery) and nonviolent or status offenses (e.g., truancy, underage possession of alcohol or drugs). Chief among their concerns was the risk that hiring adjudicated youth might pose to the safety of their businesses and clients. Employers also considered the fit between the current position for which the youth were applying and their previous offenses. In their open-ended comments, employers suggested that sex offenders should not work with children or other vulnerable populations, and offenses related to stealing were considered incompatible with jobs that require the handling of money.

### Implications for Juvenile Offenders

Findings from this study suggest that there is a difference between a job and a job with a good fit. Young offenders should assess the fit between the job and working environment, and their skills and circumstances, to better articulate their qualifications to prospective employers. Since stable employment is important for rehabilitation and identity transformation, juvenile offenders need to understand the demand-side logic, as articulated by employers in this study, and show how they can be valuable assets to the company. It is important for youth to understand the nature of their offenses and the job position for which they are applying. Former juvenile offenders should be sensitive to employer concerns when applying for a position and address the concerns appropriately.

Whether, when, what, how, and how much to disclose is an important decision and young offenders should learn to weigh the risks and benefits of disclosure in three different scenarios: inadvertent disclosure, selective disclosure, and strategically timed disclosure (Goldberg, Killeen, & O’Day, 2005). Inadvertent disclosure could occur unexpectedly at anytime and is difficult to predict. Since juvenile confidentiality is not absolute, young offenders should be prepared to handle a “gotcha” moment when employers confront them about past records. Selective disclosure is what happens when youth decide to disclose partially what had occurred. Strategically timed disclosure is what happens when youth wait until after they have proved themselves on the job and have developed a good relationship with employers before fully disclosing past records. As part of their self-advocacy training, youth should have pre- and post-disclosure strategies in anticipation of potential reactions from employers under each of these three scenarios.

### Implications for Support Personnel

Findings from this study support the idea that many employers may not be aware of juvenile confidentiality laws. As such, support personnel (e.g., school personnel or youth case workers) working to help adjudicated youth reenter the workforce should be knowledgeable about juvenile confidentiality protections in their states and inform youth about these laws. Support personnel can also play an important part in helping youth navigate the disclosure decision-making process. They should discuss all facets surrounding the issue of disclosure with these youth. This instruction can occur in schools for young offenders with disabilities as they work with their transition support personnel. Young offenders without disabilities can receive targeted lessons provided in various reentry group counseling sessions. Support personnel can brainstorm and role-play various scenarios regarding whether, when, what, and how to disclose to potential employers (e.g., at an interview, on the job).

This study’s findings of the various types of employers’ attitudes on disclosure and the hiring

of adjudicated youth could be used to help youth understand that there are employers who are willing to support their success. Through instruction, adjudicated youth can learn that they still have an opportunity to reenter the workforce and can be provided with strategies to handle disclosure issues with future employers. In particular, these youth need professional support to identify a good fit with prospective jobs and how to navigate court responsibilities (e.g., making court dates, restitution) while on the job. These skills can be taught through focusing instruction on a youth's growth in self-advocacy and problem-solving skills so he or she can better assess the gains and losses associated with disclosure and nondisclosure.

### Implications for Future Research

Disclosure is currently a zero-sum guessing game. On the one hand, juvenile confidentiality should be protected but employers want to know who they are hiring. On the other, youth do not have to disclose, but the threat of being "caught" is real and can threaten their chance of starting over. State-specific statutes regarding juvenile confidentiality are not well-known and employers, adjudicated youth, and those who work to support these youth need better information on this topic in order to make informed decisions. There is currently no standard code of practice among employers regarding the disclosure of adjudicated youth when seeking jobs. The issue of disclosure warrants stronger recognition among researchers and policymakers in order to promote a safe and successful reentrance into society for adjudicated youth.

Research on disclosure in the mental health field can be useful to inform research on disclosure in juvenile rehabilitation. For example, Goldberg et al. (2005) presented three options for disclosure that employees with mental health can face on the job: inadvertent disclosure, selective disclosure, and strategically timed disclosure. There is currently no research on disclosure in juvenile rehabilitation that examines any option for disclosure. This issue warrants more attention from the research and rehabilitation communities. Finally, although we found that employers in

small companies prefer disclosure, it is not clear whether working for larger companies would be better for adjudicated youth than working for smaller businesses (e.g., individual/family owned). More research is needed to examine the ideal working environment for adjudicated youth.

