

**Juvenile Drug Courts and Community Based Programs
Working together can Reduce Recidivism and Increase
Abstinence through Family Based Modalities**

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Statement of Problem

Evidence has shown that current community based juvenile drug programs have not been proven to reduce recidivism, but have actually shown to increase the use of drugs during phases of treatment. In addition, the community based programs have failed to keep juveniles enrolled in drug treatment, and frequently do not address other youths' problems. Fortunately, current evidence based research has demonstrated family based treatments' the ability not only to reduce drug use, but also decrease juvenile delinquency, and create abstinence during treatment. Substance abuse destroys lives and communities, and it is costing our nation billions of dollars in health care costs, law enforcement, and other lost revenues in loss of employment due to drug addiction.

Methods

Research was conducted by collecting and analyzing information gathered from various sources through the internet. Information and statistics concerning juvenile drug abuse and treatment programs was obtained from the National Criminal Justice Resource Service (NCJRS), Office of Juvenile Justice and Delinquency Prevention (OJJDP), Substance Abuse and Mental Health Services Administration (SAMHSA), Office of National Drug Control and Policy (ONDCP), and National Institute on Drug Abuse (NIDA). In addition, extensive use of evidenced based academic journals was obtained from the Online Karmann Library to review meta-analysis studies evaluating the efficacy of juvenile drug treatment programs, and the role of the juvenile drug court. Textbooks accumulated throughout the program were also utilized to gain understanding of the

complexity of juvenile delinquency, and the role drug courts have in overseeing substance abuse treatment. In addition, the resources were utilized to construct the theoretical framework explaining juvenile substance abuse and drug therapy.

Summary of Results

The results of the research demonstrated that when family based modalities are enhanced by legal mandates from juvenile drug courts, substance abuse recidivism can be decreased, and abstinence throughout treatment improved. Community based treatment programs like the Crisis Intervention Center from Stark County and Neighborhood Solutions Project proved that through the use of MST/JDC, community based programs could effectively treat juvenile drug abuse.

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SECTION I. INTRODUCTION

The cost of drug abuse to our society is astronomical, not just in monetary value, but in terms of the many lives lost, and in the number of families and communities destroyed. Law enforcement seems to be the forefront of solutions to our nation's appetite for substance abuse while treatment programs remain as alternatives at best. In terms of "treatment", prevention programs seem to be the most logical solution widely supported by political parties, but treatment for substance abuse itself never seems to make the primary topic of debate. The national focus is on drug trafficking and law enforcement due to the violence, and the billions of dollars that are generated by the manufacturing, cultivation, distribution, and sales of illegal drugs.

The National Drug Threat Assessment produced by the National Drug Intelligence Center (NDIC, 2006) describes the types of threat presented by the different categories of drugs smuggled into the U.S. According to figures from NDIC (2006), drug trafficking in the U. S. generated between \$13 billion and \$48 billion annually. The Office of National Drug Control Policy (ONDCP, 2006) estimates that between \$8.3 billion and \$24.9 billion in drug proceeds is smuggled out of the United States to Mexico and Colombia by drug trafficking organizations (DTOs). Recent government analysis estimates reveal that between \$5.1 billion and \$17 billion is transported in bulk quantities into Mexico (NDIC, 2006). In addition, between \$5.2 billion is transported in bulk quantities to Canada by mostly Asian DTOs involved in trafficking marijuana and ecstasy (NDIC, 2006). The knee jerk reaction from our politicians has always been to increase drug enforcement budgets. According to ONDCP available information (Katel, 2006), enforcement interdiction funding was increased dramatically by \$3.2 billion for the 2007 budget. It was not until the 1980's that federal funding made its way down to research for drug treatment.

Years of research has demonstrated that mental disorders and substance abuse are the primary risk factors for incarcerated youth as observed by the Office of Juvenile Justice and Delinquency Prevention (OJJDP, 2009). Current longitudinal studies have projected that more than 670,000 youth processed into the juvenile justice system nationwide each year would meet the criteria for one or more alcohol, drug, or mental disorders per the DSM-IV categories (OJJDP, 2009). An estimated 194,000 delinquency cases involving drug offenses were handled by the juvenile courts in 2004 (OJJDP, 2008). The importance of an effective drug treatment therapy program for juveniles cannot be overstated. The primary forms of treatment available for juveniles include 12-step programs, cognitive behavioral therapies, family based modalities, and community based programs as described by Rowe and Liddle (2003).

The following research focuses on the administration of juvenile drug courts (JDC), importance of coordination with social agencies, and implementation/adoption of advanced treatment modalities proven to reduce recidivism for juveniles enrolled and completing JDC mandated treatment.

Statement of Problem

Community based juvenile drug treatment programs (FC) have largely been ineffective in reducing recidivism rates for drug offenders that are enrolled or completed the programs due to their high drop out rates, service fragmentation, and failure to address youths' multiple problems as explained by Liddle et al. (2006). According to Liddle et al. (2006) an evaluation of multi-site juvenile outpatient drug treatment programs revealed that only 27 percent of youths completed therapy. More surprising, the evaluation of FC juvenile treatment programs found that the use of hard drugs increased during the treatment phase as discovered by Liddle et al.

(2006). Family based treatment programs like the multi-dimensional family therapy (MDFT) modality supported by Liddle et al. (2009), or the more progressive multisystemic (MST) promoted by McCollister et al. (2009) can reduce delinquency and drug abuse more effectively than FC programs relying on group therapy. Historically drug courts have relied on community service based treatment therapy, but more recently drug courts have experimented with drug therapy programs utilizing family based modalities such as the MST that combine elements from cognitive behavioral therapy (CBT) in an effort to reduce recidivism (Henggeler, 2006). The different types of family based modalities commonly applied to FC programs are the MST, MDFT, or the life skill training (LST).

Substance abuse can be viewed as a social disease that is depleting resources from our society and is destroying lives across our nation. While the rate of illicit drug use among persons 12 or older has remained constant , the rate of current use for juveniles ages 12 through 17 declined from 11.6 percent in 2002 to 9.3 percent in 2008 (SAMHSA). However, this translated to an estimated 194,000 delinquency cases involving drug offenses handled by the juvenile courts in 2004 (OJJDP, 2008). In addition to costing our nation over 100 billion dollars in healthcare and crime costs (Rowe & Liddle, 2003), drug use has been correlated to other social problems, including poor school performance, violence, and deterioration of family relationships. It was reported that in 1997 up to 65 percent of juveniles arrested for other offenses had traces of drug use in their system as evidenced by blood tests according to Terry et al. (2000).

Substance abuse destroys lives, breaks up families, and devastates the lives of both adults and juveniles. The need for effective treatment will continue to increase as those who are treated continue to recidivate. The standard FC programs have long demonstrated the inability to retain

those being treated, or to reduce the recidivism of those already treated or enrolled in the program.

Purpose and Significance of Study

The purpose of this research project is to provide recommendations to improve the effectiveness of FC juvenile drug treatment programs through the utilization of family based treatment modalities as mandated by juvenile drug courts. The family based treatments are advantageous in that the modalities can be tailored to the individual and family needs of the juvenile client.

Research has proven that typical FC juvenile drug treatment programs have not had a negative effect on recidivism. According to Rowe and Liddle (2003), 60 percent of treatment admissions to community based programs are for repeat treatment. As studies on drug abuse evolved, researchers in the 1990's began focusing on family involvement in intervention programs. Subsequently, emerging national standards for drug abuse and mental health practices incorporated the role of the family as the main ingredient in assessment, prevention, and intervention (Rowe & Liddle, 2003). In their analysis Terry et al. (2000) reported that progressive research in the area of drug treatment resulted in family based treatment that was designed and tested specifically for treating juvenile drug abusers and behavioral problems in general.

This paper will demonstrate that the varied approaches utilized by family based therapies can be implemented or transported into community based juvenile drug treatment programs to successfully reduce the recidivism rate for juvenile substance abusers.

Methodology

The method of approach will be to identify some of the different types of juvenile drug treatment and prevention programs including community based programs from internet sources such as the National Criminal Justice Resource Service (NCJRS), Office of Juvenile Justice and Delinquency Prevention (OJJDP), Office of Justice Programs (OJP) Substance Abuse and Mental Health Services Administration (SAMHSA), Office National Drug Control and Policy (ONDCP), and National Institute on Drug Abuse (NIDA). The resulting information will be analyzed and compared to successful family based therapies being utilized in community based juvenile drug treatment programs. Information on drug offenders, drug offender recidivism, successful treatment programs, and recommendations to improve treatments will be obtained from the review of meta-analysis studies, academic research journals, evidence based peer reviewed research, criminal justice textbooks, and statistical data from government organizations to identify different types of juvenile drug treatment programs.

