INCARCERATED YOUTH ATTENDING TEEN ADDICTION ANONYMOUS:

AN EXPLORATORY STUDY

A Clinical Research Project
Presented to the faculty of the Arizona School of Professional Psychology at Argosy University

In partial fulfillment of
The requirements for the degree of

Doctor of Psychology in Clinical Psychology.

by

Brittany Pierce

February 2016

INCARCERATED YOUTH ATTENDING TEEN ADDICTION ANONYMOUS: AN EXPLORATORY STUFDY

This Clinical Research Project by Brittany Pierce, directed and approved by the candidate's Clinical Research Project Committee, was approved by the faculty of the Arizona School of Professional Psychology at Argosy University in partial fulfillment of the requirements of the degree of Doctor of Psychology in Clinical Psychology.

Frederick S. Wechsler, Ph.D., Psy.D., ABPP
Program Dean, Clinical Psychology Programs

Clinical Research Project Committee

Lawrence M. Sideman, Ph.D., ABPP
Committee Chair

Rene McGovern, Ph.D., ABPP
Committee Member

Jennifer Jones, Psy.D.
Committee Member

2/2/16
Date

INCARCERATED YOUTH ATTENDING TEEN ADDICTION ANONYMOUS: AN EXPLORATORY STUDY

ACKNOWLEDGMENTS

I wish to acknowledge those who were instrumental in helping me be successful in this process. I would like to express my sincere gratitude to my committee chair Dr. Lawrence Sideman. Without your expertise, patience, and continuous guidance this research project would not have turned out as it did.

I would like to thank my committee members Dr. Rene McGovern, and Dr. Jennifer Jones. Dr. McGovern, you constantly encourage me to think outside the box and I am grateful for your support on this research project. Dr. Jones, I appreciate your frequent pep-talks and ongoing guidance.

A big thank you to Susan Rothery of Teen AA. I appreciate the opportunity to study Teen AA. Your dedication to helping kids is truly inspiring.

I would also like to thank my family and friends for your endless support and encouragement while I completed this project. Finally, thank you to all of the participants in this study for taking the time to share your opinions and experiences with me.

ABSTRACT

Adolescent substance users present with unique developmental needs that must be taken into consideration when providing treatment and ongoing aftercare to this population. Self-help groups, specifically Twelve Step programs, have been suggested to be an effective adjunct to primary treatment and an option for continuing care (Gossop, Stewart, & Marsden, 2007; Kelly, Magill, & Stout, 2009; Kelly, McKellar, & Moos, 2003; Moos & Moos, 2004; Ouimette, et al., 2001). Teen Addiction Anonymous (Teen AA) is a Twelve Step program that seeks to provide adolescents with a developmentally appropriate opportunity to address their addictive behaviors. The purpose of the current study was to investigate factors that may contribute to incarcerated youths' willingness to participate in Teen AA groups.

Results indicated that more than half of participants perceived Teen AA to be helpful, as they reported they received support from similar aged peers, learned new coping skills, discussed personal issues, and focused on Twelve Step material. Approximately half reported they would rather attend Teen AA than other groups. Additionally, half of them reported they were taking steps to make changes in their substance use patterns, however, approximately half reported minimal recognition of having a substance use problem. Of note was that slightly over half of participants reported they did not plan to attend Teen AA post release. Understanding the qualities of the program that attract youth can inform treatment providers of the aspects of support groups perceived to be most beneficial, while improving attendance, increasing retention, and improving long term treatment outcomes.

TABLE OF CONTENTS

TABLE OF APPENDICIES

CHAPTER ONE: INTRODUCTION

Substance use among American adolescents continues to be a pervasive issue that can lead to serious negative consequences. The National Center on Addiction and Substance Abuse (CASA, 2011) reported 75% of all high school students have used alcohol, tobacco, or another illicit substance in their lifetime and 20% of those students become addicted to a substance in their lifetime. The National Institute on Drug Abuse (NIDA, 2013) substantiated these findings and found 70% of high school seniors have consumed alcohol, 50% have used an illicit substance, and more than 20% have used a prescription drug for nonmedical purposes. Further, research has indicated that 90% of Americans classified as "addicted" by a clinician, reported using substances before age 18 (CASA, 2011). These alarming numbers suggest adolescents are at increased risk to use substances and become addicted, thus, preventative measures, problem identification, and treatment options are of the utmost importance.

Various theoretical models and modalities have shown to be effective in treating adolescents with substance use problems (Blonigen et al., 2011; Brown, Seraganian, Tremblay, & Annis, 2002; Chi et al., 2009; DeLeon, 2000; Kelly et al., 2008; Miller & Rollnick, 2012; Smith, Meyers, Miller, 2001; Waldron & Kaimner, 2004; Yen, Wu, Yen, & Ko, 2004). However, once treatment is completed, relapse presents as a major concern. Oftentimes, community-based support groups have been recommended as an option for continuing care to assist in preventing relapse (Boisvert, Martin, Grosek, & Claire, 2008; Fisk, Rakfeldt, & McCormak 2006). Specifically, Twelve Step programs are widely known support groups proven to be an effective option for aftercare (Gossop, Stewart, & Marsden, 2007; Kelly, Magill, & Stout, 2009; Kelly, McKellar, & Moos,

2003; Moos & Moos, 2004; Ouimette, et al., 2001; Timko, Moos, Finney, & Moos, 1994; Tonigan, Connors, & Miller, 1998). Teen Addiction Anonymous (Teen AA) is a Twelve Step program that was developed by reviewing the available literature and with the assistance of a group of adolescents, addresses several limitations of current substance treatment programs. Teen AA seeks to provide adolescents with a developmentally appropriate opportunity to address any and all addictive behaviors (Teen AA, 2014).

Of issue, adolescents with substance use disorders seldom feel they need treatment and almost never seek it on their own (Miller & Flaherty, 2000). Almost half of all adolescents in substance abuse treatment are referred by the criminal justice system (CASA, 2011). Adolescents involved in the criminal justice system have also been reported to be amongst the most at risk and high-need, as they present with numerous vulnerabilities including chronic social, family, and educational adversities; histories of trauma and abuse, high levels of stress, poverty, unemployment, and violence (Stathis et al., 2013). Additionally, this population often experiences high prevalence of co-occurring mental health issues that makes relapse a more prominent issue (Stathis et al., 2013).

Group therapy is often the primary treatment modality utilized in juvenile corrections facilities (Miller & Flaherty, 2000). Working at a juvenile corrections facility, the principal investigator of this study observed youth often refusing to or protesting attendance in their weekly treatment groups. Interestingly, youth would voluntarily attend Teen AA groups where attendance was not required to earn release from the facility. The purpose of the current study was to investigate the variables that may contribute to youths' willingness to attend and participate in Teen AA groups.

Specifically, a sample of incarcerated youth was utilized to examine their reasons for attending Teen AA and their experiences in the groups.

Research Questions

This clinical research project sought to explore: 1) What motivates incarcerated youth to voluntarily attend Teen AA meetings? 2) Do those who participate in Teen AA perceive their substance use as a problem? 3) What elements of Teen AA do they perceive to be most helpful? 4) Are Teen AA participants motivated to change their behavior, as measured by the SOCRATES? 5) Do participants intend to attend Teen AA meetings post release? 6) What barriers do they anticipate might prevent them from continuing to participate? 7) Are there personal characteristics and/or perceptions of Teen AA that may be related to motivation to change?

Hypotheses

It is hypothesized that Teen AA participants: 1) Attend because of the support they receive from others and the pro-social skill development provided in the group 2) Report their substance use to be a severe problem (*Very Severe* or *Somewhat Severe*); 3) Report the leadership opportunity offered by the groups to be the most helpful element; 4) Indicate being in the *Taking Steps* category on the SOCRATES; 5) Do not intend to seek out Teen AA post release; 6) Report the lack of available/accessible Teen AA meetings and logistical factors, such as lack of transportation or meeting location inconvenience as the primary reasons for discontinued attendance post release; and 7) Report prior and current participation in substance abuse treatment and self-reported severity of substance use problem to be correlated to their motivation to change.

Understanding what attracts youth to voluntarily attend and participate in Teen AA may improve attendance and retention rates in substance abuse and other treatment groups, and help inform those clinicians who develop these programs. Additionally, findings could have specific implications for treating youth in correctional facilities and may apply to treating adolescents as a whole. Variables youth identify as attractive and beneficial in their treatment can be utilized in other types of treatment groups in order to increase motivation to participate. Societal effects may also be profound. Finding an intervention that adolescents are motivated to utilize can provide a pro-social environment where they can engage in treatment and address their substance use issues as well as co-occurring mental health issues. Addressing substance use among adolescents is imperative in reducing the prevalence of delinquent acts, lowering juvenile incarceration rates, and creating a safer community by fostering more productive members of society.

CHAPTER TWO: REVIEW OF THE LITERATURE

Substance use among adolescents continues to be an epidemic in American society. Recent research indicated illicit substance use is the leading cause of morbidity and mortality among adolescents (Johnston, O'Malley, Miech, Backman, & Schulenberg, 2014). The National Center on Addiction and Substance Abuse at Columbia University (The National Center on Addiction and Substance Abuse at Columbia University [CASA], 2011) reported misuse of prescription medications has become a widespread issue for millions of adolescents. In an annual self-report survey 1,003 12 to 17 year olds were asked to indicate the most prominent issues faced by their generation (CASA, 2012). Adolescents reported substance use to be a pervasive issue, as 26% reported tobacco, alcohol, and other substance use to be the greatest problem they encounter, followed by social pressures (18%) and academic pressures (11%). This epidemic is concerning given that adolescence is the developmental period of highest risk for the onset of alcohol and other substance use disorders and related difficulties that can have lasting effects on an individual's life (Thatcher & Clark, 2008).

Substance Use Disorders Among Adolescents

It is important to distinguish between experimental use and a diagnosable substance use disorder, as the latter indicates a more problematic pattern of use and associated impaired functioning. The most recent edition of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM 5; APA, 2013) identifies Substance Use Disorders as existing on a fluid, continuous spectrum that describes pathological patterns of behavior related to the use of a substance. They include impaired control, social impairment, risky use, and pharmacological criteria. If two or three

criteria are met, a *mild* disorder is diagnosed, four or five criteria indicate a *moderate* disorder, and six or more criteria suggest a *severe* disorder. A substance use diagnosis is indicated when there is:

> A problematic pattern of substance use leading to clinically significant impairment or distress within a 12-month time period, in which a substance is taken in larger amounts or over a longer period than was intended; a persistent desire or unsuccessful efforts to cut down or control the substance use; a great amount of time is spent in activities to obtain, use, or recover from the substance use; cravings; failure to fulfill major role obligations at work, school, or home as a result of substance use; continued use despite social or interpersonal problems; recurrent use in situations that are physically hazardous; continued use despite physical or psychological problems that have been caused or exacerbated by substance use; tolerance; and withdrawal symptoms (APA, 2013, pp. 483-484).