### Conclusion

One of the key assumptions that we make in this study is that stable work, and the transformation of identity that comes from stable employment, helps to reduce recidivism. However, many employers want to see evidence of transformation before they consider hiring former offenders. There is still a need to inform employers about the laws governing juvenile confidentiality and the importance of employment in preventing recidivism.

One of the most unique findings emerging from this study is the various dispositions of employers on the hiring of adjudicated youth. Results from this study show that there are youth advocates among employers who are willing to give young people second chances if former juveniles own up to their mistakes and commit to turning their lives around. Providing adjudicated youth with employment training is a more nuanced approach to decision-making than simply telling them whether or not to disclose. Employers want to be convinced that these youth deserve a second chance, and why. Former juvenile offenders have the burden of proof as to why they deserve the job. More research that considers both supply and demand issues is needed to assess how youth can strategically time their disclosure to secure employment opportunities without undermining their integrity in the process.

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# Truancy Reduction and Prevention: The Impact of Provider Contact in Intervention Efficacy

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## Abstract

Truancy is a problem in a majority of schools and communities throughout the United States. The challenge truancy presents results in several multi-layered issues, ranging from withdrawal from school to loss of school funding. Students who are absent from school on a regular basis are at higher risk of not completing their secondary education, having fewer job opportunities as adults, earning lower wages, relying on welfare, and being incarcerated. Because multiple negative consequences result from truancy, current interventions and policies can increase our understanding of ways to reduce and prevent this problem. This study integrated secondary data analysis provided by a truancy prevention and reduction program currently being implemented in a rapidly growing metropolitan area in the state of Texas. The goal of the study was to identify whether the investigated intervention is effective in alleviating the effects of truancy on students at risk. Results show that increased time with a case manager does improve outcomes for participants.

## Introduction

Truancy is a serious problem for schools, families, and communities. Truancy is a status offense—that is, an offense only because it is committed

by a minor—and it often leads to other problems such as drug and alcohol use, sexual promiscuity, juvenile delinquency, and early school dropout (Hendricks, Sale, Evans, McKinley, & Carter, 2010; Zhang et al., 2010). Although student access to education and the amount of time students spend in the classroom is directly related to their level of educational success, truant students have fewer opportunities as a result of their absences (Gleich-Bope, 2014). As many as 75% of truant youth fail to graduate from high school compared to 3% of non-truant youth (Barry, Chaney, & Chaney, 2011).

As a result of poor attendance, schools often lose funding and fail to meet performance requirements mandated by the federal government (Maynard, McCrea, Pigott & Kelly, 2013). Other long-term negative consequences of truancy are higher rates of criminal activity and increased government spending for social services within communities (Maynard, et al., 2013; Lan & Lanthier, 2003). Statistics from the U.S. Department of Education show that truancy leads to early high school dropout, which translates into lowered earnings and increased risks for unemployment, welfare reliance, and incarceration (Lan & Lanthier, 2003; White, Fyfe, Campbell, & Goldkamp, 2001).



To address the negative effects of truancy, various prevention and reduction programs have been implemented throughout the United States. Many of the programs implemented are court-based systems that rely on the authority of the court as a means to implement change in a student's attendance behavior. However, this may create additional problems in that students miss school to attend court hearings, or are placed in juvenile detention centers and thus are unable to attend their primary school.

In addition to court-based programs, other types of prevention and reduction programs have been implemented to address and alleviate consequences of truancy: student and family-based programs, school-based programs, community-based programs, school and community-based programs, and law enforcement-based programs (Dembo & Gullledge, 2009; Sutphen, Ford, & Flaherty, 2010). Only a few studies have been conducted to measure the effectiveness of these programs aimed at preventing or reducing truancy (Maynard et al., 2013). These studies have demonstrated only short-term positive outcomes due to a lack of attention to addressing the underlying causes of truancy (Dembo & Gullledge, 2009; Sutphen et al., 2010).