Based on the resulting analysis of the data and research collected, a determination will be made as to the best approach to improve community based juvenile drug treatment programs through the use of family based therapies in order reduce the recidivism rate of youth drug offenders. The problem of juvenile drug offender recidivism and use of effective treatment therapies will be analyzed, explained, and supported through social learning and differential association criminological theories.

Contributions to the Field

This paper will serve as an educational and resource guide to criminal justice agencies, such as law enforcement, probation, juvenile drug courts, social services, community based drug

treatment centers, concerned parents, students and educators as well. This paper will provide recommendations for the successful treatment of youth drug abusers not yet committed to juvenile detention facilities, but to juvenile offenders that were mandated by juvenile drug courts to enroll in community based treatment programs.

This paper will provide supportive documentation on the effectiveness of family based treatment modalities in the treatment of juvenile drug abuse. In addition, this paper will demonstrate the efficacy of juvenile drug treatment in FC programs utilizing family treatment modalities like the MST in contrast to the less effective FC programs relying on conventional methods like group therapy and role model applications. More importantly, this paper will demonstrate the ability to reduce recidivism among drug users that are currently enrolled or have graduated from juvenile drug court mandated FC treatment programs incorporating the principle of family based modalities.

This paper can also serve as a guide to community based programs searching for better methods of treatment, and as supporting documentation for community programs seeking additional funding from federal initiatives like ONDCP, NIDA, or SAMHSA.

PART II. LITERATURE REVIEW

The literature reviewed includes important trends in juvenile drug abuse beginning with the media dramatization of the outbreak of crack cocaine addiction. In addition, the literature review includes discussions concerning the evolution and proliferation of gangs and their association to juvenile drug abuse trends. The historical review drug treatment provides a clear picture of the political and financial barriers overcome by researchers, and the vast improvements that have been made in the area of treatment for drug abuse since the 1980's. A brief overview of juvenile arrest statistics is discussed to demonstrate the magnitude of the problem that is juvenile substance abuse. More importantly, the literature review offers a brief examination concerning the quality of community based treatments, and provides several examples demonstrating the efficacy of family based drug therapy modalities.

Trends in Juvenile Drug Abuse

There is a variety of alcohol and drug related factors that can affect the development of adolescent mental and physical health. According to McWhirter et al. (2004), alcohol and tobacco are considered the gateway to drug abuse, beginning with marijuana. Smoking marijuana is also considered the gateway to hard drugs such as cocaine, crack cocaine, heroin, ecstasy, and methamphetamine. The problem of crack cocaine abuse was fully exploited by the media and congress when the death of University of Maryland Basketball star Len Bias, who was Black, reportedly died of crack cocaine and alcohol overdose (Vagins & McCurdy, 2006). During the 1980's crack cocaine came to symbolize the problem of illicit narcotics use in America by primarily minority youths from inner cities. Juvenile drug abuse is not confined to the ghettos or barrios, but drugs have reached every corner of our communities crossing every

geographical, economical, and social barrier throughout America. To fully understand the trends in juvenile drug use, a brief discussion concerning the proliferation of youth gangs and drug trafficking/drug use needs to be addressed.

According to the research completed by Starbuck et al (2001), the public continues to perceive youth gangs and gang members in terms of the media stereotype of the California Crips and Bloods of inner cities. Youth gangs are no longer a problem isolated to large cities, but youth gangs are now present in suburbs, small towns, and rural communities. Although research has demonstrated that gangs continue to be based on race or ethnicity, gangs are increasingly becoming diverse in racial and ethnic composition. Although limited studies have been conducted concerning the proliferation of gangs and drug abuse, it is worth noting that there is an association between gang activity and drug abuse.

Research conducted by Katz et al. (2005) incorporated the use of data from the Arizona Drug Abuse Monitoring (ADAM) program to establish the relationship between drug use and gang membership. Katz et al. (2005) research revealed that compared to non-gang youths, gang members were more likely to self-report use of marijuana, cocaine, heroin, and PCP. However, Katz et al. (2005) reported that official records from the juvenile court system in Phoenix, Arizona demonstrated that gang members were no more likely to be arrested for drug offenses than non-gang members, which contradicts public perception of the stereo typical drug dealing gang member.

Decker's (2000) analysis concerning drug tests given to 8,038 arrestees provides a more specific observation by providing a pattern of drug use by gang and non-gang members. Decker's (2000) research found that 65 percent of non-gang members tested positive, compared to 58 percent of gang members. Interestingly, 38 percent of non-gang members tested positive

for cocaine use, compared to 24 percent of gang members testing positive for cocaine. In contrast, 44 percent of gang members tested positive for marijuana use, compared to 36 percent for non-gang members.

According to the National Institute on Drug Abuse (NIDA, 2008) there has been a significant increase in drug abuse problems among juveniles involved in the criminal and juvenile justice systems in recent years. National Institute on Drug Abuse (2008) reported that an estimated 60 percent of juveniles detained tested positive for drug use in 2002. In addition, about half of the juvenile detainees were diagnosed with substance abuse disorder as reported by NIDA (2008). McCollister et al. (2009) conducted research demonstrating that 80 percent of juveniles arrested for a drug violation reported drug abuse, tested positive for drugs and/or were under the influence of alcohol at the time of their arrest. A number of studies have directly linked drug abuse to increased criminal activity, academic dysfunction, and drug related school dropout's rates as reported by Tsytsarev et al. (2000).

In 2004 there were over 350,000 juveniles with drug abuse histories under probation, and in some type of continuing care program; however, many did not receive appropriate treatment according to Watson (2004). The need to increase the number of juvenile drug treatment programs is imperative for the future of our youths, and safety of our communities. As a matter of fact, a survey of juvenile probation department employees revealed that the expansion of intervention services rated as the most critical need in the juvenile justice system (Watson, 2004).

Historical Review of Drug Treatment

Diversion and treatment strategies for drug addicts began in the 1930's with the opening of the Lexington and Fort Worth treatment facilities where addicted inmates were diverted and separated from the general prison population for treatment as discovered by Anglin et al. (2009). However, Hubbard et al. (2009) reported that pivotal years of drug treatment can be traced to 1966 when Congress passed the Narcotic Addict Rehabilitation Act in support of national community based treatment systems. Hubbard et al. (2009) explained that under the new law the legislation defined drug addiction as a health problem, and introduced mandatory or civil commitment as an alternative to prison for persons arrested for certain types of crimes involving drug abuse.

The modern era of drug treatment was born after President Nixon declared the "war on drugs" in 1973, and gained momentum after the creation of NIDA in 1974. The creation of NIDA expanded the scope of treatment research, and brought unprecedented amounts of funding to community based treatment programs as explained by Hubbard et al. (2009). In the 1980's funding for NIDA was further expanded when the health community discovered that HIV was being transmitted through contaminated needles being shared by drug addicts as reported by Hubbard et al. (2009). In addition, Anglin et al. (2009) argued that the 'get tough" on crime policies resulted in increased funding for unsuccessful residential and aftercare programs for juvenile offenders convicted of non-violent crimes, including drug abuse.

Since the passage of the Safe and Drug Free Schools Communities Act in 1986 by the U.S. Congress, the Department of Education has spent billions of dollars on school substance abuse prevention programs as revealed by Vicary et al. (2006). Unfortunately, school districts have spent millions of dollars on ineffective programs like the Drug Abuse Resistance Education

(DARE) as described by Burke (2002). Additionally, the federal government through ONDCP has also wasted millions of dollars on ineffective prevention programs like the Youth Anti-Drug Media Campaign according to the United States Government Accountability Office report (GAO, 2006). According to the GAO (2006) report, between 1998 and 2004 ONDCP received \$1.2 billion in government funding to implement the National Youth Anti-Drug Media Campaign. The campaign's primary goals were to prevent the initiation of or curtail the use of drugs among the nation's youth by exposing media generated messages about the dangers of drug use to youths and parents (GAO, 2006). While the campaign encouraged parents to speak to youths about the dangers of drug use, the Westat Inc. study did not reveal any positive negative relationships resulting from intermediate outcomes (GAO, 2006). The evaluation conducted by Westat, Inc. (GAO, 2006) demonstrated that the ONDCP's National Youth Anti-Drug Media Campaign program did not reduce youth drug use. Drug abuse in the United States is a real threat to our future of our youth, especially when you consider the amount of drugs available and the profit margin for drug traffickers.