Substance Use Trends Among Adolescents

Surveys are conducted annually in the U.S. to examine trends in substance use. The National Institute on Drug Abuse examined the prevalence of substance use among adolescents, the availability of substances, and adolescents' perceived risk of abuse (Johnson et al., 2014). Utilizing a nationally representative sample of 41,700 adolescents in grades 8, 10, and 12 from 389 public and private high schools, results indicated that 30.2% of the adolescents had used an illicit substance in the past year and 39.1% reported using a substance at least once in their lifetime. This presented a statistically significant increase of 1.3% from the previous year (Johnson et al., 2014), due to the number of adolescents using marijuana (1.1% increase), while use of cocaine, crack cocaine, lysergic acid diethylamide (LSD), methylene-dioxy-meth-amphetamine (MDMA), methamphetamines, heroin, steroids, sedatives, and prescription medications remained unchanged from the previous year (Johnson et al., 2014). Additionally, Johnson et al. (2014) indicated a significant decrease (6.4%) in the number of adolescents using synthetic marijuana (spice) from the previous year. Results also showed a slight decrease

in the reported use of inhalants, salvia, and Vicodin. Alcohol was found to be the substance most widely used by adolescents, as 28% had consumed alcohol by the time they entered the 8th grade while 68% had consumed alcohol by the time they graduated high school. While these numbers are alarming, gradual declines have been noted, indicating lower levels of alcohol use among high school students (Johnson et al., 2014). A study by The National Center on Addiction and Substance Abuse (CASA) at Columbia University (2012) examined trends in adolescent substance users. Their survey of 1,003 adolescents aged 12 to 17 found that 75.6% of high school students reported using at least one substance in their lifetime, while 46.1% reported using substances at the time of the study (CASA, 2012).

While national surveys are helpful in that they provide a large amount of data from many geographic areas, Swanson (2009) noted national surveys are conducted with adolescents in school settings and, therefore, do not include incarcerated juveniles or adolescents who drop out of school. Further, various studies indicated substance use is particularly high among incarcerated youth and those who drop out of school, which would likely drastically increase the overall numbers of adolescents identified as using substances (Abram, Teplin, McClelland, & Dulcan, 2003; Teplin et al., 2002).

Age Differences

Annual surveys have reported age differences among adolescent substance users. Substance use disorders tend to be more prevalent as adolescents age. In a 2009 survey (CASA, 2011), 5.3% of 14 year olds, 9% of 15 year olds, 12.3% of 16 year olds, 15.6% of 17 year olds, and 20.2% of 18 year olds were diagnosed with a substance use disorder. Johnson et al. (2014) noted differences based on age and the particular substance used.

Of the 41,700 adolescents surveyed, 16.5% of 8th graders, 35.8% of 10th graders, and 45.5% of 12th graders reported using marijuana; 1.7% of 8th graders, 3.3% of 10th graders, and 4.5% of 12th graders reported using cocaine; and 4.2% of 8th graders reported using amphetamines, while 8.1% of 10th graders, and 12.4% of 12th graders reported using amphetamines (Johnson et al., 2014). Also of significance, 27.8% of 8th graders, 52.1% of 10th graders, and 68.2% of 12th graders reported using alcohol (Johnson et al., 2014). Thus, all age groups reported using substances; however, as they age, use increases and the development of substance use disorders become more prevalent. This information should be taken into consideration when developing substance use prevention programs and providing treatment interventions for adolescents in order to reduce the risk of substance use escalation and related problems.

Gender Differences

Research has also noted gender differences among substance using adolescents. In general, males have higher rates of illicit drug use and use more frequently than females (Johnston et al., 2014). Gender differences also vary by age, as 12th grade males have distinctly higher rates of substance use than 12th grade females, while 10th grade males have slightly higher rates of substance use than 12th and 10th grade females (Johnston et al., 2014). However, 8th grade females reported using substances slightly more frequently than 8th grade males (Johnston et al., 2014). CASA (2011) also found male adolescents were more likely than females to use marijuana (23.4% versus 17.9%) heroin (3.2% versus 1.7%), ecstasy (7.6% versus 5.5%), and cocaine (7.3% versus 5.3), while female adolescents reported using alcohol more frequently than males (42.9% versus 40.8%) and were more likely to have misused prescription drugs (15.8% versus

13.9%). Additionally, the National Center on Addiction and Substance Abuse (2003) reported that once female adolescents begin using harmful substances, they are more apt than males to become dependent on them and have greater impairment. Thus, males are more likely than females to use substances; however, females tend to present with greater impairment as a result of their use. Gender differences should be considered in the prevention and treatment of adolescent substance users.

Ethnic Differences

Ethnic differences have been reported among adolescent substance users. Johnson et al. (2014) indicated African Americans had substantially lower rates of substance use than Caucasians; however, marijuana use among African American youth has increased significantly. A 2009 survey showed that while African American and Hispanic students reported using marijuana more frequently than Caucasian students, the latter group was more likely to abuse prescription pills (CASA, 2011). Similarly, Johnston et al. (2014) found lower rates of prescription drug abuse among Hispanic youth compared to Caucasian youth. According to CASA (2011), in 2009, Hispanic high school students were more likely to be diagnosed with a substance use disorder (14%) than Caucasian (12.7%), African American (7%), and those who identified as "other" (9.5%). The survey also found 8th and 12th grade Hispanic students had the highest rates of use when compared to African American and Caucasian students for a number of substances including marijuana, inhalants, ecstasy, cocaine, crack, salvia, Vicodin, methamphetamine, crystal methamphetamine, over-the-counter cough/cold medicines, and tobacco (Johnston et. al, 2014). In addition, The National Center for Children in Poverty (2011) found Asian adolescents had the lowest rates of alcohol use when

compared to other groups. This data is beneficial in regard to prevention measures, as particular ethnic youth present with higher rates of substance use and can be targeted as such. Further, it is imperative to consider these differences in providing culturally responsive treatment.

Availability

The more available substances are in a community, the higher the risk that youth will abuse them (CASA, 2012). CASA (2012) found that of 1,003 students surveyed, 60% of high school students and 32% of middle school students possessed, used, or sold drugs on school grounds (CASA, 2012). Additionally, an annual survey by Johnston et al. (2014) asked adolescents about their access to substances. The sample consisted of 41,600 youth in 377 middle and high schools (15,200 8th graders, 13,300 10th graders, and 13,000 12th graders). When asked about the availability of particular substances, 90% of 12th graders, 67% of 10th graders, and 37% of 8th graders reported they could obtain marijuana easily while 54% of 8th graders, 75% of 10th graders, and 88% of 12th graders reported alcohol was easily obtainable. When questioned about cocaine (powder or crack), 24% of 8th graders, 31% of 10th graders, and 50% of 12th graders reported it to be readily available. Additionally, 21% of 8th graders, 36% of 10th graders, and 59% of 12th graders reported amphetamines to be easily obtainable. According to the 2011 Youth Risk Behavior Surveillance Report (Centers for Disease Control and Prevention, 2011), Arizona had the nation's highest percentage (34.6%) of high school students who were sold, offered, or given an illegal drug on school property.

An additional factor that contributes to the epidemic of adolescent substance abuse is the increased availability of prescription medications. Boyd, McCabe, and Teter

(2006) conducted a web-based survey to examine the non-medical use of prescriptions by youth ages 10 to 18. Of 1,017 participants, 34% reported obtaining prescription drugs from a family member, 17% from a peer, and 14% from a dealer or through theft. Friese, Moore, Grube, and Jennings (2013) further investigated the prevalence of prescription medication obtained within the family. Qualitative interviews were conducted with parents or caregivers to assess their practices and precautions to prevent adolescents from abusing prescription medications. Participants were asked to describe the availability of prescription medications in their home, how they were stored and monitored, and how they prevented their children from using the drugs. Of the 40 parents interviewed, 70% reported keeping at least one prescription drug in the house and of those, only one caregiver reported keeping the medication locked up. Several different tactics for controlling the medications were reported such as parents taking responsibility for dispensing the drugs as needed, parents noting how much medication remained after each use, memorizing how medication bottles were positioned, and/or counting the pills. Other parents reported they did not take special care in storing or monitoring the drugs. The information collected from this study is beneficial in understanding how adolescents obtain prescription medications and the importance of monitoring, properly storing, and preventing access to prescription medications.

Non-medical use of prescription medications is especially concerning. McCabe, Boyd, and Young (2007) reported findings from their online survey of 1086 students (54% female, 52% White, 45% African American, and 3% other). They found adolescents who abuse prescription drugs were significantly more likely to use illicit drugs and alcohol than those who did not. McCabe, West, Teter, and Boyd (2012)

examined data from the 2011 Monitoring the Future annual survey on the prevalence of youth who co-ingest prescription opioids and illicit substances. Of the 12,441 students who completed the survey, approximately 70% of high school seniors who abused prescription drugs within the past year reported also ingesting other drugs or alcohol. The substances most commonly co-ingested were marijuana (58.5%), alcohol (52.1%), cocaine (10.6%), tranquilizers (10.3%), and amphetamines (9.5%). This information is especially concerning, as prescription opioids are much more toxic when taken with other substances (McCabe, West, Teter, & Boyd, 2012). Specifically, those substances that act as central nervous system depressants, such as alcohol, can lead to an increase in substance-induced fatalities (McCabe, West, Teter, & Boyd, 2012). Prescription drug use presents as a problem among adolescents and is an issue in need of further attention.

Consequences Associated with Substance Use

Consequences of adolescent substance use can manifest on both a personal and a larger societal level (Crowe & Bilchik, 1998).

Personal

For a developing adolescent, substance use can interfere with cognitive processes, overall brain development, contribute to mental health and medical conditions, undermine motivation, contribute to educational failures, and increase an adolescent's participation in other risky behaviors that can ultimately lead to accidental death (Crowe & Bilchik, 1998). Substance use can jeopardize many aspects of family life including adding emotional strain and contribute to dysfunctional communication practices (Crowe & Bilchik, 1998). Arrest, adjudication, and intervention by the juvenile justice system are eventual consequences for many youth who engage in alcohol and other drug use

(Crowe & Bilchik, 1998). This can result in financial stress on the family if they have to pay legal costs an adolescent may acquire while under the influence of substances (Crowe & Bilchik, 1998). The Gallup Organization (1996) and CASA (2011) reported substance use at an early age increases the risk of dependency and addiction in adulthood.

Societal

In addition to personal consequences, substance use among adolescents also affects the community in general. Adolescent substance use can result in higher health care costs and a greater demand for mental health services (Crowe & Bilchik, 1998). Because adolescents are typically not self-supporting, financial resources may need to be obtained through government agencies and/or taxpayer money to fund treatment (Gropper, 1985). Moreover, there is an undeniable link between substance abuse and delinquency, in which taxpayers pay to incarcerate and rehabilitate these individuals (Crowe & Bilchik, 1998).

Unique Developmental Factors Contributing to Adolescent Substance Use

Adolescence is a critical time period generally beginning around the onset of puberty, that consists of a series of biological, social, and psychological growth that must be taken into consideration when examining and providing treatment to this population (Stagman, Schwarz, and Powers, 2011; Wagner 2008, Luna, 2009; Siegel, 2013; Hyman, 2007).

Biological and Neurological

Biological and neurological factors should be considered when examining adolescents' risk to use substances. Adolescence is a developmental period that makes one particularly vulnerable to become physiologically drawn to using and becoming

addicted to substances, as the adolescent brain is still developing (Siegel, 2013). NIDA (2011) noted that the adolescent brain is more sensitive to the addictive properties of alcohol and other drugs than adult brains. This is because the areas of the brain imperative in higher order cognitive functions such as decision-making, impulse control, judgment, and emotion regulation are not yet fully developed. Additionally, alcohol and other drugs physically alter the structure and function of the brain in adolescents faster and more intensely than in adults, which can ultimately interfere with development (Guerri & Pascaul, 2010).