### **Intervention Definitions and Impacts on Truancy**

There is minimal uniformity when defining truancy: states have their own definitions of truancy, including attendance requirements, which complicates the measurement of intervention efficacy (Sutphen et al., 2010). For example, the Texas Education Code (2011) mandates that children are required to attend school every day that instruction is provided. This includes students who are between 6 and 17 years of age. Students younger than 6 who have been enrolled in kindergarten or in a prekindergarten program, as well as students 18 or older who are enrolled in school, are required to attend school every day (Texas Education Code, 2011). A school is required to file a charge of "Failure to Attend School" or "Parents Contributing to Nonattendance" if a student has

unexcused absences for 10 or more days, including portions of whole days. Schools in Texas may also file a charge against students or parents if the student has unexcused absences for 3 or more days in a 4-week period (Texas Young Lawyers Association, 2012).

In many cases, students who are truant present a wide array of secondary problems that conflict with consistent school attendance. Such conflicts fall into four main categories: family, school, community/economics, and other student challenges (Hendricks et al., 2010; Sutphen et al., 2010; Lan & Lanthier, 2003). Family problems such as child maltreatment, a lack of guidance or parental supervision, a difficult parent-child relationship, family history such as parental drug or alcohol abuse or parental disabilities, a lack of parental awareness of school attendance laws, and parents' differing views about the importance of education can lead a child to truancy (Hendricks et al., 2010; Sutphen et al., 2010; Zhang et al., 2010). School characteristics can also influence or compound truancy. For example, a school's size; the administration's perceptions and attitudes; peer relationships; the school environment and culture; and school policy enforcement can all contribute to a child's decision to not attend school (Hendricks et al., 2010; Zhang et al., 2010; Lan & Lanthier, 2003).

Community and economic factors can negatively affect students' ability to attend school on a regular basis. These factors include low socioeconomic status of a neighborhood, lack of job availability for students, a large proportion of single-parent homes, a lack of affordable transportation or child care, and parents who have multiple jobs (Hendricks et al., 2010; Sutphen et al., 2010; Lan & Lanthier, 2003). A student may be unable to attend school regularly because he or she needs to be employed during school hours to help the family financially or to provide for his or her own children. Such economically challenged families face truancy citations when students are chronically tardy or absent. Individual student factors such as age, gender, ethnicity, social

development, learning disabilities, drug/alcohol use, misunderstanding of attendance laws, physical or emotional illness, lack of school-engaged friends, a lack of proficiency in English, and family needs can all influence a student's decisions to attend school regularly (Hendricks et al., 2010; Sutphen et al., 2010; Zhang et al., 2010; Lan & Lanthier, 2003).

Some agencies have considered these factors to create specific interventions to reduce truancy. For example, the Colorado Foundation for Families and Children identified several key elements necessary for an effective truancy program (Dembo & Gullledge, 2009). These family-friendly and innovative elements are: (a) parent/guardian involvement, (b) a continuum of services, (c) collaboration with community resources, (d) school administrative support and commitment, and (e) ongoing evaluation (Dembo & Gullledge, 2009). The Justice of the Peace, Precinct 3 (JP3) has attempted to integrate these elements into their truancy programming since 2007, when they first began. The case manager makes an effort to maintain communication with the student and parents, school personnel, and outside community resources the student is referred to. Ongoing evaluation of the student's progress is conducted throughout the life of the case.

### The JP3 Intervention

The JP3 intervention, in an effort to alleviate truancy in Travis County, Texas, implements a case management model that includes family participation, collaboration, evaluation, and school support. In 2010, the truancy prevention and reduction program was integrated into all of the justice of the peace courts within Travis County and included an innovative case management model, similar to that of the Colorado Foundation's design, for juveniles within the court-based system.

Traditionally, a case management model requires intensive contact from the specified service provider and includes multiple points of contact for

the staff member within a system of services for the client. In the JP3 intervention, the juvenile court case manager position was designed to assist with compliance for court-ordered sanctions and to act as a probation officer for the court. However, the case management position has since evolved and increased contact to assess, outsource, and develop programs to encourage school attendance. The juvenile court case manager provides various prevention and intervention services to schools, students, and their families. Some of the services provided are: leadership groups in schools; home and school visits with students and families; referrals to outside agencies; parenting classes as parenting relates to school attendance; encouragement and reinforcement for parents and students; regular updates on progress and compliance or noncompliance to the judge; and education for the public about available community resources.