According to the research conducted by Burke (2002), the DARE program was developed by the Los Angeles Police Department and the Los Angeles Unified School District in 1983, and eventually became the most popular prevention program in the nation. The goal of the DARE program was to teach children to recognize and resist the pressures of alcohol, tobacco, marijuana, inhalants, and other drugs. In addition, the DARE program aimed to prevent youths from getting involved in violence (Burke, 2002). The DARE program is a collaboration effort between law enforcement and teachers that involves a curriculum of 10 weeks instruction for junior high students, and a 17-week core curriculum for fifth and sixth graders. The most frequently used form of the program is the 17-week curriculum delivered to elementary students

(Burke, 2002). Consequently, the DARE program has failed because while the main target audience of fifth and sixth graders may be receptive, junior and high school students are more influenced by their peers, and tend to reject authority figures, especially law enforcement (Glazer, 1995). The development of effective, progressive and evidence based intervention and treatment became a necessity for the future wellbeing of our youths.

Prior to the 1990's research demonstrating the effectiveness of family based interventions for juvenile drug abuse was considered inconclusive (Rowe & Liddle, 2003). However, much attention was given to research supporting the family involvement in intervention programs during the 1990's. As stated earlier, emerging standards for drug abuse therapy emphasized the importance of family involvement as a key element responsible for producing successful treatment outcomes (Rowe & Liddle, 2003). This resulted in the increase of evidence based drug abuse research and availability of interventions for families through community programs.

Community Based Therapy (FC)

While there are several FC models nationwide dealing with substance abuse and reducing criminal behavior, Morral et al. (2004) reported that FC approach commonly involves residential and outpatient treatments. According to a study conducted by the Institute of Medicine, Morral et al. (2004) explained that the FC treatment components are primarily derived from self help principles found in recovery communities, and involve drawing from the experience of counselor's personal experience with substance abuse. Although the efficacy of community based treatment in the reduction of drug use among juvenile is not well documented, FC programs are readily available, and made attainable to dysfunctional communities in need. In addition, Simmons et al. (2008) study found FC programs to be effective outreach strategies

utilized to identify mental health and substance abuse treatment services to high risk populations in need.

A worthwhile example of what is considered a successful community based treatment designed to help juveniles involved in gangs, delinquency, and drug use is the House of Ujoma established in Philadelphia, Pennsylvania. The House of Umoja program initiated in Philadelphia provides for a family oriented community institution that effectively mediates gang conflicts, and offers counsel and individual development for gang members and non-gang members alike involved in delinquent behavior (Howell, 2000). This program is a family model that provides individuals with a sense of belonging, identity, and self-worth through the use of role models and training in parenting skills. According to Howell (2000), the program has successfully transformed more than five hundred troubled youths into self-assured, competent, and productive citizens.

According to Morral et al. (2004), pretreatment variables, such as problem severity, treatment motivation, criminal history, school problems, and environmental factors can predict poor treatment outcomes. Unfortunately for the supporters and recipients of community based treatments, there have been only 13 studies that have utilized rigorous designs that control for pretreatment differences between treated and comparison youths as discovered by Morral et al. (2004). It seems that additional scientific research needs to be conducted to prove the efficacy of community based treatment.

Family Based Therapy Modalities

Over the years a number of evidence based treatments for drug abuse have been developed for both adults and juveniles. Included in the family based treatment group are the

Multidimensional Family Therapy (MDFT), Multisystemic Therapy (MST), Functional Family Therapy (FFT), and Family Support Network (FSN) programs, and Life Skills Training (LST). Other evidence based treatment programs include Cognitive Behavioral (CBT), and various community based (FC) treatments as defined by NIDA (2009).

According to Rowe and Liddle (2003) family based approaches have the advantage of addressing significant barriers, such as parental resistance to change and family adversity resulting in increased engagement and retention during treatment. In addition, family based treatments retain teenage drug abusers successfully when compared to other state of the art drug treatments, and retains more effectively than standard drug treatment programs (Rowe & Liddle, 2003). Rowe and Liddle (2003) have demonstrated that over the course of therapy all controlled trials of family based treatment have significantly reduced the effects on alcohol, marijuana, and use of other hard drugs. More importantly, the research conducted by Rowe and Liddle (2003) demonstrated significant reduction in drug abuse by adolescents when compared to alternative treatments such as individual therapy, adolescent group therapy, and family psycho-educational drug counseling.

The Life Training Skills (LST)

The LST program was developed by Dr. Gilbert J. Botvin, professor of public health at the Weill Medical College of Cornell University in 1979 (Burke, 2002). Along with teaching drug resistance skills and normative education, the LST program was designed to address a wide range of risk and protective factors by teaching general personal and social skills according to the National Institute on Drug Abuse (NIDA, 2006).

The curriculum for the LST program was designed for elementary, junior high school, and high school students. The universal program consists of a 3-year prevention curriculum for students in middle and junior high school. According to NIDA (2006) description, the LST contains 15 sessions during the first year, 10 booster sessions during the second, and 5 sessions during the final year. The LST can be taught to middle schools that include 6th, 7th, and 8th, or junior high school grades 7th, 8th, and 9th. The LST curriculum consists of the following three major components: 1) drug resistance skills and information, 2) self-management skills, and 3) general social skills.

According to Botvin's early research (as cited by Glazer, 1995), the LST was successful because it provided twice as many drug prevention sessions when compared to other programs, and the LST also included additional booster sessions. The underlying premise of the LST is that youths learn to use drugs through association with other students using drugs, so Botvin's program teaches students about the misconception that everyone uses drugs.

Another crucial attribute to the success of the LST programs is the process of the intervention. Although different types of providers have successfully implemented the program, including health professionals and older peer leaders, the most natural and logical provider for a school based program is a classroom teacher (Botvin & Cantor, 2000). According to NIDA (2006), the program has been extensively tested over the past 20 years and has been found to reduce the prevalence of tobacco, alcohol, and illicit drug use relative to controls by 50 to 80 percent. In addition, the LST combined with booster sessions reduced prevalence of drug use by as much as 66 percent according to research presented by NIDA (2006).

Multidimensional Family Therapy (MDFT)

According to Terry et al. (2000), researchers have designed and tested family therapy interventions specifically for treating juvenile drug abusers, and have demonstrated the success of family based interventions not only in treating substance abuse, but also in the areas of delinquency and child behavior problems in general. The family based models as described by Terry et al. (2000) involve co-joint family therapy, one-person family therapy, group therapy, social networking, and self-help skills training.

Liddle et al. (2006) described the MDFT program module as manual guided evidence based treatment for juvenile drug abuse. The MDFT treatment is a developmental-ecological approach that targets intrapersonal elements associated with the adolescent's drug abuse as described by Liddle et al. (2006). The research conducted by Liddle et al. (2006) associated substance abuse with the following factors: drug use as a means of coping with stress; parenting practices; drug use by adults in the family; and parent and adolescent conflict that are contributing factors to drug use and other behavioral problems. Liddle et al. (2009) research outlined several versions of the MDFT system that can be delivered as an office based, in-home, brief, intensive outpatient, day treatment, or residential treatments. Additionally, Liddle et al. (2009) explained the MDFT treatments are delivered one to three times a week during the course of 3 to 6 months.

Regardless of the MDFT version, therapists provide treatment work simultaneously in four interdependent domains described as the *adolescent domain*, *parent domain*, *family interactional domain*, and *extrafamilial domain* according to Liddle et al. (2009). The study conducted by Liddle et al. (2009) demonstrated that the *adolescent domain* is designed to keep teens engaged in treatment, helps adolescents to communicate and relate effectively with parents

and adults, and develops social competence and alternative behaviors in order to avoid drug use. *Parent domain* engages parents in therapy, helps build positive interaction between parent and adolescent, and improves parental monitoring and limit settings as described by Liddle et al. (2009). The *family interactional domain* decreases conflict, and improves positive communication patterns and problem solving through multi-participant family sessions as interpreted by Liddle et al. (2009). In addition, Liddle et al. (2009) study shows the *extrafamilial domain* fosters family participation in all the teenager's social systems, such as school, juvenile justice, and recreational activities. To further improve treatment outcomes, Liddle et al. (2009) found that MDFT therapist met alone with parents, adolescents, or both parents with adolescent throughout the program depending on the treatment domain and problem being addressed. The literature review revealed the application and efficacy of the MDFT as a successful treatment program for juvenile drug offenders and adolescents in general.

Cognitive Behavioral Therapy (CBT) vs. MDFT

Research conducted by Hogue et al. (2008) closely examined fidelity outcomes in a controlled trial comparing individual CBT and MDFT for adolescent substance use and related behavioral problems. The research project was conducted under the approval and observation from the governing Internal Review Board as reported by Hogue et al. (2008). Although this research did not stop with measuring only performances and effects in reducing drug abuse among youths, Hogue et al. (2008) demonstrated that it also examined the impact of therapist competency on treatment outcomes.