Wagner (2008) identified multiple biological processes that appear to affect adolescents, including pubertal status, hormonal changes, physical appearance, and maturation of particular areas of the brain involved in higher order functioning. Luna (2009) suggested one hallmark of adolescence is the considerable progressive maturation of cognitive control, which enables individuals to form and utilize internally generated plans to guide behavior, and minimize impulsive reactions.

In addition to gaining increased cognitive control, adolescents also demonstrate peaks in sensation and reward seeking behaviors, likely as a result of increased levels of dopamine in the brain (Siegel, 2013). Dopamine, the primary neurotransmitter responsible for signaling pleasure and reward feelings, causes adolescents to gravitate toward thrilling and exciting experiences (Siegel, 2013). Certain behaviors initiate the release of dopamine in the brain, which is then reinforced and the likelihood of that behavior will be repeated is increased (Hyman, 2007). Luna (2009) suggested this can be rather dangerous, as heightened thrill seeking behaviors paired with limited abilities in cognitive control can lead adolescents to engage in dangerous or risky behaviors.

One of these risky behaviors, substance use, causes increased amounts of dopamine to be released in the brain and often over a longer period of time than many other pleasurable activities, which encourages adolescents to repeatedly seek and engage in the use of substances to obtain the pleasurable results (Di Chiara et al., 1998). The brain will then adapt to increased dopamine levels, causing difficulty in achieving feelings of pleasure from other behaviors that were once considered pleasurable (NIDA, 2011). Increased dopamine levels also results in greater susceptibility to addiction, as all behaviors and substances that are addictive involve the release of dopamine (Siegel, 2013). Not only are adolescents more susceptible to experiment with new experiences, they are also more prone to an increased dopamine release that can result in an addictive cycle (Siegel, 2013). Furthermore, the brain's increased drive for pleasure and reward can be manifested in impulsive behaviors (Siegel, 2013). Impulsivity has been noted to be a risk factor associated with substance use (Tarter, 1988; Dawe & Loxton, 2004; Perry & Carroll, 2008).

Psychological

As previously stated, adolescence is a stage that includes increased risk for problematic behaviors, including substance abuse, which can disrupt healthy adjustment and psychological development (Erickson, Crosnoe, & Dornbusch, 2000). Erikson (1968) suggested peers are particularly important in the formation of identity in the adolescent years. As adolescents seek autonomy and independence from their parental figures, they become more dependent on their peers (Erikson, 1968). Seltzer (1982) indicated peer influences become important in adolescence because they share a unique state of "frameworklessness," defined as a unique state of instability and anxiety.

Schacter (1959) indicated those under stress tend to affiliate with others with like difficulties, thus, adolescents seek the support of others who are going through puberty, struggling to form an identity, and attempting to become more independent from their families. Both of these concepts (Seltzer, 1982; Schacter, 1959) may lead adolescents to seek out a sense of belonging with peers who engage in risky behaviors such as substance use or use substances to help them cope with the instability and anxiety they experience.

Adolescents also face a wide range of other challenges that may contribute to using substances, including child abuse or neglect, bullying and violence, suicide, unplanned pregnancies, mental health disorders, and health and nutrition issues (CASA, 2011). Adolescents with behavioral disorders (Conduct Disorder, Oppositional Defiant Disorder Attention-Deficit/Hyperactivity Disorder (ADHD) and emotional disorders (anxiety or depression) are at increased risk of substance use and of substance use disorders (Elkins, McGue, & Iacono, 2007; Lopez et al., 2008; Moss, & Lynch, 2001; Windle & Windle, 2006). Further, those diagnosed with Conduct Disorder between ages 11 and 14 were four times as likely to have been dependent on nicotine and five times as likely to have an alcohol or marijuana use disorder by age 18, as compared to adolescents without a diagnosis of Conduct Disorder (Elkins, I. J., McGue, M., & Iacono, W. G., 2007). Additionally, CASA's (2011) analysis of national data indicated that high school students who experienced a major depressive episode in their lifetime were more likely than their peers to have used an illicit substance (72% versus 57%).

CASA (2012) surveyed 1,003 adolescents regarding their stress and found that almost half (46%) reported experiencing high levels of stress (a 6 or higher on a scale of 1 to 10), with 15% choosing "8" or higher. Furthermore, those who chose "6" or greater

were nearly three times more likely than those who rated their stress level at "5" or less to have used marijuana (22 % versus 8%), twice as likely to have used alcohol (36% versus 18%), and almost twice as likely to have used tobacco (14% versus 8%). CASA (2011) also found high school students who engaged in sexual behavior prior to age 13 were more than twice as likely to be current substance users (74% compared to 45%) and those who reported having multiple sexual partners reported being current substance users (80% versus 41%).

In 2007, 10% of teen deaths were due to suicide, which was the third leading cause of death among adolescents ages 12 to 17 (Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, 2010). Suicide has been linked to teen tobacco, alcohol and other illicit drug use (Epstein, J. A., & Spirito, A., 2010; Hacker, K. A., Suglia, S. F., Fried, L. E., Rappaport, N., & Cabral, H., 2006). In 2008, 8.8% of substance-related emergency room visits by adolescents involved a suicide attempt. Of these suicide attempts, the majority (95.4 %) involved the misuse of controlled prescription drugs and 11% involved alcohol use alone or in combination with another drug (Substance Abuse and Mental Health Services Administration, 2012). Further, Hacker et al. (2006) indicated adolescents who used illicit drugs or misused controlled prescription drugs in the past year were more than three times as likely to attempt suicide than those who had not used any substances in the past year.

Bullying also contributes to adolescent substance use. Adolescents who are bullied are more likely than those who have not been bullied to engage in substance use, whether the bullying is physical or mental such as rumors, teasing or threats, and whether the bullying occurs through face-to-face interactions or online (Mitchell, Ybarra, &

Finkelhor, 2007; Niemela, et al., 2011 & Tharp-Taylor, Haviland, & D'Amico, 2009). In 2005, 28% of 9th graders and 20% of 12th graders reported having been victims of bullying at school in the past 6 months (U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2011). It is likely the prevalence of bullying has increased as advances in technology plays a large role in the frequency of cyber bullying.

Certain sub-groups of adolescents are at higher risk for substance use (CASA, 2011). Adolescents who have been in foster care or another type of out of home placement are at least one and a half times more likely to use illicit drugs than adolescents who have never been in foster care (34% versus 22%, Office of Applied Studies, 2005). Aarons et al. (2008) reported the number of out-of-home placements was associated with lifetime use of alcohol, marijuana, cocaine and other illicit drugs, and this association was strongest for adolescents who entered the child welfare system after age 13. In addition, adolescents who are involved in the criminal justice system have even higher rates of substance use disorders and are more likely to be diagnosed with a mental health disorder (Aarons, Brown, Hough, Garland, & Wood, 2001; D'Amico, Edelen, Miles, & Morral, 2008; Dembo & Sullivan, 2009; Drerup, Croysdale, & Hoffmann, 2008; Marmorstein, 2010; Teplin, 2002). The more extensive an adolescents' involvement in the criminal justice system, the higher his or her risk of substance use and addiction (CASA, 2011). Forty-four percent of youth in the juvenile justice system meet clinical diagnostic criteria for a substance use disorder (CASA, 2011). Moreover, juvenile offenders' continued use of substances significantly increases their risk of recidivism (CASA, 2011; Stoolmiller & Blechman, 2005).

Social

While simply being an adolescent increases risk for substance use, the American culture further contributes to the issue, as substance use has in many cases become a societal norm (CASA, 2011). As a result of their developmental position, adolescents are prone to social influences including friends, family members, school, and the media (CASA, 2011). Wagner (2008) noted that interpersonal relationships are of particular importance in adolescence and suggested developing gender roles, social problem solving, and role transitions are matters that must be navigated.

Erickson, Crosnoe, and Dornbusch (2000) presented two major sociological perspectives (social control theory and differential association theory) regarding adolescent deviance in order to examine whether having strong, positive social bonds reduced engagement in deviant behavior. The authors hypothesized adolescents with positive peer influences would have fewer opportunities to develop beliefs that support deviant behavior, thus, making them less likely to engage in these behaviors. In contrast, it was hypothesized that those adolescents who associated with peers who engaged in deviant behavior would be more likely to become involved in it (Erikson et al., 2000). In regard to substance use, it was hypothesized that adolescents with positive social bonds would have fewer substance using friends and be more resistant to negative peer pressure. The authors also hypothesized that adolescents who experienced strong social attachments, commitments, and involvement would be less likely to jeopardize their personal relationships and accomplishments by associating with peers who supported and engaged in deviant behaviors (Erickson et al., 2000). Utilizing a longitudinal design over a 2 year time period, 2000 high school adolescents completed questionnaires regarding

social bonds, peer deviance, susceptibility, and deviant behaviors. Results supported the social models of adolescent deviance presented. Higher susceptibility and deviant friendships were linked to both forms (delinquency and substance use) of problematic behaviors. In contrast, the greater adolescents' pro-social bonds to others and other community sources, the lower their vulnerability to negative pressures from peers. Adolescents who had strong ties to institutions like the family, school, and community were more likely to internalize cultural values and behave accordingly. Through these connections, adolescents developed a positive self-image and associated with peers who adopted similar goals and values. Additionally, adolescents who reported strong parental attachment and a high commitment to education were significantly less likely to associate with peers who engaged in deviant behavior. Furthermore, participants who reported pro social bonds continued to display pro social behaviors in the year following completion of the questionnaire (Erickson et al., 2000).

By reducing exposure to deviant peers and increasing pro-social peer groups, adolescents may be better able to avoid engaging in risky behavior, such as substance abuse (Erickson et al., 2000). Substance abuse treatment for adolescents should consider social models that may assist youth in forming pro-social bonds and present the opportunity to become connected with supportive community resources.

Adolescent Substance Abuse Treatment

While substance abuse among adolescents is prevalent, as a group they receive the least amount of substance treatment when compared to any other age group (CASA, 2011). In 2012, only 10% of the 1.4 million adolescents with a substance use problem received formal treatment (Center for Behavioral Health Statistics and Quality, 2012).

Brannigan, Schackman, Falco, and Millman (2004) additionally noted adolescents who did receive treatment often did not receive the quality services they require. CASA (2011) stated this might be due to clinicians' inadequate understanding of the nature of adolescent substance use, which can lead to a failure to address it in a developmentally appropriate manner**.** Given the complex nature of risk factors leading to adolescent substance use and the serious implications and consequences substance use can have, identifying and examining effective treatment approaches is imperative to reducing substance use among this population.

Many different modalities have been utilized in treating adolescent substance users, yet few have been studied extensively to determine their effectiveness. Some of the evidence-based practices include cognitive behavioral interventions (Brown, Seraganian, Tremblay, & Annis, 2002; Waldron & Kaimner, 2004; Yen, Wu, Yen, & Ko, 2004), community reinforcement (DeLeon, 2000; Smith, Meyers, Miller, 2001), family therapies such as Structural Strategic Family Therapy, Multidimensional Family Therapy, and Multisystemic Family Therapy (Waldron and Turner, 2008; Dennis et al., 2004; Liddle et al, 2003; Liddle et al 2004), motivational enhancement therapy (Miller & Rollnick, 2012), Twelve Step facilitation (Blonigen et al., 2011; Chi et al., 2009; Kelly et al., 2008), contingency management (Higgins & Petry, 1999), and pharmacological interventions (Berglund, 2003; Johansson, 2003). Many of these approaches can be utilized in group sessions or an individual format.