Travis County receives its funds from taxes, inter-governmental funds, charges for services, fines, forfeitures, interest, and miscellaneous sources (Travis County Texas Government, 2012). There are two sections of the county's budget set aside for the truancy programs: the Truancy Court Fund and the Juvenile Case Manager Fund (Travis County Texas Government, 2012). The Juvenile Case Manager Fund is funded through tickets that are issued to people for traffic violations, truancy fines, parking tickets, and the like. For every ticket issued, \$3 is disbursed into the program fund.

Funding distribution among the various justice of the peace courts varies depending upon the programs being implemented and their degree of perceived effectiveness. For each of the school years 2011–2012 and 2012–2013, \$5,600 in operating funds were available for JP3 and were expected to be used to service more than 300 students who were filed as truant. This budget distribution is an example of how JP3 works with available funds to provide sometimes expensive case management services. Because the case management model has shown effective outcomes in Colorado, it was important to ensure

sustainable funding to continue the program in Travis County.

The purpose of this descriptive study is to determine whether truancy prevention and reduction programming offered through Travis County JP3 improves school attendance. The research question is: *are JP3 services effective interventions in decreasing truancy for youth at-risk?* Included in the analysis is an investigation of the case management model and integration of family-friendly and community-based outreach services in decreasing truancy. In order to provide an accurate analysis of the research question, secondary data of tracking and court contact was analyzed to assess intervention efficacy and outcomes. These data focused on case management services provided by the juvenile case manager and quantified contacts, types of contacts, and outcomes of court interactions. To best contribute to the topic area's body of knowledge, this descriptive methodology is explicated below.

## Method

Upon acquisition of secondary data, the research question was investigated in both an exploratory and descriptive manner. It was hypothesized that the JP3 truancy prevention and reduction program would decrease truancy in specific geographic jurisdictions, thus improving the overall attendance of students who have received services through this programming. This study focused on students who were involved in JP3 programming. The researcher also placed emphasis on database creation and management for the JP3 court, in an effort to improve outcome tracking. This research study was deemed exempt from Institutional Review Board approval because it was based on an analysis of secondary data.

## Design

This cross-sectional, one-group, pretest-posttest design integrated quantitative and descriptive secondary data analysis. Secondary data included demographic information and programmatic

variables, such as school attendance, truancy, show/cause hearings, and additional status variables of participants in the JP3 interventions. The independent variable was the JP3 truancy prevention and reduction program, including the additional quasi-independent variables such as the demographic characteristics and program frequencies just mentioned. The dependent variable was the impact of the JP3 intervention on school attendance. School attendance was operationalized by the percentage of unexcused absences or late (tardy) arrivals for a given number of time-frames within a 90-day period for each student.

## Sample

Of the secondary data cases ( $n = 664$ ), 311 were randomly selected. Systematic random selection with a random start was used to select 55% of the population from each school year provided for the study (2011–2012 school year  $n = 186$ , 2012–2013 school year  $n = 179$ ). After completing a random sample, it was discovered some cases were missing significant information or were still open; therefore, the data set was cleaned by removing open cases and cases lacking pertinent information. This resulted in a smaller sample size ( $n = 311$ ). The sample contained school-aged children (4 to 18 years old) and their parents who lived in Travis County and had completed the court processing for truancy within the JP3 court. In the state of Texas, children under the age of 12 cannot be held liable or have charges processed for truancy; therefore their parents are held accountable in lieu of the children. In the 2011–2012 school year, a total of 339 students or parents were processed for truancy charges within JP3. In the 2012–2013 school year a total of 325 students or parents were processed for truancy charges within JP3.

## Data Management and Variables

Information was gathered by the juvenile case manager and/or interns in the form of questionnaires, surveys, interviews with students,

parents, and school personnel, and reviews of existing documents, such as attendance records and report cards. Data from the 2011–2012 and 2012–2013 school years were provided for database information management and outcome documentation. A total of 664 students were processed for truancy and referred to JP3 over the course of those 2 years. In addition to hard copies of raw data from JP3, the program included an existing secondary database for students during the school years under study, which is a continuous effort in data management and collection to enhance outcome reporting and program efficiency.