Hogue et al. (2008) examination of the MDFT and CBT included 136 adolescent substance abusers with 75 percent meeting DSM-IV criteria for cannabis dependence and 13

percent for cannabis abuse, 20 percent alcohol dependence and 4 percent alcohol abuse, and 13 percent other drug dependence and 2 percent other drug abuse. Also, Hogue et al. (2008) reported that 79 percent were diagnosed as having oppositional defiant conduct disorder and 49 percent for a mood and/or anxiety disorder. The sample included 85 percent male ranging from 13-17 years of age, 70 percent were African American, 20 percent White, and 10 percent Hispanic. In addition, 75 percent of adolescents were enrolled in school, 63 percent were on juvenile probation at intake, and 32 percent were mandated by a juvenile drug court to receive treatment as reported by Hogue et al. (2008). There were four therapist delivering the CBT and five providing MDFT. Outcome measures included *marijuana use frequency with timeline follow-back*, *personal experience inventory (PEI)*, *child behavior checklist (CBCL)*, and *youth self-report (YSR)* as described by Hogue et al., (2008). The research conducted by Hogue et al., (2008) confirmed the importance and need for therapists to adhere to treatment plans as defined in the manualized behavioral interventions such as MDFT or CBT.

In the Cannabis Youth Treatment (CYT), a multi-site randomized clinical trial study, Rowe and Liddle (2003) demonstrated that teens in the MDFT continued to reduce their drug abuse problems between a 3-12 month follow-up assessments. More promising was the fact that adolescent drug use continued to decline from discharge to 12-month post treatment in MDFT programs whereas decrease in drug involvement leveled off among teens receiving CBT (Rowe & Liddle, 2003). In addition, the MDFT proved to be more cost effective when compared to standard residential treatment in the community. According to Rowe & Liddle (2003), a residential treatment condition has a weekly cost of \$1,138 per client while the MDFT weekly cost per client is \$384. In other words, MDFT produces better outcomes and is more cost effective, as well.

Multisystemic Therapy (MST)

In the last 20 years there have been a number of trials examining the efficacy of family based therapies in reducing drug abuse among adolescents and adults in general. In particular, the MDFT treatment modality described by Liddle et al. (2009) has proven to be the most effective solution to treating juvenile substance abuse when compared to other treatment programs like the CBT or FC programs. The efficacy of the MDFT was demonstrated in both clinical and community based treatment environments. However, further research needs to be conducted to continue the improvement of the MDFT, or to discover new ground breaking drug abuse treatments. Multisystemic therapy treatment developed by Henggeler et al. (2006) includes some elements from family based therapy principles and components from CBT treatment modality.

While there has been several study's claiming the efficacy of family based treatments, most of that research was done to show short term results; however, Henggeler's et al. (2002) research set out to demonstrate effectiveness of family based therapy beyond the typical 12 month follow-up assessment. In fact, Henggeler's et al. (2002) research involved the examination of a four-year follow-up of MST as applied to 43 juvenile drug offenders compared to 37 juvenile drug offenders given usual community based services. Prior to discussing the results of Henggeler's et al. (2002) study, the MST elements need to be defined to fully understand the implications of the research involved.

What defines the MST approach as practical is its' application to the complexity and hosts of issues involving juvenile substance abuse. Henggeler's et al. (2002) MST interventions focuses on the individual, family, peer, school, and the social network variables associated with drug abuse problems. Unlike other family based treatments, Henggeler et al. (2002) MST has

evolved and improved by adopting practical evidence based interventions found in strategic family therapy, structural family therapy, and cognitive-behavioral therapies. More importantly, Henggeler et al. (2002) MST combines the psychopharmacological treatment with psychosocial therapy specifically tailored to individual needs in order to increase desired outcomes.

Henggeler's et al. (2002) MST model is applicable to the family arena by providing avenues for caregivers to effectively monitor the behavior and whereabouts of the juvenile client. In addition, the MST teaches the caregivers about applying positive consequences for responsible behavior and sanctions for irresponsible behavior as defined by therapy developed by Henggeler et al. (2002). To accomplish treatment at the family level, the MST therapists help caregivers develop family structure and to identify natural *reinforcers*, so caregivers can influence youths into participating in positive behaviors and activities as described by Henggeler et al. (2002). Of paramount importance is the therapist's ability to identify parental barriers, such as parental drug use and/or parental mental health problems, and design interventions to continue the application of consequences to irresponsible youth behaviors. In addition, Henggeler's et al. (2002) MST treatment approach not only increases the ability to reduce youths continued interactions with delinquent and drug using peers, but it also increases associations with *prosocial* peers, as well. To increase supervision, the therapists provided guidance to caregivers on how to develop strategies to monitor and promote academic performance and/or vocational training as part of MST treatment model outlined by Henggeler et al. (2002). According to Henggeler et al. (2002), the caregivers were taught how to develop and continue an open line of communication with school personnel in order to structure after school hours and to promote academic success.

In Henggeler's et al. (2002) four-year follow-up study, the MST therapists that provided the treatment were master's-level clinicians that were assisted by a child psychiatrist. In addition, as outlined by Henggeler et al. (2002), the therapists used a home based model of service delivery that included the following treatment conditions: 1) low caseloads consisting of four to six families; 2) average of 46 hours of contact per family over a period of 130 days of treatment; 3) delivery of services included community settings such as home, schools, or neighborhood centers; 4) treatment was provided for 4-6 months; 5) therapist were available 24 hour/day and 7 days a week. In comparison, youth's in the control group received usual community based drug treatment that entailed weekly attendance at group meetings using the 12 step program as described by Henggeler et al. (2002).

The results of Henggeler's et al. (2002) four-year follow-up continued to support and advocate the efficacy of MST treatment as demonstrated by other MST short term randomized trial studies of delinquency. Although some of Henggeler et al. (2002) findings regarding long-term reductions in drug use were mixed, MST was associated with 100% increase in marijuana abstinence and 33 percent increase in cocaine abstinence according to self-report indicators. Overall the study showed that MST produced favorable long-term reductions in delinquency and substance abuse. At the time of Henggeler et al. (2002) study it was articulated that additional intensive studies need to be conducted to further improve the drug related and mental health outcomes associated with the MST treatment model. Later MST studies demonstrated further progress and improvement in the reduction of substance abuse among juvenile offenders when applied in FC programs involving coordination with juvenile drug courts as demonstrated by the research conducted by Henggeler et al. (2006).

While the literature review provided a comprehensive analysis of the overwhelming problem of juvenile drug abuse, it also gave a hopeful indication of effective family based treatment modalities. Current family based treatment such as the MST can be applied to community based settings, and be bolstered through the support of juvenile drug courts. In particular, the MST research has demonstrated a successful track record showing improvements by adopting elements from various family treatment modalities as it continues to evolve. The following section applies the social learning theory in combination with Sutherland's Differential Association to explain some possible causes for juvenile drug abuse, and the basis for supporting MST treatment.

SECTION III. THEORY FRAMEWORK

There is no one single criminological theory that can offer an absolute explanation to the causes of delinquency associated with substance abuse. However, an analysis of social learning theory combined with Sutherland's differential association provides some insight into why juveniles abuse drugs, and explains how contemporary drug treatment programs like the MST are grounded in social learning theories.

Social Learning Theory and Differential Association

Akers (1994) social learning theory when applied to elements of Sutherland's differential association theory (1960) offers a thorough examination of criminal behavior beyond the simple explanation that criminal behavior is learned through peer imitation. The social learning theory demonstrates that criminal and delinquent behavior if acquired, repeated, and changed is the same process as conforming behavior (Akers, 1994). Juvenile substance abuse is a form of delinquent behavior that can be interpreted as a conforming behavior explained through Aker's (1994) social learning theory.

Unlike Sutherland's differential association, Aker's (1994) modification of the social learning theory defines the learning mechanisms supported by differential association as reinforcement theory of criminal behavior. Akers' theory primarily focuses on differential associations, definitions, differential reinforcement, and imitation. In other words, Aker's social learning theory is not only compatible but also an extension of Sutherland's differential association theory (Cullen & Agnew, 2006).