With the exception of family therapy, group modalities have been the most commonly employed treatment for adolescents with substance use disorders (Kaminer, 2005), as they provide a means to learn to interact with others in order to resolve

problems, provide feedback and support, and learn how to relate in a pro-social manner (Sussman, Silvana, & Ames, 2004). Adolescents typically use alcohol or drugs in the company of others and because others easily influence them in group settings, group treatment has the benefit of mirroring their daily experience in a healthy manner (Kaminer, 2005). Brown and D'Amico (2002) surveyed 162 14 to 18 year olds regarding their treatment modality preferences. When given a choice, 80% selected a group format over individual therapy or a web-based activity.

All of these approaches provide benefits; however, once treatment has been completed, individuals must continue to be motivated to remain sober, often resulting in relapse and loss of hope for sobriety. Thus, research (Boisvert, Martin, Grosek, & Claire, 2008) has suggested that providing a holistic, community based support group to enhance primary treatment outcomes is imperative for these adolescents. Peer support groups are becoming increasingly integrated into formal treatment programs as an aftercare option to help individuals obtain the support they need and sustain long term sobriety (Fisk, Rakfeldt, & McCormak 2006).

Mutual Support Self Help Groups

Mutual help support groups for substance use disorders are non-professional, peer-operated meetings devoted to helping individuals with addiction-related problems sustain long term sobriety (Humphreys et al., 2004). Support groups can be added to primary treatment as an adjunct or utilized as a continuing care option post treatment. Several key elements are shared by all support groups including: A focus on overcoming a specific personal difficulty, individual transformation, reciprocal support, sharing of

personal experiences, and peer direction rather than professional management or expertise (Humphreys et al., 2004).

Theoretical Underpinnings of Support Groups

Various theorists have attempted to explain the factors that contribute to the efficacy of support groups. Support groups have theoretical underpinnings in Yalom's (2005) group therapy model and Social Learning theory (Bandura, 1986),

Yalom's group therapy model. While support groups are not group therapy, they follow a similar model and incorporate similar components. Yalom (2005) identified 11 primary factors of therapeutic experiences, which promote change and healing in individuals who participate in the group therapy process. Among the 11 factors is the instillation of hope and encouragement that recovery is possible (Yalom, 2005). This can occur when members see improvements or success in other members, which encourages them to continue working toward their goals and look for improvements in their own behaviors. Yalom (2005) also suggested the concept of universality, as it is helpful to know there are others struggling with similar issues. This concept is depicted in the statement, "We are all in the same boat" (Yalom, 2005, p.6). Another important factor Yalom (2005) noted is altruism, as group members are able to better themselves through supporting others. Individuals who use substances often times experience interpersonal problems and can benefit from group therapy interactions (Center for Substance Abuse Treatment, 2005). Yalom suggested simply being in a group setting can help participants learn how to interact with others and acquire basic social skills they may lack, which can lead to improved relationships. Additionally, imitative behavior is a concept Yalom described as one individual benefiting from

observing others coping with similar issues (Yalom, 2005). Kelly, Myers, and Rodolico (2008) asked adolescents what the most important reasons for attending Twelve Step groups were. They indicated universality, installation of hope, and support from other group members (Kelly et al., 2008). Thus, the concepts of Yalom's theory may help explain group as a successful intervention for adolescents.

Social learning theory. Group modalities also have theoretical underpinnings in social learning theory (Bandura, 1986). All social learning theories operate under the premise that learning occurs within a social context, as a result of observation, imitation, and modeling of others (Bandura, 1986). Lee, Akers, and Borg (2004) for example, indicated adolescent delinquency, including substance use, is learned from others. The effects of modeling begin with observation and imitation of specific behaviors and continue with reinforcement of those behaviors (Bandura, 1986). As the behaviors are socially reinforced, cognitions supporting the delinquent behaviors are formed, resulting in continued engagement in the negative behaviors (Lee et al., 2004). According to social learning theory, the key to achieving abstinence is to make substance-using role models less salient and substance-abstaining role models more salient (Kelly et al., 2000; Moos, 2008).

Social network changes are particularly important for adolescents, as social factors have been shown to be the most prevalent contributing factor to relapse in substance abusing adolescents (Garner, Godley, Funk, Dennis, & Godley, 2007; Godley, Dennis, Godley, Funk, & Kahn, 2005). For instance, support group attendance has been shown to impact social and environmental factors for adolescents by altering their social networks, increasing the number of peers who support sobriety, and eliminating negative

influences that encourage substance use (Groh, Jason, & Keys, 2008; Humphreys, Kaskutas, Bond, & Humphreys, 2002; Kelly et al., 2000; Mankowski, Moos, & Finney, 1999; Moos, 2008).

Twelve Step Programs

Twelve Step groups are a widely known form of mutual-help. Although Alcoholics Anonymous (AA) is not a treatment modality (AA, 2014), the program plays a prominent role in the design and implementation of Twelve Step based treatment programs. Twelve Step philosophy, methods, and materials are often formally integrated into substance abuse treatment programs (Gallant, 1988). A study specifically examining 150 substance treatment programs for adolescents in the United States noted that 67% described their services as incorporating Twelve Step principles and practices and encouraged ongoing participation in Twelve Step programs post-treatment (Drug Strategies, 2003).

The origins of AA can be traced as far back as the early 20th century to the *Oxford Group*, a religious movement emphasizing self-improvement (AA, 2014). In 1935, Bill Wilson and Dr. Robert Smith, both self-proclaimed alcoholics, founded a worldwide fellowship based on the Twelve Step disease model of addiction (AA, 2014). The organization emphasizes a social support model and requires individuals to have a desire to be sober, follow the Twelve Step model, and conform to the Twelve Traditions (AA, 2014). Following and practicing the Twelve Steps and Twelve Traditions is said to help group members abstain from substance use. An essential concept of AA is the idea of "one drunk helping another," in that a recovering alcoholic can altruistically and effectively aid in the sobriety of another member (AA, 2014). Group meetings are

intended to help individuals struggling with addiction attain and maintain their sobriety while helping others who are also struggling in the process. This group model draws on the social support offered by peer discussion to help promote and sustain drug-free lifestyles (AA, 2014).

AA offers an affordable and highly accessible option to individuals looking for support. It is readily available, as there are AA programs all over the world at practically all hours of the day (AA, 2014). AA also maintains an online community, in which members can attend meetings and receive support from their homes via the internet. AA does not require membership dues or fees, but instead is run solely by voluntary contributions. This is beneficial, as members' financial difficulties do not prohibit them from attending. Social support from group members and the support of a sponsor are also beneficial. A sponsor is typically another group member who is further along in their sobriety who can be used for additional support and resources. The fellowship of AA has been proven to contribute to the abstinence of its members. As members, knowing they are not alone in their struggles enables them to form trusting and supportive relationships with other members (AA, 2014).

Twelve Step programs advocate that in addition to the physical, emotional, and mental aspects of the disease, there is a spiritual component that must be examined (Sussman, 2010). Specifically, the *Big Book of Alcoholics Anonymous* (2001) refers to a "higher power" and following the Twelve Steps, members learn to trust their "higher power," which could be a religious deity; however, it does not have to be. Bill W. and Dr. Bob adamantly argued that their program was not affiliated with any specific religion,

sect, denomination, political viewpoint, organization or institution, nor did it support any particular cause (AA, 2014).

AA is not the only Twelve Step program for those in recovery. Approximately 100 other Twelve Step programs have been created using similar guiding principles including Narcotics Anonymous (NA), Cocaine Anonymous (CA), Marijuana Anonymous (MA) Gamblers Anonymous (GA) and Overeaters Anonymous (OA) (AA, 2014). Additionally, Twelve Step groups for family members of alcoholics (Al-Anon) and adolescents who have parents struggling with alcoholism (Alateen) have been created to assist those who are affected by their relatives' substance abuse (AA, 2014).

In 1960, John Park Lee, the secretary of health and welfare and director of the National Council on Alcoholism, discussed why he thought Alcoholics Anonymous was successful while many other programs failed. He argued that AA restored hope that one can recover by meeting others who have obtained sobriety through participation in the fellowship. He also suggested alcoholics are often rejected by their families, friends, work places, and churches and AA were offered an open door to associate with others, have empathic experiences, and receive acceptance. He stated the fellowship in AA enabled participants to recognize the nature of their problem and come to terms with reality. Moreover, AA shows members what it means to be a human being, that everyone has strengths and weaknesses, and that failure and success happens concurrently (Lee, 1960).

Groups for adults. AA is the original Twelve Step fellowship and is considered to be an effective treatment adjunct and aftercare option for adult substance users (Gossop, Stewart, & Marsden, 2007; Kelly, Magill, & Stout, 2009; Kelly, McKellar, &

Moos, 2003; Moos & Moos, 2004; Ouimette, et al., 2001; Timko, Moos, Finney, & Moos, 1994; Tonigan, Connors, & Miller, 1998,). Timko et al. (1994) surveyed 515 individuals with alcohol use disorders who were asked to select one of four treatment options including no treatment (24%), Alcoholics Anonymous only (18%), outpatient treatment (25%), and residential or inpatient treatment (32%). Some participants in outpatient and inpatient treatment also attended AA meetings. Participants were asked about their level of functioning related to their alcohol consumption 12 months following an initial interview. All four groups reported less alcohol consumption post-treatment. However, those individuals in the AA only, outpatient, and inpatient groups improved significantly more than those who did not receive any treatment. Furthermore, Timko et al. (1994) indicated regular AA attendance was associated with abstinence among all three groups: AA only, outpatient, and inpatient.

Subsequently, Moos and Moos (2004) examined the same data set used by Timko et al. (1994), but focused on the impact of frequency and duration of AA meeting attendance and delayed attendance on sobriety at 1 and 8 year follow-up. Four hundred and seventy three individuals with alcohol use disorders were asked questions regarding their abstention from alcohol, presence of alcohol dependence symptoms, and problematic situations related to alcohol use (health, job, money, family arguments). Compared to those who did not participate in AA, those who attended AA had better 1 year and 8-year alcohol related outcomes (abstinence). Longer attendance duration and higher frequency of AA meetings were also predictors of abstinence. In addition, those participants who delayed AA participation until 1 year following their baseline interview reported worse outcomes than those who began participating in AA meetings within the

first year. Thus, clients should be encouraged to attend AA directly following treatment, as better outcomes are likely. Furthermore, long-term participation in AA continued to produce positive outcomes (Moos & Moos, 2004).

Similarly, Gossop, Stewart, and Marsden (2007) conducted a longitudinal study to investigate the relationship between the frequency of AA and NA meeting attendance and substance use outcomes among individuals discharging from a residential treatment facility. One hundred and forty-two participants diagnosed with substance dependence were recruited from 23 facilities throughout England. The sample consisted of 78% male, 22% female, and 94% Caucasian participants with an average age of 29.7 years. Participants completed a baseline interview upon intake to residential treatment and three follow up interviews (1, 2, and between 4 to 5 years). The baseline interview included information regarding substance use behaviors and problems that resulted from use of substances over the previous 3 months. Urine screening was also conducted at baseline. Results indicated that AA or NA attendance was a positive predictor of abstinence, as those who regularly attended Twelve Step meetings had better abstinence outcomes compared to those who attended meetings infrequently or not at all. At the final 4 to 5 year interview, those who specifically identified opiates as their drug of choice (77%) reported being able to maintain abstinence throughout the 5-year follow-up period by regular attending AA or NA meetings. However, those who reported amphetamine dependence (35%) reported less success at 4 to 5 year follow up. Furthermore, it was noted that overall, those who attended AA or NA at least once per week reported better outcomes than those who did not attend. These results suggest Twelve Step support groups can be a useful aftercare resource to aid participants in maintaining abstinence.