Secondary data included variables such as students' age, grade, types of services to which they were referred, the number of show cause hearings they attended, open case dates, number of siblings, number of parents living in the home, disposition of the truancy case, and grade point average (GPA). In addition, secondary data via an electronic database, Truancy Reduction Application Interface (TRAIN), provided additional variables for program outcomes and analysis. TRAIN is a secure, Web-based database that allows the tracking of progress for youth receiving school attendance services. TRAIN includes information about a student's school attachment, achievement, and attendance. It also tracks information such as a student's demographics, mental and physical health, family and peer relationships, and service history (National Center for School Engagement, 2013).

For the 2011–2012 school year, the number of visits a student or family received from the juvenile case manager while the case was open were tracked and analyzed. For the 2012–2013 school year, the electronic database, *Truancy12*, was used to track and analyze the number of visits a student/family received from the juvenile case manager while the case was open. *Truancy12* is a database created by Travis County to help track the number of hours a juvenile case manager spends working on a case. Details about visits, phone calls, court hearings, and meetings are

recorded in *Truancy12*. All information provided was collected and entered by the JP3 juvenile case manager with measures taken to ensure anonymity and to secure database information management.

## Data Analysis

Secondary data were entered into the Statistical Package for Social Sciences, Version 20 (SPSS v.20) to conduct demographic, correlational, and hypothesis testing for descriptive and inferential statistical analyses. The data entered included both nominal and ratio levels of measurement. Nominal level data were coded prior to entering into SPSS. Data such as student demographics, referrals, school attendance at entry and exit, number of show cause hearings, number of visits to the student or family by the juvenile case manager, and conviction status were variables of interest and were analyzed. A multiple regression was conducted to find predictors of effective participant outcomes. These analyses are presented below.

## Results

### Demographics

The demographic and descriptive statistical characteristics analyzed show a diverse sample of youth at risk in terms of ethnicity, income, and public school assistance programs. Of the 311 participants, 147 (47.4%) were females, 163 (52.4%) were males, and 1 (.2%) was unknown. Participants ranged in age from 4 to 18, with the majority being 16 (16.6%) and 17 years old (16.6%). Grade level of students in the sample ranged from prekindergarten to 12th grade, a majority being in the 9th grade (20.1%), closely followed by 10th (15.9%) and 8th graders (12.3%). Racial characteristics of the sample were 64.5% Hispanic, 25.8% Caucasian, 6.8% African American, and 2.9% Asian. English was the primary language of the sample (92%), with Spanish being the only other primary language spoken by students (8%). A majority of students had only

one parent living in the home (67.6%), 31.4% had two parents in the home, and 1% had no parents living in the home. Participants in the JP3 program who had no parents living in the home were either in the foster care system or lived in a youth shelter. Household income was measured based on the family receiving free, reduced, or full-priced lunch through the school. Of 188 respondents, two-thirds received free lunches (73.9%) and 5.9% received reduced-priced lunches. Demographic characteristics of the sample are summarized in Table 1.

Additional descriptive statistical analyses revealed that school attendance upon entry into the JP3 intervention was an important variable. Although student attendance upon entry fluctuated (ranging from students having unexcused absences or tardy arrivals 0.1% of the time to students having unexcused absences or tardy arrivals 100% of the time), the mode of students who were absent from or tardy to school ranged from 8% to 10% upon entry into the JP3 program (13.8%). There was a statistically significant finding ( $p = .01$ ) in improved attendance upon completion of the program compared to attendance upon entry. Variation in absences decreased to 0% to 79% from the original range of 0.1% to 100%. Detailed results regarding pre- and post-test results of student attendance rates can be seen in Figures 1 and 2.

### Correlations

Descriptive analysis was conducted on student demographic information and case outcomes. Of the 311 students processed for truancy, 200 were dismissed from the JP3 program, indicating their attendance improved and they met all court requirements. Table 2 shows these specific

Table 1. Sample Demographic Characteristics

Demographic	Attribute	Frequency	Percent
Gender	Female	147	47.4
	Male	163	52.6
Grade	7	23	7.4
	8	38	12.3
	9	62	20.1
	10	49	15.9
	11	35	11.3
	12	27	8.7
Age	13	28	9.1
	14	44	14.3
	15	47	15.3
	16	51	16.6
	17	51	16.6
Primary Language	English	275	92.0
	Spanish	24	8.0
Ethnicity	Hispanic	200	64.5
	Caucasian	80	25.8
	African American	21	6.8
	Asian	9	2.9
# Parents In Home	0	3	1.0
	1	198	67.6
	2	92	31.4
Household Income	Free	139	73.9
	Reduced	11	5.9
	Full Price	38	20.2

Figure 1. Attendance at entry.