Akers (1994) articulates that according to the process of *differential association*, individuals are exposed to *interactional* and *normative* definitions that can be favorable to law

abiding behavior, as well as illegal behavior. Akers (1994) explains that the *interactional* dimension of the *differential association theory* refers to the direct association and interaction with others who engage in certain types of behavior. In this case the illegal behavior can be defined as the association with drug users, as well as abusing drugs with the delinquent peers. The *normative* dimension refers to the values, norms, and attitudes an individual is exposed through his associations. Through repeated interactions and associations with other drug users, a youth learns attitudes favorable to drug abuse. In essence, substance abuse becomes a normal and accepted behavior by like minded peers. It would follow that as the result of *normative* definitions accepted and practiced by youths involved with drugs, youths are exposed to *specific definitions* favorable to drug abuse and drug trafficking. In other words, Akers (1994) *social learning theory* would articulate that juveniles that abuse drugs may believe that it is not morally wrong to smoke marijuana, and therefore rationalize that it is acceptable to violate drug laws.

Akers (1994) *differential reinforcement* refers to the rewards and punishments that follow the deviant behavior. Specifically, deviant behavior committed or repeated will increase when the behavior is rewarded. For substance abusing juveniles, the drug use will result in a reward in terms of getting high, subsequently resulting in addiction and increase in drug use. Eventually, increase in drug abuse may lead to punishment in the form of being arrested, prosecuted, or forced to attend drug therapy mandated by a juvenile drug court, which may result in no longer repeating the illegal behavior.

Additionally, Akers (1994) research proposes that imitation plays a significant role in learning *prosocial* and deviant behavior in the initial acquisition and observation of primary groups such as family and peers, but it also depends on the characteristics of the role model. However, *imitation* does influence the repetition of behavior, in this case being drug use and

drug trafficking. Obviously, *imitation* plays a significant role in learning how to use drugs and how to deal drugs, as well.

Application of Social Learning and Differential Association Theories

The structure of family based therapy programs can be interpreted as being based upon social learning theories. The family based drug treatment programs like the MDFT or MST can be applied to the elements of Aker's (1994) social learning theory in several ways. For example, as described earlier, MDFT treatment is applicable not just to the individual, but to the parent and family interaction domain, as well as the *extrafamilial* domain in order to encourage *prosocial* activities as defined by Liddle et al. (2009). The MDFT also deals with problems involving the guardians by having therapists meet alone with parents as needed in order to improve their communication and parenting skills in hopes of changing their behavior and attitudes towards drug use.

On the other hand, the MST deals more directly and specifically with the individual, family, school, peers, and other social network problems that may contribute to delinquency and drug abuse. As Henggeler et al. (2002) outlined, MST interventions provided training for guardians to better monitor the juvenile's whereabouts, activities, and social network involvement to increase *prosocial* activities. Multisystemic therapy interventions include the use of punishment and rewards by teaching parents to develop *reinforcers* to influence positive behaviors, and increased supervision as a consequence to undesirably behavior. In other words, MST is designed to encourage association with peers involved in *prosocial* activities, and teach both juvenile and parents to reject positive attitudes about drug abuse. Using the elements of social theory and differential association, the MST is designed to reverse drug use trends by

teaching new ways to socialize, modify behavior, and encourage involvement in *prosocial* activities. The effectiveness of MST can be enhanced by mandated juvenile drug court through the use of rewards and punishment, and closer supervision.

Based on the above discussions, it is clear that the family based interventions are fully grounded in the principles of social and differential association theory as described by Akers (1994). The integration of social learning theory and Sutherland's differential association into family based therapy can be observed through the MST's community based interventions designed to treat the host of complex social variables associated with juvenile drug abuse and delinquency.

SECTION IV. COMMUNITY BASED PROGRAMS AND MST

As commented by Watson (2004), the juvenile justice population is a diverse population requiring progressive treatment approaches that are integrated and multi-modal. In order for the juvenile rehabilitation process to be effective, it must be highly structured, intensive, address specific behaviors, and involve family members and community resources. However, community based programs are burdened with providing a variety of interventions designed to treat juvenile behavioral problems ranging from substance abuse, mental health illness, gangs, and delinquency. Subsequently, the dissemination, transportation, and implementation of evidence based programs like MST within the context of FC environment is crucial to successful treatment outcomes. As previously discussed, there are a multitude of family based therapies that have been utilized in FC programs. However, the efficacious MST modality has demonstrated a long track record of success in clinical settings, and in real world conditions like the Crisis Intervention of Stark County and the Neighborhood Solutions Project community based programs.

MST Transportability

Evidenced based therapy proven to be effective in clinical trial evaluation studies doesn't necessarily mean they work in real world conditions experienced in community based settings. Consequently, prior to dissemination of the product services, transportability must be addressed to make sure the therapy program being marketed actually works in real world conditions as reported by Schoenwald (2008). The research conducted by Schoenwald (2008) demonstrated that MST fidelity can be maintained by utilizing a sound transport strategy and implementation process when exported from a clinical setting into a community based environment. This section

will provide a brief description about the preparation and development required to transport MST, fidelity measurements utilized, and the validation of the MST transport system as outlined by Schoenwald (2008).

In order to transport MST programs into community based settings, a transport system comprised of numerous personnel with different responsibilities and skills must be organized. The MST transportation system described by Schoenwald (2008) has the capability of providing clinical trials-level training, supervision, consultation, and monitoring therapist's treatment plans at the community program level. To accomplish this level of service in a community setting, the Medical University of South Carolina (MUSC) MST treatment developers obtained assistance from MST Services, LLC, identified as a university-licensed technology transfer organization according to Schoenwald (2008). To improve the delivery of service, the MST Services took over the management of transportation of MST nationwide, recruitment of doctoral level MST experts, and continued to provide training in MST to provider organizations looking to expand their programs.

Schoenwald (2008) reported that the increase in demand for MST led to the creation of MST Network Partners made up of providers having experience in implementing and developing MST programs. To keep intact the MST fidelity in a community setting, the MST demand characteristics described by Schoenwald (2008) were incorporated into the transport strategy. The MST demand characteristics are pertinent to a successful service delivery of treatment at the community setting level. Schoenwald (2008) identified the MST demand characteristics as the following: home-based model of service; 24 hour per day, 7 days a week availability of therapist; low case loads; and on-going training. Schoenwald (2008) explained that this particular transport strategy model was utilized to address legal mandates, organization policy

and regulation, funding, and cross agency coordination, all of which can have an impact on the fidelity of MST. As part of the effort to continuously improve the process of transportability and implementation of MST with fidelity, the MST Services kept consistent with the Continuous Quality Improvement (CQI) philosophy of monitoring and improving methods of implementation (Schoenwald, 2008).

Schoenwald (2008) found that MST Services took further steps to demonstrate the validity of the transport strategy model by applying proven fidelity measures previously applied to a 9-site study conducted by the OJJDP. As reported by Schoenwald (2008) the fidelity measures applied at multiple levels in the OJJDP study were purposely incorporated to ensure quality assurance. Schoenwald (2008) defined the measures as follows: the *Therapist Adherence Measure* (TAM), *Supervisor Adherence Measure* (SAM), and the *Consultant Adherence Measure* (CAM). Schoenwald's (2008) examination revealed that the SAM and TAM as applied at multiple levels within the context of the 9-site study demonstrated transport fidelity. In addition, subsequent outcomes revealed a casual relationship between the therapist and supervisor adherence to MST principles to the 43-45 percent decrease in youth criminal activity and drug use as reported by OJJDP (Schoenwald, 2008). The efficacy and validity of the MST transport strategy is further supported by the current 15 Network Partners (4 international) which deliver MST services to 17, 300 youths in 32 states and 10 countries per year according to Schoenwald (2008).

Crisis Intervention Center of Stark County

Schaeffer et al. (2008) reported that the Family Services Research Center has been developing three initiatives involving MST adaptations designed to increase the effectiveness of

real world drug abuse treatment and prevention. For the purpose of this research, the second initiative, Crisis Intervention of Stark County in Canton, Ohio will be examined.

According to Schaeffer et al. (2008), numerous studies have documented that 50 to 99 percent of youths and adults receiving treatment for substance abuse reported a history of maltreatment. Since maltreatment poses a significant risk for substance abuse and other negative life outcomes, the staff at the Crisis Intervention Center also treats caregivers through Community Reinforcement Approach (CRA), which is an adaptation of standard MST as reported by Schaeffer et al. (2008). Since it has been reported that approximately 17 to 26 percent of caregivers of youths receiving MST have drug use problems themselves, the Crisis Intervention Center integrated the CRA into their treatment programs according by Schaeffer et al. (2008). The application of the CRA involves frequent urine tests, vouchers for clean screens, and teaching the caregivers drug refusal skills as reported by Schaeffer et al. (2008).