It has been hypothesized that support groups such as Twelve Step provide participants with additional benefits including increased motivation to change patterns of substance use, increased self-efficacy, and better coping skills, all of which have been theorized to mediate the relapse process (Kelly, 2003; McKay, 2009). Kelly, Myers, and Brown (2002) investigated multiple variables, including support group attendance and affiliation, and its relationship to motivation, self-efficacy, and coping skills. Participants included 74 adolescents recruited from two Twelve Step inpatient substance abuse treatment centers. Sixty-two percent of the sample was female, 70% Caucasian, 18% Hispanic, 8% African American, and 4% Asian/Pacific Islander. All participants met criteria for a substance abuse or dependence diagnosis in accordance with the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV, APA, 1994). The Structured Clinical Interview for Adolescents (Brown, 1987) was utilized to obtain information regarding substance use history, frequency of Twelve Step meeting attendance, perceived affiliation with the Twelve Step program (importance of meetings, utilization of sponsor, and participation in Twelve Step functions outside of weekly meetings), level of motivation to change substance use patterns, and feelings of self-efficacy. The Adolescent Relapse Coping Questionnaire (Meyers and Brown, 1995) was utilized to measure abstinence-specific coping skills. Interviews and assessments were completed upon intake to inpatient treatment and again at 3 and 6 months post discharge. The authors found those adolescents who reported severe substance use at intake interview were more likely to attend Twelve Step support groups post treatment. Greater frequency of attendance and to a lesser degree, greater affiliation with the program resulted in better post treatment outcomes at 6-month follow-up, as those who reported to

be more affiliated with Twelve Step groups were more likely to report increased motivation, coping skills, and self-efficacy. The authors hypothesized that greater Twelve Step affiliation to be the "mechanism through which attendance maintains and enhances adolescents' motivation for abstinence" (p. 301). During follow up interviews, feelings of self-efficacy and positive coping strategies were associated with abstinence; however, it was the participant's motivation to abstain that appeared to have the most significant impact on their abstinence (Kelly et al., 2002). These findings suggests that motivation to remain abstinent increases support group attendance and affiliation; thus, contributing to a greater sense of self-efficacy and healthier coping skills to aid participants in their sobriety. Therefore, when treating substance users, attention should be paid to cognitive factors such as motivation level in order to improve treatment retention, aftercare participation and motivation to change.

Comorbid disorders. Oftentimes substance use disorders coexist with other mental health issues. Research has found AA to be an effective intervention for substance abuse problems among adults dealing with a variety of comorbid disorders (Ouimette, et al., 2001; Kelly, McKellar, & Moos, 2003). Ouimette et al. (2001) examined the effects of Twelve Step support groups on comorbid Posttraumatic Stress Disorder (PTSD). Participants consisted of 1,429 males diagnosed with a substance use disorder and 159 males diagnosed with a comorbid substance use disorder and PTSD. Substance use and PTSD symptomatology were measured via self-report at the start of the study and again one-year later. The authors found that Twelve Step attendance rates were similar in both groups. However, those with comorbid PTSD who identified with the Twelve Step philosophy attended meetings more frequently than those who did not

identify with the Twelve Step model. In addition, those with PTSD reported a decrease in their PTSD symptomatology, in addition to greater abstinence from substances (Ouimette et al., 2001).

In another study, Kelly, McKellar, and Moos (2003) examined the effects of Twelve Step involved adults diagnosed with substance use disorders and comorbid Major Depressive Disorder. The sample was obtained from an inpatient substance use treatment program and included 2,051 males diagnosed solely with a substance use disorder and 110 males diagnosed with a substance use disorder and Major Depressive Disorder. Depressive symptoms were measured using the Brief Symptom Inventory (BSI, Derogatis & Melisaratos, 1983), while severity of substance use was measured by self-report over the 3 months prior to treatment. Follow-up data was collected at 1 and 2 years post-inpatient treatment. Results indicated participants with comorbid Major Depressive Disorder attended Twelve Step groups significantly less than the substance use only group. The researchers suggested this might be due to a decreased desire for social activity or struggle assimilating easily into support groups, which may prevent attendance and/or create a subsequent lack of interest in participating if they did not attend (Kelly et al., 2003). It appears as though Twelve Step groups may be beneficial for individuals with comorbid diagnoses; however, additional research is needed to examine their impact on other mental health diagnoses.

Diversity. The concept of spirituality that is interwoven throughout the AA program has come into question, particularly for adolescents, as Solhkhah, Galanter, Dermatis, Daly, and Blunt (2009) noted adolescents have more concrete cognitive and

developmental capabilities that may preclude them from fully taking advantage of the spirituality piece of the Twelve Step program.

The adaptability of Twelve Step programs for diverse populations may be questionable, as the majority of studies examining AA and its outcomes include primarily Caucasian populations (Tonigan, Connors, & Miller, 1998). However, Tonigan et al. (1998) argued that Twelve Step programs are equally appealing to individuals of diverse ethnic and cultural backgrounds, as Twelve Step ideologies are flexible and adaptable to diverse cultures that hold various values and beliefs. As such, AA is currently utilized in approximately 127 countries and offered in 35 different languages (AA, 2014).

Tonigan, Connors, and Miller (1998) asked "Can a mutual-help program with strong Protestant roots that was started by white, middle class Americans appeal equally to individuals with diverse ethnic and cultural backgrounds?" (p. 281). These authors' utilized data from Project MATCH, a research study that aimed to identify guidelines for assigning individuals to appropriate substance abuse treatment programs. Of specific interest was the attractiveness and efficacy of AA mutual-help programs for diverse ethnic groups. One thousand six hundred and twenty nine participants were recruited from 10 locations throughout the United States. The ethnic makeup of the sample included 1,327 Caucasian, 138 Hispanic, and 164 African Americans. Participants were split into two groups based on their previous exposure to treatment: 1) an aftercare sample of those who had completed at least 7 days of residential treatment before the study and 2) an outpatient sample comprising of those who had not received residential services. Participants were then randomly assigned to one of three 12-week outpatient interventions: Cognitive-behavioral therapy (CBT), motivational enhancement therapy

(MET), or Twelve Step facilitation therapy. AA was neither promoted nor discouraged to participants in the CBT and MET groups. Participants were subsequently followed at 3-month intervals for 1 year. At each follow up, participants were questioned about their attendance at AA meetings as well as their commitment to AA related principles and practices. Results indicated 70% of participants reported attending AA meetings on at least one occasion, while 30% of the sample attended AA regularly throughout the 12 month follow up. In both groups, participants' ethnic background did not predict attendance, as relatively equal numbers of each ethnic group attended Twelve Step groups. Additionally, African American and Hispanic participants were as likely to attend and benefit from AA post treatment as Caucasian individuals, as evidenced by their self-report of sobriety. While this study is dated, it provides interesting insight into the attraction and application of AA to diverse groups of people while highlighting the need for more research that may assist in identifying the cultural needs of Twelve Step program participants.

Groups for adolescents. As previously stated, Twelve Step programs were initially developed for adults; thus, much of the available literature utilizes adult samples. While some of the literature may not be entirely applicable to adolescents, much of the research has been utilized as the foundation for studying adolescents. Research examining adolescents and Twelve Step programs is lacking, as AA and NA for adolescents have only been subject to empirical investigation since the early 1990s (Sussman, 2010). In a study that examined 150 adolescent substance treatment programs in the US, more than two-thirds described their services as "Twelve Step" to a lesser or greater degree (Drug Strategies, 2003), indicating that many formal substance abuse

treatment programs for adolescents include Twelve Step components. Passetti and Godley (2008) interviewed 27 clinicians to determine their referral practices, specifically in regard to Twelve Step programs/groups. Results revealed that 26 of 27 clinicians referred adolescents post treatment to self-help groups that were almost exclusively Twelve Step oriented. The clinicians reported they considered the age of participants in the prospective meetings and the adolescent's ability to understand Twelve Step concepts when determining if a referral was appropriate (Passetti & Godley, 2008). This practice is imperative, as the literature indicates attending groups with similar aged individuals is important to adolescents (Kelly, Myers & Brown, 2005).

Similar to the adult AA literature, research has indicated that adolescent attendance at AA or NA meetings was predictive of abstinence (Blonigen et al., 2011; Chi et al., 2009; Kelly et al., 2008). Chi et al., (2009) examined substance use outcomes among 375 adolescents ages 13 to 18 that attended Twelve Step programs. Sixty-six percent of the sample was male, half identified as Caucasian, 16 % as African American, 19% Hispanic, 9% Native American and 6% Asian. Participants were recruited from four private managed care substance abuse treatment facilities, which incorporated intensive outpatient treatment with residential services. Baseline, 1 year, 3 year, and 6 year follow-up interviews were conducted to examine participants' use of substances (quantity and frequency), post treatment Twelve Step affiliation (meeting attendance and involvement in other related activities), social support (number of peers in support of their sobriety), and attendance at religious services. The authors found that even minimal affiliation with Twelve Step programs was associated with improved outcomes. At 1-year follow-up, those who attended 10 or more Twelve Step meetings within a 6-month period were

twice as likely to be abstinent than those who did not attend meetings. At 3 year follow up, those who attended three or more additional activities outside of Twelve Step meetings were five times as likely to remain abstinent when compared to those who did not attend Twelve Step affiliated groups. Chi et al. (2009) hypothesized that participation in Twelve Step meetings alters one's social network to include more individuals who are supportive of sobriety, perhaps reflecting the social aspect of Twelve Step meetings as a particularly important factor in adolescents' recovery from substance abuse.

Hsieh and Hollister (2004) utilized records from the Comprehensive Assessment and Treatment Outcome Research (CATOR) project, a database of adolescent substance abuse treatment centers' treatment outcomes. While the database initially included 2,317 participants, only 50% of the sample was available for follow up interviews 6 months post treatment. Subjects ranged from 12 to 19 years of age. Two-thirds of the final sample was male, 90% were Caucasian, and 75% were enrolled in school at the time. Three variables were examined post treatment including attendance at AA/NA support groups, attendance at additional aftercare services (substance abuse treatment, individual therapy, or family therapy), and parental attendance at Al-anon. Outcomes were measured on a dichotomous scale of abstinent (self-reported abstinence from substance use during the previous 6 months) and non-abstinent (self-reported use of substances in the past 6 months). While both Twelve Step attendance and participation in other aftercare services were shown to be beneficial, participation in AA and NA had the most significant and consistent influence on treatment outcomes for both male and female subjects. At 6-month follow-up, 55% of males and 42% of the females were abstinent. While female subjects presented with lower rates of abstinence, they attended more

Twelve Step meetings and other aftercare treatment programs. Additionally, parental participation in Al-anon was important, as those whose parents attended had greater rates of abstinence than those whose parents did not (Hsieh & Hollister, 2004). The results of this study suggest aftercare services are effective in maintaining sobriety among adolescents. In addition, there may be differences between male and female youth in regards to their motivation to attend Twelve Step programs or other types of aftercare services. While female subjects attended twelve step groups more frequently than males, they reported poorer abstinence outcomes (Hsieh and Hollister, 2004). Thus, it is imperative to consider gender differences, motivational differences, and to include family supports as a way to individualize treatment.