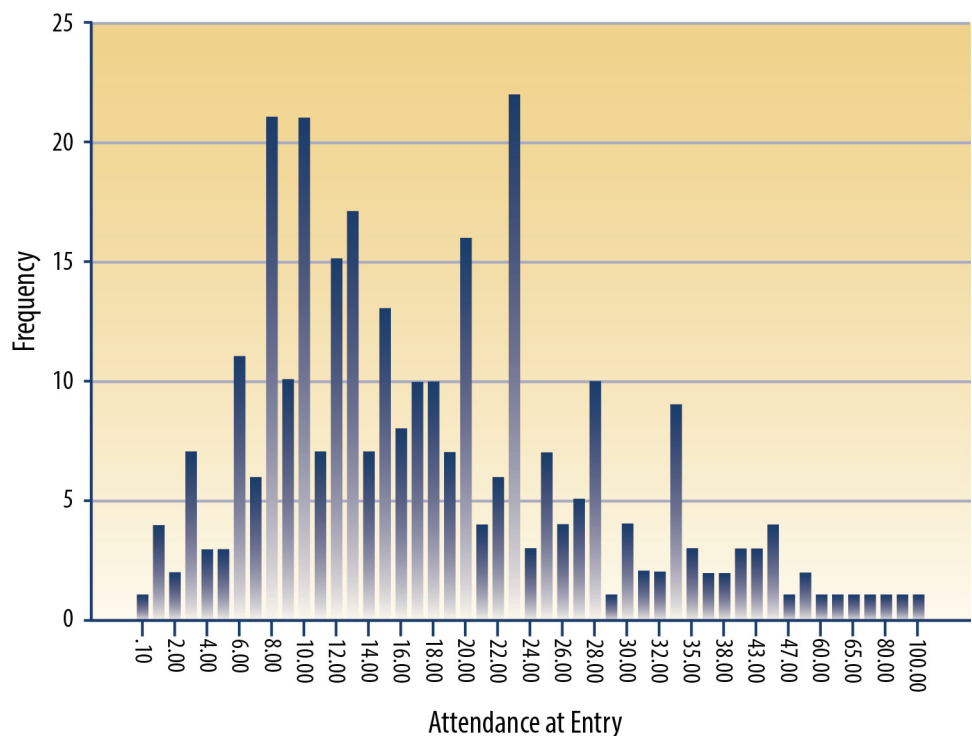
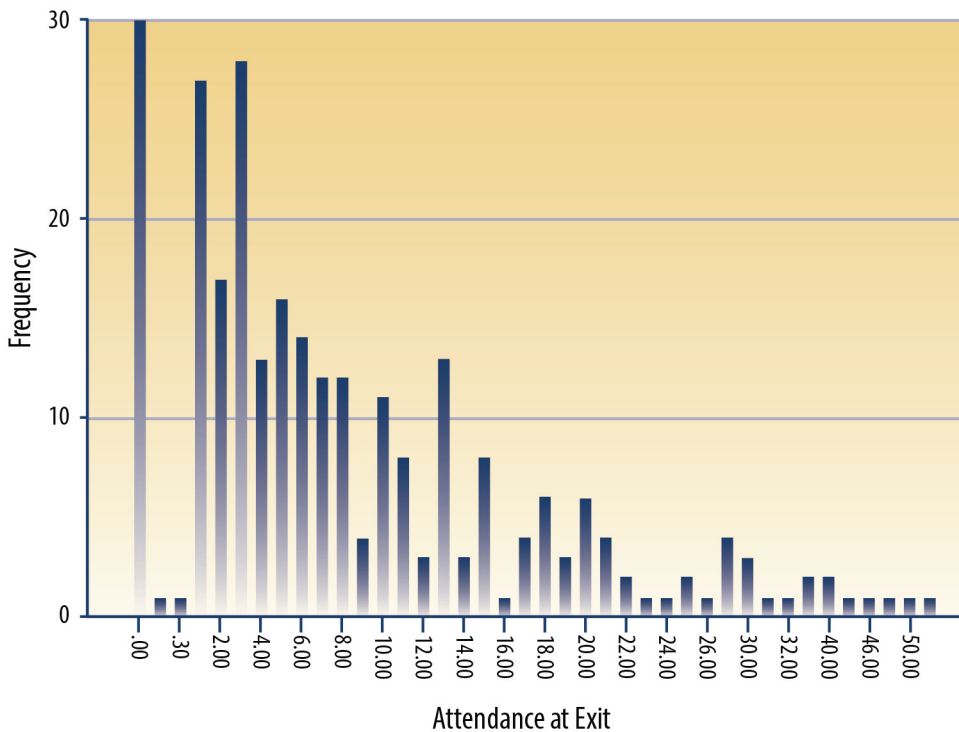