According to Schaeffer et al. (2008), researchers selected the Crisis Intervention Center of Stark County because of their successful track record of being an MST provider for more than eight years. Schaeffer et al. (2008) discovered the Crisis Intervention Center to be well staffed by 3 MST teams consisting of 11 therapist, 2 supervisors, and a consulting child psychologist. In addition, all teams receive clinical advise from an Ohio based licensed MST consultant. The Crisis Intervention Center also has a website (www.circstark.org/services) providing a 24 hour “hotline”, and description of services available 7 days a week. The services include crisis telephone counseling; face to face crisis counseling; mental health assessment; pre-hospital screening; screening and intake for battered women; crisis counseling for children and adolescents; crisis stabilization unit; and detoxification unit. The Crisis Intervention Center of

Stark County commitment to the community it serves is evident by the services it provides, and clearly defined in their mission statement:

It is the mission of the Crisis Intervention and Recovery Center, Inc., to provide person-centered crisis intervention, stabilization, and recovery-based services in the least restrictive environment feasible, and to respond to evolving community mental health and chemical dependency programming needs by developing and providing needed services. (www.circstark.org/about us)

The importation of the hybrid efficacy-effective CRA into the community was possible through the collaboration of public agency administrators, local community residents, and MST consultants as reported by Schaeffer et al. (2008). Although the CRA adaptation is an ongoing treatment program that is still developing, the CRA holds promise for the creation and dissemination of the next generation evidenced based treatment practices found in MST.

Neighborhood Solutions Project

As part of an effort to reduce incarceration, residential care, and long term hospitalization, the state of South Carolina funded a Healthy South Carolina initiative in North Charleston. The initiative was named the Neighborhood Solutions Project and developed by researchers Scott W. Henggeler and Cynthia Cupit Swenson as documented by Swenson et al. (2005). As part of the Neighborhood Solutions Project, Swenson et al. (2005) reported that researchers were tasked to evaluate the effects of developing and implementing a collaborative project utilizing MST to address community violence and youth substance abuse problems in

disadvantaged neighborhoods. According to Swenson et al. (2005), the selection of Union Heights Community by researchers was based on the high crime rate, high juvenile arrests rates, number of maltreatment reports, and poverty in the area. The research evaluation project took three years to conduct and cost the state of South Carolina \$600,000 as documented by Swenson et al. (2005).

To conduct an evaluation study of the Neighborhood Solutions Project, Swenson et al. (2005) advised that researchers elected to utilize four groups of juvenile participants. The first group of 17 youths was labeled the Neighborhood Solutions clinical sample (NS-clinical); the second group was the control group labeled the Comparison clinical sample; the third group of 16 participants was comprised of youths referred by the school (NS-school); and the fourth group of 31 participants was a sample of well adjusted youths (NS-healthy). Post and pre-treatment outcomes were reported based on arrest data and self-reported criminal activity as documented by Swenson et al. (2005). While most youths were referred by community members, 8 youths were referred by the juvenile drug court.

Unfortunately, the comparison group was not considered an adequate sample, so no between-groups analysis was conducted as reported by Swenson et al. (2005). However, Swenson et al. (2005) reported treatment outcomes demonstrated only 29 percent of the 17 youths in the NS-clinical group as being re-arrested during intensive MST treatment, but none were arrested for drug related crimes. The outcome results for the NS-clinical group are impressive considering that pre-treatment data reported that 59 percent had been arrested for drug charges; 71 percent for violent offences; 29 percent for theft, 35 percent for destruction of property; and 47 percent for school related chargers as documented by Swenson et al. (2005). Of

particular importance was the treatment outcomes reported for the 13 youths having intensive history of marijuana and cocaine use, 8 of which were referred by the Charleston County JDC.

The requirements for the Charleston County JDC as reported by Swenson et al. (2005) included weekly appearances by caregivers and youths before the judge; weekly drug testing; engagement in community based drug abuse treatment; and consequences, both negative and positive, based on the drug testing results and counselor recommendations. Swenson et al. (2005) reported that all 13 youths completed an intensive MST program ranging 3 to 9 months with the JDC referrals completing 12 months of treatment. The outcomes for the referral youths demonstrated an 85 percent reduction in drug use, decrease in preoccupation with drugs, and marked decreased in association with peer groups involved in drug activity as reported by Swenson et al. (2005).

As mentioned earlier, few community programs incorporate evidence based treatment, and even fewer utilize the influence and leverage provided by the juvenile drug courts. Although limited research has been conducted evaluating outcomes of MST enhanced by JDC, this potent combination has proven to significantly reduce drug abuse and recidivism.

SECTION V. JUVENILE DRUG COURTS

Although the juvenile drug court (JDC) system is decentralized in every district across the nation, the goal remains the same. The mission of the JDC is to provide the best possible treatment to the juvenile offender; however, the JDC's informal structure does not always provide the best treatment available. Although drug abuse among juveniles may have decreased, it still remains an overwhelming social problem that needs to be addressed not just through law enforcement efforts, but also through improved social service strategies. The following section provides a brief history of juvenile drug courts (JDC), and the various treatments that can be mandated by JDC in an effort to retain enrollment during therapy and reduce recidivism. In order to provide a broad view of the internal politics within the JDC system, a brief discussion concerning the structure and organization of JDC will be included. It should also be noted that the administration of juvenile drug courts is crucial to the effective delivery of services that are facilitated through cross coordination with social agencies. To decrease recidivism for juveniles enrolled in JDC mandated programs, implementation of advanced treatment modalities and cross agency coordination must take place in order to provide the best service possible.

History of Drug Courts

As a response to the rise in drug use and drug related violence overburdening our criminal justice system, McCollister et al. (2009) reported that advocates for rehabilitation efforts created drug court programs in the 1980's as an alternative to incarceration. The purpose of drug courts was to provide rehabilitative alternatives to incarceration for non-violent offenders through cross coordination between probation, courts, substance abuse treatment providers, and other community based services as documented by McCollister et al. (2009). The first drug

court to deal with treatment and drug related crime was established by Dade County, Florida in 1989 as documented by the Office of Justice Programs (OJP, 2008).

McCollister et al. (2009) reported that over the past 20 years drug programs have become popular and widely accepted by the correctional community as evidenced by the current 1,600 drug courts operating nationwide. The juvenile drug court (JDC) system was created in the mid 1990's by several juvenile court judges from San Jose and Vasalia, California, and Pensacola, Florida as the result of handling similar adult and juvenile dockets dealing with substance abuse that often involved drug users from the same families as documented by Cooper (2002). Subsequent success in San Jose, Vasalia, and Pensacola led to the expansion of the JDC system in other judicial districts nationwide through the support of the federal government.

Abadinsky's (2006) findings revealed that funding to establish or expand drug courts was initiated by the federal 1994 Crimes Act Bill. According to McCollister et al. (2009), popularity of adult drug courts led to the increase in JDC programs nationwide, and by 2004 there were 357 JDC in operation in the U.S. The OJP (2010) reported that the increase in JDC programs continued to flourish, and by 2007 there were 737 JDC operating in communities nationwide.

Organizational Structure and Administration

The organizational structure of drug courts follows the "informal structure" model as discussed by Stojkovic et al. (2008). Every state has a variation of drug courts that are organized and operated independent of other drug courts or social agencies; however, Gottfredson et al. (2007) reported that every drug court uses similar measures of outcomes such as graduation, re-arrests for drug offenses, and re-arrests for any non-drug offense used for the evaluation of the programs. The philosophy of drug courts follows the "legal therapeutic jurisprudence" model

that intertwines legal rules, procedures, and stakeholders in furtherance of successful outcome through the use of drug treatment and court monitoring as documented by Gottfredson et al. (2007). The interactions between personnel from drug courts, treatment programs, probation, and other social services develops into what is known as informal working groups or teams, as described by Stojkovic et al. (2008). These informal working groups share the same goals and values, which is to provide the best possible treatment for juvenile drug offenders. To provide an understanding of the administration and structure of a juvenile drug court, the following sections include discussions concerning daily operations of the North Dakota Juvenile Drug Court (OJP, 2007) and Aiken County Juvenile Drug Court programs as reported by Miller et al. (2007).

Cross Agency Coordination

The importance of coordination between JDC, social and health services, law enforcement, school, treatment providers, and other community sources can not be overstated. According to research conducted by Cooper (2009), the majority of juveniles with substance abuse problems that enter the juvenile justice system are not identified and therefore do not receive any kind of treatment. As a matter of fact, Cooper (2009) reported that the National Center on Addiction and Substance Abuse at Columbia University estimates that fewer than 3 percent of youths in the juvenile justice system actually receive treatment. Cooper (2009) advises that social services need to pay attention to “red flags” such as youths being involved in truancy, disorderly conduct, and similar red flags that are frequently associated with drug use. As the result of decreases in referrals from prosecutors, police, schools, and the other commonly known community sources, the enrollment in JDC programs appears to have dropped according to Cooper (2009). Knight (2008) strongly emphasizes that the collaboration and partnerships

between agencies working with the juvenile courts is crucial for meeting the standards of therapeutic jurisprudence. Unfortunately, at this time there is insufficient research available to determine how or if treatment outcomes are affected by cross-agency cooperation as discovered by Cooper (2009).