While the literature has reported Twelve Step program attendance and involvement to be effective aftercare options for adolescents, Kelly et al., (2005) questioned whether the primarily adult composition of typical Twelve Step groups impact adolescent involvement and their substance use outcomes. Seventy-four 14 to 18 year olds were recruited from two inpatient Twelve Step substance abuse treatment programs. Sixty-two percent of the sample was female, 70% Caucasian, 18% identified as Hispanic, 8% African American, and 4% Asian. Initial interviews were completed prior to participants being discharged from inpatient treatment. Substance use was measured using an adaptation of the Timeline Follow Back (TLFB; Sobell & Sobell, 1992) to include multiple substances. The most frequently reported substances used were marijuana (42%), amphetamines (30%) and alcohol (13%). Twelve Step affiliation was measured as the number of meetings attended during and post treatment, the use of a sponsor, the number of steps the individual completed, and how frequently they attended

activities outside of regular meetings (Kelly et al., 2005). Participants were also asked whether it was important for them to attend groups with similar aged peers. Follow up interviews were completed at 3 and 6 months post discharge. At 3 month follow up, 71.6% of the sample reported attending at least one Twelve Step meeting, while 51.8% attended at least weekly, and 36.5% attended at least twice per week. At 6 month follow up, 54.1% of participants reported attending at least one Twelve Step meeting, 30.8% attended twice per week, and 20.3% attended two or more times per week. In regard to abstinence rates, 32.4% of participants were sober at 3 month follow up and 37% were sober at 6 month follow up. Furthermore, in examining age composition, participants who were involved in groups with similar aged peers attended more frequently and viewed Twelve Step meetings as important to their recovery (Kelly et al., 2005). Overall, attendance rates at Twelve Step meetings decreased from 3 month to 6 month follow up, especially for meetings primarily composed of adults. Thus, it may be beneficial to further explore the relationship between age-specific Twelve Step meetings and attendance rates.

Kelly et al. (2008) interviewed 74 adolescents about their experiences while attending Twelve Step groups. The average age of participants was 16, with 62% female; 70% Caucasian, 15% Hispanic, 8% African American, and 4% Asian. Participants were interviewed upon their admission to a private, short-term substance abuse residential treatment facility. Follow-up interviews were conducted at 3 and 6 months post treatment. Participants were asked about the perceived importance of Twelve Step groups in their recovery, the extent they found the groups helpful, how connected they felt to the group, and what they specifically liked about the meetings. Seventy-two

percent of respondents reported attending at least one Twelve Step meeting at 3 month follow up while 54% reported consistently attending meetings at 6 month follow up. Fifty eight percent of participants reported Twelve Step groups to be of "high" importance in their recovery, 58% found Twelve Step groups to be "highly" helpful and 53% of participants reported feeling "highly" connected to their group peers (Kelly et al., 2008, p.56). When asked what they enjoyed about the groups, 65% indicated the social dynamic and support they received. Yalom's (2005) concept of Universality (23%) and support from the group (23%) were cited as the best part of Twelve Step meetings. Instillation of hope (19%) was also reported to be one of the most important factors identified by respondents. Participants identified the ability to meet with other members who were struggling with similar issues enabled them to feel supported and understood, obtain encouragement in recovery, gain a more hopeful perspective of their future, and not feel alone in their problems (Kelly et al., 2008). Participants indicated Twelve Step specific factors, such as the concepts of a "higher power," "living one day at a time," and "working the steps" to be less important (5%) than the group dynamics. While impressions and experience over time may change as adolescents understand and gain benefits from Twelve Step programs, these findings suggest that general group therapy factors such as the social connection, support, and sense of hopefulness may be most significant for adolescents at their stage of development and recovery (Kelly et al., 2008).

Research Limitations. Twelve Step approaches have been shown to be effective as a supplement to other forms of treatment, as well as an option for aftercare. Many have incorporated them into substance abuse treatment programs, NA and AA being particularly prevalent (Humphreys, 2003). While there are countless testimonials and

endorsements from participants and supporters regarding its effectiveness, scholars seek to provide empirically validated data regarding the efficacy of the Twelve Step model. Research examining the effectiveness of support groups in general is relatively minimal. This may be because AA, as an organization, does not conduct scientific studies on its success rates due to the program's anonymous nature (Dodes & Dodes, 2014), which makes data collection difficult.

In addition to the anonymous nature, there are other complications in attempting to obtain empirical support for Twelve Step programs and other support groups. Dodes and Dodes (2014) reported some of the limitations within the AA literature to include lack of control groups, inadequate amount of time dedicated to studying the programs, and a tendency to ignore dropout rates. Like many studies examining alcohol and other substance use, reliance on participants' self-report may not be an accurate reflection of the circumstances, as impression management can be a common reaction (Dodes and Dodes, 2014). The current literature may be plagued by a selection bias as those who participate in AA may have certain characteristics or motivations that produce positive results rather than the support groups themselves. Dodes and Dodes (2014) stated, "A growing body of evidence strongly suggests that people who do things faithfully and regularly for their own well-being are fundamentally different from people who don't" (p.32). They also reported compliance bias to be a limitation, as differences in adherence to planned treatment can affect outcomes (Dodes & Dodes, 2014). For example, participants of Twelve Step groups are voluntary, suggesting they may be in favor of support groups, which can bias outcomes. Krentzman (2007) identified similar limitations in the current literature including the implausibility of randomized clinical

trials, confounding variables (e.g. attendance in other treatment programs), lack of membership records, self-selection bias, fluid membership, lack of control groups, and the variety of Twelve Step meetings based on membership and location.

Research examining the efficacy of Twelve Step programs typically utilizes a naturalistic, longitudinal, and prospective approach (Krentzman, 2007). In essence, the studies begin with individuals who are participating in substance abuse treatment and follow them over time to examine their participation in Twelve Step programs and their substance related outcomes. Timko, Moos, Finney, and Moos (1994) argued in favor of naturalistic methods and suggested realism as a strength of the method, as it avoids distorting the self-help experience. On the other hand, Lemke and Moos (2003) disagreed and argued naturalistic methods present many limitations that restrict their ability to identify clear relationships, including an individual's motivation to change, number of available coping skills, and personal resources that may encourage subjects to participate in self-help groups. In addition, Dodes and Dodes (2014) suggested the phenomenon of spontaneous remission, where individuals overcome their problems without any treatment at all, should be considered when examining the efficacy of Twelve Step programs. The authors believed this alone might lead to improved outcomes, rather than the Twelve Step program itself. While there are significant limitations in the methods, data collection, and data analysis in the research on Twelve Step programs, the information offered may provide direction to future research endeavors regarding sound methodology.

Treatment Considerations

Sussman (2010) indicated that once individuals are no longer in formal treatment, their participation in Twelve Step groups tends to decrease and adolescents are one-third less likely than adults to be involved in Twelve Step meetings outside of formal treatment (Sussman, 2010). Many factors have been identified that negatively impact adolescents participation in substance abuse treatment and aftercare services such as lack of motivation, high relapse rates, lack of developmentally appropriate programs, and logistical barriers such as lack of transportation or funding (Kelly & Myers, 2007; Sussman, 2010, Kelly et. al, 2008; Kelly et. al, 2000).

Motivation. A critical component of substance abuse treatment and recovery is motivation to change one's behavior (Austin, Hospital, Wagner, & Morris, 2010; Beckman, 1980; Breda & Heflinger, 2007). Motivation has been linked to seeking, complying with, and staying in treatment (Applebaum, 1972; DeLeon, 1996; Prochaska, DiClemente, & Norcross, 1992), as well as long-term treatment outcomes, including sustained abstinence (DeLeon, 1996; Miller & Tonigan, 1996; Prochaska & DiClemente, 1992). A persistent problem among adolescent substance users is low motivation to participate in or complete treatment and a lack of follow through with aftercare services, as they typically have low motivation to change and do not perceive treatment as appropriate for them (Jainchill, Hawke, DeLeon, & Yagelka, 2000). DeLeon and Deitch (1985) suggested their low motivation and perceived lack of fit is due to adolescents experiencing fewer negative consequences (e.g. legal consequences, interpersonal difficulties, withdrawal symptoms) as a result of their substance use, compared to adults who have longer substance use histories. Additionally, many adolescents are involved in

substance abuse treatment as a result of external pressures from parents, school, or the juvenile justice system, which may contribute to decreased motivation to participate (Pompi & Resnick, 1987). Thus, treatment providers must determine youths' level and sources of motivation in order to inform treatment and aftercare services as a way to increase participation among adolescent substance users.

Stages of change model. The Transtheoretical Model (stages of change) offers an integrative framework for understanding and intervening with intentional behavior change (Prochaska and Norcross, 2002). The model can be used to assess an individual's readiness to act on a new behavior, and provides strategies to guide the individual through the stages of change. The model operates under the premise that behavior change does not occur in one step, but rather a progression through stages including: Precontemplation (not yet acknowledging problematic behavior, Contemplation (acknowledging there is a problem, but unsure if changes are necessary), Preparation (getting ready to make changes), Action (changing behavior), and Maintenance (maintaining new behavior). Prochaska and Norcross (2002) indicated the Transtheoretical Model might serve as a useful tool in identifying those most at risk for treatment attrition. The model predicts that those in the Precontemplation stage will present with higher rates of drop out than individuals in other stages and those in the Preparation and Action stages of change will be more invested in their recovery (Prochaska and Norcross, 2002).

Assessments. Various assessment measures have been created to assist in measuring readiness or motivation to change, which are aligned with the Transtheoretical Model of Change. The Circumstances Motivation Readiness and Suitability (CMRS;

Melnick, et al., 1997) and the Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES; Miller & Tonigan, 1996) have been used to determine the relationship between motivational variables and treatment outcomes (Breda & Heflinger, 2007; Isenhart, 1997; Melnick et al., 1997).

Melnick et al. (1997) examined the relationship between motivation and readiness for change and retention in treatment. A total of 1,899 subjects (1,458 adults and 441 adolescents) were recruited from residential substance abuse treatment communities. Results revealed level of motivation and readiness for treatment consistently predicted treatment retention for both adults and adolescents. Those who attended 45 days of treatment expressed higher levels of motivation than those who dropped out. Additionally, a positive relationship between age and CMRS scores was reported, as older participants had higher mean scores on all scales as compared to younger participants (Melnick, et al., 1997). Furthermore, those who voluntarily participated in treatment reported greater motivation to change their substance use patterns than those referred by the legal system. This study suggests that those participants with higher levels of motivation attended treatment longer than those with lower motivation and that voluntary participants presented with higher levels of motivation than those referred by the legal system. Given this information, it is imperative to assess levels of motivation in the initial phases of treatment and develop strategies that may increase adolescents' motivation to participate in services, especially those referred by the legal system.