Figure 2. Attendance at exit.



intervention outcomes. In addition, a two-tailed Pearson Correlation test was completed for bivariate analyses for ratio levels of data. The number of visits a student had with the case manager was positively related to the number of show cause hearings a student attended; this was statistically significant at the  $p = .001$  level. An additional statistically significant relationship was found between a student's attendance at entry and the number of visits a student received from the case manager while the case was open ( $p < .05$ ). These outcomes reveal that contact with the case manager was an important variable.

Table 2. JP3 Case Outcomes

Variable	Attribute	Frequency	Percent
Dismissal Rate	CONVICTED	97	31.2
	TRANSFERRED	14	4.5
	DISMISSED	200	64.3
Number of Show Cause Hearings	1	112	36.0
	2	127	40.8
	3	62	19.9
	4	9	2.9
	5	1	.3
Number of Visits with Case Manager	1	98	31.5
	2	96	30.9
	3	55	17.7
	4	23	7.4
	5	14	4.5
	6	4	1.3
	7	9	2.9
	8	2	.6
	9	3	1.0
	10	2	.6
	11	4	1.3
14	1	.3	

A two-tailed Spearman Correlation Coefficient was conducted to complete a bivariate analysis on both nominal and ratio levels of data. This analysis revealed several statistically significant correlational findings at both the .001 and .05 levels. For example, the number of show cause hearings was positively related to family household income ( $p = .001$ ).

As a follow-up test to correlation, a one-sample chi-square test was conducted to assess whether the number of case manager visits had an impact on a student receiving outside referrals. The results of the test were not significant,  $\chi^2(11, N = 311) = 15.70, p < .01$ . Although the results were not significant, they are still important since the proportion of visits with the case manager is related to outside referrals at the attribute level of "none" ( $P = .20$ ); two visits with the case manager were proportionately the same ( $P = .19$ ). The limited number of case manager visits with a student is associated with receiving no outside referrals. The chi-square test indicated a proportion of dismissed cases were significantly associated with zero truancy at the time of exit, at 10.7%,  $\chi^2(18,$

$N = 270$ ) = 166.52, ( $p = .000$ ). This clearly shows the improvement in school attendance after receiving services through the Travis County JP3 truancy prevention and reduction program.

### Regression

A multiple regression analysis was conducted to investigate contact with a case manager and successful exit status from the JP3 program. Increased contact with a case manager, as the criterion variable that predicts successful exit from the program, and groupings of court measure variables were analyzed for a predictive model, including: court status at exit, attendance at entry and exit, number of days the case was open, and outside referrals. The linear combination of court measures was significantly related to the number of visits with a case manager,  $F(5, 263) = 5.289$ ,  $p < .000$ . The sample multiple correlation coefficient was .302, indicating that approximately 9% of the variance in the sample can be accounted for by the linear combination of court measures variables. Three of the five bivariate correlations were positive, with attendance at entry being negative, with three (attendance at entry, number of days case open, and outside referrals) of the five measures being statistically significant ( $p < .01$ ). These results suggest that the less a student is attending school upon entry into the program, and the more contact they have with a case manager, may impact: the number of outside referrals, the amount of time a case is open, successful dismissal, and an increase in attendance upon exit from the JP3 program. These factors, in combination, provide a predictive model of success from the intervention.

In summary, descriptive and inferential data analyses suggest that developing a relationship of increased contact with a JP3 case manager can lead to more successful outcomes when a student is engaged in court intervention. Variables that revealed success for students in this program were increased contact with a case manager, dismissal status at exit from the program, and outside referrals.