North Dakota Juvenile Drug Court

Like most organizations in the criminal justice system, the North Dakota Juvenile Drug Court (NDJDC) also has a mission statement. The mission statement of the NDJDC focuses on the reduction of juvenile crime and substance abuse by referring the youths to a court managed treatment program, and emphasizes personal responsibility on the part of the participant as documented by the OJP (2007). The NDJDC administration's organizational structure is staffed by professionals and community members working in concert for the best interest of the juvenile.

Review by the OJP (2007) reported that the NDJDC organizational structure is comprised of a judge, juvenile court officer, the coordinator, state's attorney, defense attorney, school representative, law enforcement and treatment providers that meet on a weekly basis to make recommendations and review the participant's progress. The judge has the final adjudicative authority in the drug court, and the responsibility of making sure that the therapeutic and restorative aspects of the JDC are met. In addition, the judge applies the appropriate sanctions and incentives to enhance the NDJDC accountability program requirements as reported by OJP (2007).

The NDJDC juvenile court officer ensures that the juvenile is abiding by the probation rules and court policies, and reports to the JDC team concerning the participant's conduct. Also, the juvenile court officer provides orientations to the youth and family, and administers alcohol

and drug testing throughout the program's different phases as reported by OJP (2007). The coordinator is responsible for maintaining a record on file for each juvenile, keeping track of progress, and acting as the point of contact for other members of the team. More importantly, as discovered by the review conducted by OJP (2007), the coordinator keeps statistical data, budget information, and relevant information used in the evaluation of the NDJDC program outcomes.

The primary role of the state's attorney is to review petitions and the juvenile's case on a weekly basis, implement JDC procedures and policies for the program, and assist in the staffing of juveniles into the program. The defense counsel plays the role of advocacy and guardian of the juvenile's constitutional rights within the frame work of the NDJDC as documented by OJP (2007).

The school will provide the NDJDC information concerning the youth's academic progress that includes grades, attendance, and any disciplinary reports and other relevant information. The juveniles' families are required to provide a supportive environment, supervision, and to make sure that the youth continues his/her active participation in the program. Finally, the law enforcement officer is expected to provide assistance in monitoring the juvenile's outside activities, and be the liaison between the local law enforcement and the JDC team as outlined by OJP (2007).

Aiken County Juvenile Drug Court

The Aiken County Juvenile Drug Court (ACJDC) in Southern Carolina is a court supervised program designed for non-violent juveniles with a substance abuse problem as observed by Miller et al. (2007). The participants are required to attend several weeks of counseling accompanied by a parent (s) three to four times a week; submit to random drug

testing; and be in compliance with the individual treatment plan mandated by the JDC as reported by Miller et al. (2007). The review conducted by Miller et al. (2007) revealed that the treatment plans included sanctions, such as written assignments, community service, restitution, and increased drug screenings. By reviewing JDC records, Miller et al. (2007) found that the participating juveniles were typically referred by arresting police officers, school resource officer, other school personnel, attorneys, or by family court officials.

Once the juvenile is referred, an assessment is conducted to verify eligibility into the drug court program. According to the requirements, the juvenile must be a non-violent offender, entered a plea with the juvenile family court, be between the ages of 12 to 16, and have a history of alcohol/drug abuse as reported by Miller et al. (2007). In addition, the juvenile must be diagnosed by a clinic representative using the DSM-IV manual. Miller et al. (2007) also reported that juvenile participants can be enrolled in a treatment program lasting about 12 to 15 months depending on the individual treatment plan prescribed.

Traditionally, juveniles were either subjected to imprisonment or given probation that included enrollment in a community based rehabilitative programs dealing with a range of problems from drug abuse, delinquency, to gang activity. Juvenile drug courts usually follow the adult drug court model by requiring troubled youths to enroll in a community based drug treatment program with enhanced judicial oversight as documented by Miller et al. (2007). Historically drug courts have relied on community service based treatment therapy, but more recently drug courts have experimented with drug therapy programs utilizing family based modalities in an effort to increase retention, graduation, abstinence during treatment, and to decrease drug abuse recidivism (Henggeler, 2006). The most progressive treatment, MST,

incorporates elements that are family based and cognitive based therapies. In addition, research supports better outcomes of treatment when they are judicially mandated, as well.

SECTION VI. RECOMMENDATION

Evidence based drug treatment therapies have been extensively studied in the last 20 years, and have demonstrated to be effective in treatment of juvenile drug abuse and delinquency. In particular, research has demonstrated the efficacy of MST enhanced by JDC oversight to actually increase abstinence during treatment, reduce criminal activity, and decrease drug abuse recidivism as documented by Henggeler et al. (2006). Unfortunately, research has demonstrated that poor cross agency coordination has led to the decrease in referrals and less juveniles being treated for drug abuse (Cooper, 2009). Based on the findings, it seems that improved cross agency coordination would increase the number of juveniles treated. Improved cross agency coordination combined with JDC/FC enhanced by MST should have a definite impact in reducing long term drug abuse recidivism among youths treated through the juvenile justice system. In addition, the cost effective benefit resulting from the implementation of JDC mandated MST/FC therapy surpasses expectations compared to stand alone FC, or other evidence based juvenile drug abuse treatment programs.

With the increase in drug abusing youths entering the juvenile justice system, federal organizations working with state governments have initiated FC programs enhanced by MST/JDC to combat this trend nationwide. Community based organizations like the Crisis Intervention Center of Stark County (CICSC) and Neighborhood Solutions Projects (NSP) are prime examples of successful government sponsored treatment programs. The CICSC and NSP approach to treatment inherently included principles from the social learning theory and Sutherland's differential association that enabled them to reduce juvenile drug abuse recidivism, and increase abstinence throughout treatment. For example, both FC programs enhanced by MST/JDC were able to decrease association with drug abusing juveniles, increase *prosocial*

activities, reverse favorable attitudes toward drug use, and develop *reinforcers* to encourage positive behaviors. Understanding principles of social learning theory and Sutherland's differential association can increase favorable treatment outcomes as evidenced by the CICSC and NSP programs. In agreement with the principles of social learning and differential association theories, the CICSC and NSP community programs specifically dealt with juveniles at different treatment levels that included individual attention, family issues, academic performance, peer associations, and other social networks contributing to drug abuse. To increase *prosocial* behavior, FC/MST programs need to continue to capitalize on the judicial influence exerted by juvenile drug courts.

JDC Mandated Treatment

Depending on the decision made by the JDC judge, a juvenile may receive a mandatory treatment referral requiring to enroll into a community based program or adolescent drug treatment facility. There are other various treatment options that judges can recommend such as Alcoholics Anonymous (AA), Narcotics Anonymous (NA), outpatient, day treatment, inpatient, and residential therapeutic communities. Polakowski et al. (2008) observed that participant experiences within the DTC were strong predictors of termination and recidivism; however, research conducted by Terry et al. (2000) demonstrated that treatment outcomes were better predicted depending if the treatment was voluntary or involuntary. Terry et al. (2000) reported that when treatment was voluntary, participants tended not to complete treatment, but frequently relapsed into drug use and criminal activity. In their research, Terry et al. (2000) demonstrated that dropout rates for juvenile participants in voluntary drug treatment programs were considerably higher than involuntary participants. For example, the dropout rate was 82 percent

for outpatient treatment- drug free programs; 35 percent for methadone maintenance programs; and as high as 90 percent for participants enrolled in therapeutic communities as observed by Terry et al. (2000). Also, where juvenile participants voluntarily enrolled in a drug treatment program, Terry et al. (2000) reported that 92 percent of the youths relapsed during the first year after discharge from a residential facility.

Other studies have proven that added pressure from drug courts increased the likelihood participants will complete a drug treatment program. In research conducted by Gottfredon et al. (2007), participants in an adult drug treatment court (DTC) in Baltimore demonstrated significantly lower rates of recidivism at the two year follow up compared to control groups not receiving DTC. Similarly, Polakowski et al. (2008) demonstrated that treatment mandated by the JDC does increase retention, graduation, and reduce recidivism.