Breda and Heflinger (2007) examined the relationship between motivation to change and substance abuse treatment outcomes. One hundred and twenty nine 12 to 18 years old were recruited from publicly funded treatment facilities (81% inpatient and

19% outpatient). Nearly all (94%) had received some type of substance abuse treatment prior to their current admission. Three-fourths of participants were male, 63% were Caucasian, 29% identified as African American, and 8% were of other ethnic backgrounds. Forty-nine percent lived in a single-headed household, 30% lived in a two-parent household, and 23% resided in another living arrangement, such as a group home prior to admission into the facility. Most of the subjects (67%) were in state custody and court mandated to complete treatment. Initial interviews were conducted with the adolescents and their parent/guardian to obtain information about their substance use and legal history, assess their level of motivation to change their substance use, and to identify diagnoses and level of functional impairment. The CMRS was used to generate a global measure of participants' motivation to change their substance use. CMRS results indicated that upon admission, 17% of participants presented with "low" motivation, 33% "moderately low" motivation, 39% "moderately high" motivation, and 11% "high" motivation. At 7 and 14 months post treatment, CMRS results indicated that those participants with more serious substance use were more motivated to change and those who were more motivated to change reported greater declines in substance use. Thus, it may be helpful to determine an adolescent's motivation to change at the beginning of treatment and design interventions to match their motivation level. Additionally, it would be beneficial to target those adolescents with low motivation in order to generate better intervention outcomes.

Isenhart (1997) also examined motivation to change and attempted to predict alcohol use and participation in AA activities (AA affiliation and having a sponsor) one year following initial assessment. Data was collected from 125 males diagnosed with

alcohol dependence participating in a 21-day inpatient Twelve Step treatment program. The SOCRATES was utilized pre-treatment to examine readiness for change. One-year follow up interviews were conducted to examine substance use and participation in recovery activities such as Twelve Step meetings and sponsorship. Results revealed that those participants who were categorized in the *Taking Steps* or *Action* stage of change (they had modified behavior) upon intake was predictive of abstinence from alcohol at one year follow up. The results of this study are consistent with previous literature (Applebaum, 1972; Beckman, 1980; Breda & Heflinger, 2007; DeLeon, 1996; Miller & Tonigan, 1996; Prochaska & Norcross, 2002), which indicates higher levels of motivation to change results in better long-term outcomes. Thus, increasing levels of motivation and readiness to change is imperative in producing long-term treatment outcomes.

Theories. Motivational assessments such as the CMRS and the SOCRATES can be utilized to identify an individual's level of motivation and readiness for change. This information is imperative to treatment providers, as they can utilize motivational strategies to generate better treatment outcomes. The literature provides support for the use of specific intervention models based an individual's level of motivation, specifically for adolescents with substance use problems (Austin, et al., 2010; Clair et al., 2011; Feldstein & Ginsburg, 2006; Slavet et al., 2005). Motivational Interviewing and Motivational Enhancement Therapy (Miller & Rollnick, 2012) were developed to drive the therapy process and facilitate change by exploring and resolving motivational ambivalence. While originally developed for adult populations, these approaches may be effective in improving outcomes if modified for adolescents. These methods eliminate coercive, externally driven methods and support change in a manner that is congruent

with the person's individual goals and values (Miller & Rollnick, 2012). One of the main tenants of Motivational Interviewing and Motivational Enhancement is employing empathy by demonstrating reflective listening techniques and taking a non-judgmental stance. The therapist helps develop discrepancies in the information the client presents, which is achieved through identifying short and long-term goals and examining how the behavior in question might be hindering or preventing goal achievement. It is imperative to accept the individual and their decisions and not enter into debates about beliefs, perceptions, or behaviors. In this way, the therapist and client are collaborators rather than adversaries (Miller & Rollnick, 2012). Finally, supporting self-efficacy is demonstrated through statements of affirmation and hope, and feedback that reinforce the client's own statements about behavior change (Miller & Rollnick, 2012).

As a result of its main tenets of acceptance, understanding, and increasing motivation to change, motivational enhancement interventions can be beneficial for adolescent substance abusers. Motivational enhancement interventions view the individual as an autonomous agent, capable of making decisions and accepting responsibility for change, which is particularly valuable to adolescents in their stage of development (Miller & Rollnick, 2012). Motivational enhancement interventions tend to utilize a harm reduction approach for targeting excessive, hazardous substance use, versus an abstinence-based approach that may be indicated for those with more serious substance use disorders. Thus, it may not be relevant to those with less serious substance related problems (O'Leary-Tevyaw, & Monti, 2004). In line with the advantage of inclusivity, motivational enhancement interventions are tailored to the needs and issues of the specific individual, which in turn might increase the intervention's appeal to

adolescents (O'Leary-Tevyaw, & Monti, 2004). Another powerful reason for using motivational enhancement interventions with adolescents is its focus on avoiding argumentation and hostile confrontation. By accepting adolescents as individuals without lecturing them or telling them what to do, helpers may be able to effectively initiate and maintain rapport with a rebellious or difficult adolescent and foster an atmosphere of self-directed change (O'Leary-Teyyaw, & Monti, 2004). Many adolescents do not voluntarily present for substance abuse treatment and are more likely to be referred by a parent or other outside influence. Lack of motivation to examine and make changes to their risky behaviors is common (Pompi & Resnick, 1987). Motivational Interviewing and Motivational Enhancement Therapy offer a structure to assist therapists in increasing motivation for change and provides many tenants helpful in working with adolescent substance users. Overall, adolescents can be empowered to evaluate their goals and current behaviors, come to their own conclusions regarding their behaviors, and make the changes they wish to make.

Twelve Step groups incorporate many of the factors included in motivational therapies. Given the voluntary nature of Twelve Step groups, the coercive, externally driven motivational factors are eliminated and allow participants to attend and participate at their own discretion. Twelve Step groups also allow participants to work on issues relevant to them, to feel empowered, and in control over the material they believe to be relevant.

Relapse. The majority of adolescents who complete substance abuse treatment eventually relapse, often due to their lack of participation in aftercare (Chung & Maisto, 2006; Gardner, Godley, Funk, Dennis, & Godley, 2007; Godley, Kahn, Dennis, Godley,

& Funk, 2005; Wagner, 2008;). Cornelius et al., (2003) and O'Leary et al., (2002) reported adolescents relapse more quickly than adults after completing treatment. Ramo and Brown (2006) and Chung and Maisto (2006) identified several factors associated with adolescent substance relapse including low motivation for change, lack of parent and peer support, lack of coping skills, associating with peers who use substances, lack of participation in continuing care services, and most often, social and peer pressure.

Arci, Gogel, Pollock, and Wisdom (2012) attempted to determine specific factors and types of supports adolescents believed were important for their sustained sobriety post treatment. They interviewed 28 adolescents, 30 parents or caretakers, and 29 staff from residential treatment facilities. All participants reported similar opinions regarding aftercare services. Outpatient treatment and Twelve Step support groups were the most frequently cited as imperative in maintaining sobriety. Healthy peer and family relationships were also noted to be of importance, specifically the importance of pro-social peers. Non-drug related structured environments and activities were the third most reported services needed to sustain sobriety. Finally, the need to stay focused and achieve emotional stability was reported to be important for adolescent participants, but less frequently by parents and staff members (Arci, et al., 2012). This study's small sample size and lack of diversity among its participants (77% Caucasian and 86% male) reduces the ability to generalize its findings to other populations.

The high rates of reported relapse among adolescent substance users is concerning. Various factors have been identified as protective of relapse, including motivation to change, parental and peer support, and continuing care services. Despite their limitations, research (Arci, et al., 2012; Chung & Maisto, 2006; Ramo and Brown,

2008) has identified the importance of supportive, structured, substance free aftercare activities and services for long-term recovery for adolescent substance users. Twelve Step programs can assist in offering continuous support to maintain long-term recovery from substance use.

Lack of developmentally appropriate options. While the literature presented indicates the efficacy of various treatment approaches, room for improvement is noted, particularly in the area of developmentally appropriate intervention methods. The Center for Substance Abuse Treatment (1999) indicated treatment for adolescents is most effective when it is implemented with their particular developmental needs in mind. Deas and Clark (2009) reported adolescents present for treatment with various substance use patterns, risk factors that contribute to their substance use, and developmental abilities, including cognitive thought processes, emotional, and social capabilities. Therefore, evidence based treatment models for adults with substance abuse issues are not necessarily applicable to the treatment needs of adolescents. McKay (2009) elaborated by explaining how adolescents in treatment differ from adults, as they tend to use multiple substances, experience fewer medical complications as a result of their substance use, are less able to recognize the consequences of their behavior, and have shorter histories of substance use. This idea was reiterated by Drug Strategies (2003), which encouraged programs to design their treatment to meet the specific needs of adolescents rather than simply using adult treatment models. Ramos and Brown (2008) added that developmentally appropriate recovery support services are imperative to counteract the risk for relapse among adolescents, as they transition from residential or correctional treatment setting back into high-risk, community environments. Regardless

of the treatment model utilized, there are several key elements to consider when treating adolescents with substance use disorders, including adolescent substance use trends, associated consequences, and the developmental level of program materials. Additionally, treatment programs should make efforts to involve family members to address their role in the initiation and maintenance of the youth's substance use (Center for Substance Abuse Treatment, 1999).

Specific to Twelve Step programs, multiple variables have been identified to contribute to adolescent's lack of participation. In particular, some of the Twelve Step concepts may make adolescents hesitant to attend meetings. One Twelve Step principle requires an individual to admit they are powerless (AA, 2014), which may not be appropriate for adolescents who are at a developmental stage where they are searching for autonomy and independence (Rivers, Greenbaum, & Goldberg, 2001). AA's basis in spirituality has been long questioned for turning individuals away from participating in the program (AA, 2014). Kelly and Meyers (2007) found adolescent substance users tend to report lower levels of spiritual orientation compared to adults and may struggle with the Twelve Step spiritual concepts. Additionally, Kelly et al. (2008) noted it might also be difficult for adolescents to remain abstinent if they have not experienced as many substance-related symptoms, such as recurrent negative social and legal consequences, or inability to fulfill their role obligations, suggesting they may not have "hit rock bottom" (AA, 2014).

In a 2001 survey, 46 was the average age of individuals attending AA meetings with only 2% under the age of 21 (Alcoholics Anonymous Membership Survey, 2001). Deas et al. (2000) indicated the topics pertinent to adults in Twelve Step meetings,

specifically marital relations, raising children, and employment difficulties might be perceived to be irrelevant or unhelpful to adolescents. Furthermore, the predominant adult composition of groups may present as a barrier to and hinder identification with others, ultimately affecting group attendance and affiliation (Kelly, Myers, & Brown, 2005).

As presented earlier, Kelly, Myers, and Rodolico (2008) found that one-fourth of the 62 adolescents surveyed reported a "lack of fit," feeling like AA/NA was not relevant or of interest to them, as the most common reason for not attending meetings. Other reasons for discontinuing attendance were relapse (24%), not believing one had a substance use problem (14.5%), and the removal of an external contingency (13%), such as completing inpatient treatment and no longer being required to attend. Subjects failed to identify the spiritual aspects of the Twelve Step fellowship in their decision to discontinue attendance, suggesting the spiritual concepts including a "higher power" may not be as much of a barrier for adolescents as previously suspected. The authors suggested professionals could assist their adolescent clients by locating and referring them to age-specific Twelve Step meetings that include same age peers as a way to increase attendance rates.

Logistical barriers. Adolescents also may experience logistical and structural barriers not encountered by adults following treatment, as adolescents are often dependent on parents for money and transportation. In addition, meeting locations may not be convenient for adolescents to get to (Kelly & Myers, 2007).