### Discussion and Application to Practice

Students and their families who are cited with truancy are faced with various challenges in their efforts to alleviate consequences within court systems. It is important for the health of the student, family, school, and community to identify and treat the underlying problems that lead to truancy and to apply effective models of innovative interventions that include familial and environmental factors. The court system and the use of case managers to work directly with students, their families, the schools, and outside community agencies promises to be a positive and effective intervention for truant youth, as evidenced in this study of the JP3 court intervention. The results of this study indicate that the more time case managers spend with a student, including interactions that involve referrals, the more clearly the case managers can understand the issues underlying truancy for that student. This leads to the extension of time a case is open and more impactful resources for students and their families.

Elements that include parent/guardian involvement, a continuum of services, collaboration with community resources, school administrative support and commitment, and ongoing evaluation, like those identified by the Colorado Foundation for Families and Children (Dembo & Gullede, 2009), show how an effective truancy program can be implemented. However, it is difficult to achieve commitment and follow-through from all the identified elements and to obtain adequate funding. The JP3 program offers an effective and economically feasible and sustainable intervention. The cost for a program such as JP3 is adequate to operate this intervention.

As indicated by this study, the development of a positive relationship with a caring adult is a key element in any intervention to prevent and reduce truancy. Visits with the juvenile case manager in this study helped to reduce the number of convictions for truancy that students or parents received. As noted in many therapeutic

interventions, it is the relationship between a client and therapist, in this case the case manager, that is most strongly correlated with positive change in clients (Corey, 2013).

The JP3 truancy prevention and reduction program is not without challenges. The JP3 program operates in a low-level court system and enforcement leverage is limited to fines for those who do not abide by the deferred conditions of the court. If a case is determined to be too difficult, the student is either convicted and a fine is imposed, or the student is transferred to the juvenile justice court system. Here, they are most often booked, released, and not provided with any additional services or followup.

Because truancy is considered a status offense, it is not given high priority in the juvenile justice system. Therefore, these students have an increased possibility of not receiving the help or services they need, and are at increased risk for dropping out of school. It is for this reason that the JP3 program is of the utmost importance in helping students, schools, and communities to alleviate truancy, as well as to address the community and familial issues surrounding truancy.

Positive outcomes for students are restricted due to the lack of funding and the limited number of juvenile case managers available to work with students. With only \$5,600 a year budgeted for operating funds, it is imperative that the impact of the JP3 program be far-reaching. The JP3 program delivers services to more than 300 students and parents a year. This translates into less than \$18 annually per student to help address the issue of truancy and the related issues that lead them to become truant; this is a small amount of money to keep a student out of the juvenile justice system.

### Implications of the Study

The findings of this study indicate the involvement of the court, in addition to the assignment of a case manager to work with the student, family, and school, has an impact on the student's

level of success in relation to attendance. While the JP3 intervention strives to be a case management multimodal program, developing a positive relationship with a caring adult, such as the juvenile case manager, has a positive impact on students. Although the use of a multimodal model is most ideal, and while costs can present challenges, the JP3 program is managing to provide services at minimal cost. With a program such as the one described in this study, spending and funding for increased staff such as juvenile case managers to help reach more students seems like a worthwhile investment.

### Study Limitations

Limitations of this study are that tracking and longitudinal measures from participants were not collected; the sample was limited to one geographic area; there was no comparison group and therefore no randomization; and the amount of time and resources spent on the prevention side of the program could not be evaluated due to a lack of available data.

### Recommendations for Future Research

Future research should include an analysis of all samples and databases; a longitudinal study of the JP3 intervention, including analyses of additional variables such as specific outside referrals, student GPAs, whether or not students were promoted to the next grade level, and the history of siblings who had truancy issues or dropped out of school; and a study using a control group and randomization. It would be beneficial to know how much of the program's resources are being put into the prevention portion of the program in comparison to the intervention portion of the program. Moreover, it would be advantageous to know whether the program's prevention strategies are effective so that these strategies can be replicated. Further research on this program and its long-term effectiveness should be conducted in order to determine whether JP3 or programs like it are short-term or long-term solutions for truant students. Finally, a follow-up study using



all students from the chosen school year(s) and using all variables that were not assessed during this study is recommended.

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## Journal Manuscript Submission

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