Although research conducted by Polakowski et al. (2008) demonstrated that JDC treatment largely improves graduation and reduces recidivism, there are a number of youths enrolled in JDC treatment programs that still fail to complete treatment and/or return to criminal activity. Polakowski et al. (2008) compared a sample of JDC graduates with a similar sample of randomly selected JDC drop-outs from a Southwest community. Participants in Polakowski's et al. (2008) research ranged from 12 to 16 years of age, all were non-violent offenders, and all spent a minimum of 7 months in the JDC program. The results of Polakowski's et al. (2008) research revealed that 38 percent of those graduated were referred back to juvenile court. In comparison, only 6 percent of the terminated group from the Southwest FC was not referred back to juvenile court. The importance of retention was demonstrated by the fact that no one from the graduated group was incarcerated within the first year following the treatment; however, up to 53 percent of the terminated group were arrested and incarcerated as reported by Polakowski et al.

(2008). As evidenced by research presented by Polakowski et al. (2008), judicial oversight of drug court programs does have a positive impact on treatment outcomes; however, more needs to be done to improve JDC/FC retention in order to increase the number of youths graduating from treatment programs. By enhancing JDC/FC programs with potent family based treatment modality such as MST, a wider range of youths can be retained and treated further reducing drug abuse recidivism among juvenile offenders.

MST Enhanced by JDC

While there are a number of treatments available for juvenile behavioral problems, decades of research strongly supports the use of family based modality in the fields of drug abuse, violent crimes, mental health, and clinical research as reported by Terry et al. (2000). Although JDC preferential treatment seems to be the FC approach, Henggeler et al. (2006) demonstrated that when MST was implemented into FC and enhanced by JDC, the rate of juvenile drug abuse recidivism for youths graduated from the program was drastically reduced.

Henggeler et al. (2006) research is important because it demonstrated the effectiveness of integrated evidence based practices such as MST, and subsequent improved outcomes enhanced by JDC. The study conducted by Henggeler et al. (2006) evaluated the outcomes of 161 juveniles treated with MST integrated with community based (FC) practices in a 12 month long JDC program. Drug abuse and criminal activity was measured by self-reports, arrest records, drug testing, and mental health was assessed through youth and caregiver reports. The findings in Henggeler et al. (2006) concluded that the use of evidence based treatments within the JDC forum improved youth drug related outcomes. More specifically, the study revealed that the MST combined with JDC was more effective at reducing alcohol use, marijuana use, and poly-

drug use compared to JDC/FC as observed by Henggeler et al. (2006). Further examination of Henggeler et al. (2006) research proved JDC was stronger than FC at reducing drug use, and MST/JDC produced significantly better treatment outcomes than JDC alone. In support of Henggeler et al. (2006), the National Institute on Drug Abuse reported that MST was one of the few juvenile treatment programs able to produce long-term reductions in drug use and criminal behavior among substance abusing juvenile offenders.

To further demonstrate the efficacy of MST/JDC, Swenson et al. (2008) reported that in a study involving more than 150 substance abusing juveniles, MST youths tested positive for drug use in only 13 percent of their drug court appearances. With over \$30 million invested in research and development, and evaluation of MST in the past 30 years, studies of MST have consistently demonstrated the ability to reduce drug abuse recidivism as reported by Swenson et al. (2008). By transporting MST to FC programs, a greater number of youths in need can be treated; furthermore, MST/FC enhanced by JDC will have a significantly stronger propensity to reduce drug abuse recidivism nationwide. However, in real world application, a fair question asked by interested stakeholders might be whether MST is cost effective enough to be disseminated and transported to FC programs nationwide.

Cost Effectiveness of MST

The costs of transport and implementation of MST programs may limit the number of community organizations from adopting them due to the on-going training, supervision, and consultations required to maintain fidelity as reported by Franklin and Hopson (2007). However, the cost effectiveness of MST should not be measured by the dollar value spent on transport or implementation alone. Instead, budget program analyst should take into account the projected

savings that will be accrued by our criminal justice system by implementing MST services to a greater number of FC programs throughout neglected communities across our nation. For example, a cost analysis of crime conducted by McCollister et al. (2007) demonstrated the cost savings produced by the implementation MST and JDC/FC programs.

The cost analysis conducted by McCollister et al. (2007) assessed the cost of criminal activity for nine specific crimes measured at pre-treatment baseline, and for 4 months and 12 months thereafter. The nine specific crimes measured included disorderly conduct, vandalism, running away from home, burglary, stolen property, larceny/theft, aggravated assault, drug sales, and robbery as documented by McCollister et al. (2007). The sample involved 161 juvenile from the South Carolina juvenile system that were enrolled in community based programs using the following treatment format: JDC (n=38), case management (CM) supporting JDC/MST (n=43), JDC/MST (n=38), family court (n=42), and JDC combined (n=119) as documented by McCollister et al. (2007). The cost analysis compared savings accrued by preventing aggravated assault crimes through JDC/MST/CM treatment in comparison to the group (n=42) receiving supervision from the family courts as described by McCollister et al. (2007). According to McCollister et al. (2007) analysis, a single act of aggravated assault can cost as much as \$111,431 in losses to the victim and criminal justice system.

In the 12 month assessment, McCollister et al. (2007) estimated that the baseline cost for criminal activity per individual under the supervision of family courts was \$228,874 versus the \$54,099 for juveniles receiving JDC/MST/CM. The outcomes for the 12 month assessment revealed that in each of the JDC conditions, criminal activity was significantly reduced. For example, McCollister et al. (2007) reported that JDC/MST/CM conditions grossed \$157,853 less criminal activity costs than the family court group. The cost of treatment per intervention was

documented as \$3,718 for family court; \$9,178 (JDC); \$12,499 (JDC/MST); and \$12,994 (JDC/MST/CM) as documented by McCollister et al. (2007).

As reported earlier, juvenile drug abuse impacts our communities at all levels of society, and burdens our nation's health system, schools, criminal justice system, and other social services in general. Schoenwald (1996) reported that the cost of MST can cost upwards of \$5,063 per youth for treatment lasting up to 12 months. However, Schoenwald (1996) reported that without taking into account the cost of treatment, one lifetime of crime in combination with substance abuse can cost our society more than \$1 million dollars. In a study examining the cost effectiveness of evidence based treatment (EBT), Franklin and Hopson (2007) argued that EBT practices can be extremely expensive and time consuming to implement; however, communities can save money by preventing incarceration and residential treatment for juveniles abusing drugs. Subsequently, the cost effectiveness of MST should be measured in terms of savings accrued by our criminal justice organizations and the investment made for our future generation.

In a one year study involving the examination of MST incremental costs, Swenson et al. (2008) reported that the costs of MST are offset by the savings incurred as the result of reducing days of incarceration, hospitalization, and residential treatment for that year. Literature presented by academic institutions, non-profit groups, private organizations, and government organizations like ONDCP, SAMHSA, OJJDP, and NIDA have made strong cases supporting the argument that juvenile drug abuse tops as one of our nation's primary health concerns. Our search and vision for an efficacious evidence based treatment should not be limited by the cost alone, but treatments like MST/JDC/FC should be viewed as a step in the right direction, and a necessary investment that will pay profitable dividends by transforming youths in need into productive members of society.

SECTION VII. SUMMARY AND CONCLUSION

Federal government organizations, such as OJJDP, NIDA, OJP, SAMHSA, ONDCP, and other academic institutions have invested millions of dollars on substance abuse research in the last three decades. It was not until the late 1980's that our institutions began focusing on evidenced based research to reduce juvenile drug abuse and recidivism. Through the efforts of academic researchers, clinicians, and social scientist, family based therapy modalities like MST, MDFT, CBT, or LST have been engineered to reduce juvenile drug abuse and increase abstinence during treatment in clinical trials and in real world conditions like community based programs. More specifically, researchers have demonstrated that the application of MST/JDC in community based programs consistently produced favorable treatment outcomes in the reduction of juvenile drug abuse recidivism, and increase in abstinence and graduation over other family based modalities. The history of drug courts revealed the importance of cooperation between JDC, FC, social agencies, and treatment providers. Researchers demonstrated that more juvenile drug abusers can be treated through competent cross agency coordination.

In conclusion, better cross agency coordination can increase the number of drug abusing youths being treated within the juvenile justice system through increased enrollment in FC programs enhanced by MST/JDC. Several studies examining the financial commitment required for MST/JDC/FC have demonstrated the cost effectiveness in terms of crime prevention, and dollars saved by reducing incarceration and residential treatment of juveniles. By enhancing JDC/FC programs with potent family based treatment modality such as MST, a wider range of youths can be treated to further reduce drug abuse recidivism in our society.

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