Teen Addiction Anonymous

The current study seeks to examine the program of Teen Addiction Anonymous (Teen AA). Teen AA attempts to address many of the barriers and limitations identified in the available literature, especially the lack of developmentally appropriate programs for adolescents who struggle with addictive behavior (Teen AA, 2014). "Teen Addiction Anonymous (Teen AA) was the first Twelve Step program in the world created by teens for teens" (Teen AA, 2013, p.6). It was created in 2003 as a response to high school students' request for substance abuse groups that were more effective, meaningful, and that provided them a pattern of positive living (Teen AA, 2014). Several of these students reported they had previously attended AA meetings in the community with family members or friends; however, they sought a Twelve Step program that was more relevant to their lives (Teen AA, 2014). Teen AA "was created by teens for teens," as it was specifically designed to address the life issues teens felt were most relevant to their generation, including addictive behaviors. The program provides a structured format and a safe environment to discuss relevant issues with peers (Teen AA, 2014).

All addictive behaviors are embraced in Teen AA including, but not limited to, alcohol and other drugs, eating disorders, self-harm behaviors, and bullying. Teen AA (2014) defines Addictive behavior as "any habit that is causing personal harm" (p.4). Teen AA "educates and empowers adolescents to overcome addictive behavior through the unconditional support of the other members" (Teen AA, 2013, p.4). Susan Rothery, the co-founder and CEO of Teen AA stated, "Teens are educated to make positive decisions, moving away from self-destructive behavior and chemical abuse and feel empowered to make their own decisions" (S. Rothery, personal communication, March 5,

2014). Ms. Rothery stated she cofounded Teen AA with a number of adolescents who approached her with ideas for constructing a program. The program utilizes a training manual that includes program information, meeting instructions, meeting discussion topics and activities (See Appendix D).

"Teen AA claims no affiliation with any other intervention program" (Teen AA, 2013, p. 34). It has an independent structure and format; however, the Twelve Step model is used as a guideline for addiction recovery. While the Twelve Steps of Teen AA were inspired by the Twelve Steps of Alcoholics Anonymous, they are not an adaptation. Teen AA (2014) includes the following Twelve Steps:

Step 1: I admit that I am powerless over a personal addiction, which is controlling my life.
Step 2: I have found a power that is greater than I am which can restore my sense of peace.
Step 3: I agree to turn my will over to the "Higher Power" as I define it.
Step 4: I will make a fearless and honest review of my life, my values, and my goals.
Step 5: I admit to a "Higher Power," to myself and to another human being, what was wrong with my choices.
Step 6: I am committed to having my addictive behavior removed by a commitment to a "Higher Power."
Step 7: I humbly ask my "Higher Power" to be with me as a constant reminder toward recovery from my addictive behavior.
Step 8: I will make a list of all the people whom I have hurt and will make peace with them.
Step 9: I will return to others what is owed them as long as it would not cause them harm.
Step 10: I will continue to evaluate my own actions and admit to myself what choices were wrong.
Step 11: I will continue to commit to my "Higher Power" through meditation and reflection, while following through with my recovery.
Step 12: As I continue my journey in recovery, I will share these steps with others while continuing to make them a part of my life (p. 9).

Teen AA (2014) also utilizes the following eight traditions that guide recovery:

1. Teens will be welcome to meetings as long as each individual shows unconditional respect toward all members.
2. Teens will never be charged any fee to attend a meeting.
3. Teen Addiction Anonymous is a nonprofit organization that will not be used for profiteering.
4. No teens who participate may be exploited, interviewed or identified to the media or public.
5. Facilitators will be trained individuals who support teen intervention and prevention.
6. Confidentiality will be maintained unless there is any endangerment or threat involved.
7. Teens will be autonomous in terms of deciding upon his or her own "Higher Power" as long as it represents a positive symbol or ideal.
8. Discrimination will not be tolerated. This organization was created to serve adolescents; therefore, it will be limited to that population (p. 10).

In addition, Teen AA Twelve Step meetings attempt to:

1. Provide teens with a means to change any self-destructive behavior.
2. Educate teens about the Twelve Step recovery program for prevention and intervention.
3. Facilitate meetings where teens can offer peer support and unconditional acceptance.
4. Generate a sense of awareness and honesty in terms of personal healing.
5. Encourage teens to seek personal gain through assessment and commitment to recovery.
6. Offer teens a means to communicate both in the group and with parents/family.
7. Discuss personal visions and strategies for developing those skills needed to attain achievement.
8. Ensure that all teens understand the significance that each person has in this world as well as the ability to find hope and peace of mind for personal happiness (Teen AA, 2014, p.14).

Teen AA seeks to minimize the factors that adolescents have reported to be barriers to attendance at Twelve Step meetings, including the provision of age specific groups and meeting convenience. Previous research has reported similar age group members to be important in that adolescents were more likely to attend, attended more frequently, and viewed the Twelve Step meetings as important to their recovery (Kelly et

al., 2005). The meetings are only open to adolescents ages 16 to 19; however, younger adolescents and young adults up to 21 years of age may attend with permission from the facilitator (Teen AA, 2014). Meetings are typically held on school grounds, allowing participants easy access to meetings. Teen AA is similar to other Twelve Step programs in that members attend meetings and events on a voluntary basis at no cost.

Due to the fact the program works with minors, facilitators must be associated with an agency or youth support organization that completes backgrounds checks (Teen AA, 2014). While there is always a trained adult group facilitator present at meetings, leadership is shared by the members. Parental education and support is also encouraged. Moreover, the program attempts to embrace a community coalition approach in which various individuals, groups, and businesses are utilized to provide additional support to participants. Interactive discussion and peer support is encouraged from members (Teen AA, 2014). The limits of confidentiality and mandatory reporting requirements are explained to group members. Participants are informed parents must be aware of their participation; however, the content of what is discussed during group remains confidential. To protect confidentiality, participants do not discuss behaviors that may trigger parental notification (e.g. substance abuse, eating disorders, self-harm), but rather focus on healing and recovery as a whole. During meetings, participants discuss patterns of addictive behavior, life skills, and how to maximize personal success. Moreover, meetings focus on healing and teach participants acceptance and tolerance (Teen AA, 2013).

Traditional Twelve Step programs encourage members to develop a sponsor-sponsee relationship with another member who is often further along in the recovery

process (AA, 2014). Since adolescents are minors, Teen AA does not pair participants with sponsors; however, the program acknowledges how important alliance and support are to youth, which led to the concept of "sidekicks," defined as a support person who may be another group member, peer, family member, counselor, or teacher (Teen AA, 2014, p.33).

Similar to Twelve Step groups for adults, Teen AA refers to a "Higher Power;" however, the concept focuses on the values of individuals they admire or trust (Teen AA, 2014, p.24). A "Higher Power" may include "their value of life," "hope for a positive future" or a character trait of someone they admire (Teen AA, 2014, p.24). Additionally, Teen AA (2014) provides participants with tokens, similar to adult Twelve Step programs. Youth receive a bronze token for remaining sober for 24 hours, a silver token for one week of sobriety, and a gold token for every month they remain sober thereafter (Teen AA, 2014).

Ms. Rothery stated, "We must take a holistic approach when working with adolescents, and that is what Teen AA strives to do" (S. Rothery personal communication, March 5, 2014). In addition to working the Twelve Steps, various "life skill" (Teen AA, 2014, p. 118) lessons can be incorporated into groups depending on participant needs, including how to cope with depression, Attention Deficit Hyperactivity Disorder, abusive relationships, sex education, listening, family dynamics, anger, and grief (Teen AA, 2014). During meetings, participants discuss personal issues and emotional experiences they struggle with, receive unconditional support from other group members, commit to recovery from addictive behavior, and learn techniques for self-empowerment through the Twelve Steps (Teen AA, 2013).

Theory

Teen AA incorporates many of the theoretical underpinnings that have proven effective in treating adolescents with substance use disorders. As previously discussed, Yalom (2005) identified specific factors of therapeutic group experiences likely to be important and beneficial to adolescents. Being a part of a group with others struggling with similar issues is reassuring and provides hope to continue working toward recovery. The program facilitates this by providing weekly meetings and encouraging interaction through a structured format. Yalom (2005) also noted that simply being in a group setting may help adolescents learn how to interact with others and acquire basic social skills they may lack. Erikson (1968) suggested peers are particularly important in the formation of identity in the adolescent years. As adolescents seek autonomy and independence from their parental figures, they become more dependent on their peers (Erikson, 1968). While Teen AA empowers adolescents to participate in meetings, the program also provides the opportunity for group members to take on a leadership role and facilitate meetings. The opportunity to lead meetings was identified by Ms. Butt, a Teen AA facilitator, as one of the most important factors to participants, as they often sign up to lead meetings weeks in advance (A. Butt, personal communication, April 23, 2014). Given their developmental level, adolescents likely find this role to be rewarding and empowering.

In addition to empowerment, the groups work to increase motivation, promote a sense of self-efficacy, and improve coping skills. These factors have proven to protect adolescents against relapse (Kelly, Myers, & Brown, 2002). The ability to master new coping skills increases self-efficacy and motivation for sobriety by providing participants

a safe place to discuss their issues and teach skills teens can utilize to avoid substance use or other addictive behaviors. In addition, social learning theories that focus on observational learning, imitation, and modeling (Bandura, 1986) are utilized in meetings. Both the facilitator and group members serve as models, from which other group members can learn healthy behaviors. These behaviors are encouraged and reinforced in meetings, increasing the likelihood of them occurring again. Furthermore, the program provides participants with a new social network where they can receive support and work together toward a goal of sobriety.

While many have hypothesized as to why Teen AA is attractive to participants, it is unclear which factors are the most salient and beneficial to adolescents and their sobriety goals. The current research project sought to help shed light on the factors participants reported to be most beneficial to their recovery and thus, what may reinforce their continued attendance at meetings, and ultimately, help them to maintain sobriety.

Program Endorsement

Ms. Rothery stated, "Teen Addiction Anonymous is the most profound and replicable program for teen intervention and prevention today" (S. Rothery, personal communication, December 18, 2013). She added, "Our goal is to get Teen AA into as many school districts, group homes, detention centers, correctional facilities, and charter schools as possible" (S. Rothery, personal communication, December 18, 2013). The director of outreach at Teen AA added, "We need to offer opportunity for all teens and empower them to make positive changes. That's what Teen AA is all about" (R. Schneider, personal communication, January 29, 2014).

W. White, a lead researcher at the Chestnut Health Institute, a national leader in prevention and intervention studies, released the following statement after reviewing the Teen AA training manual: “I am quite impressed with what you have sent (Teen AA training manual). I will add Teen AA to the addiction-recovery mutual aid chronology on my website and we will add Teen AA to the Guide to Recovery Mutual Aid Groups under “Up and Coming Groups” (Teen AA, 2014). Additionally, Arizona school superintendent John Huppenthal, a strong advocate for adolescents and behavioral health, stated “I would like to see Teen AA in every high school in our state” (Teen AA, 2013). Ms. Rothery indicated that Teen AA has trained approximately 300 group leaders to facilitate groups and during the 2013 school year, 720 teens participated in meetings (personal communication, January 29, 2014). As of January 2014, Teen AA was being utilized in 16 high schools in Arizona and has expanded to one high school in Wyoming (Teen AA, 2014). Multiple community agencies in Arizona also utilized Teen AA including The Boys and Girls Club, YMCA-Maryvale, John F. Long Family Services, and multiple Youth Development Centers (Teen AA, 2014). Additionally, eight juvenile detention centers in Arizona and the Arizona Department of Juvenile Corrections have incorporated Teen AA programs into their facilities (Teen AA, 2014).

Ms. Rothery intends to expand the program into other facilities across the United States and internationally to provide support to youth struggling with addictive behaviors (personal communication, January 29, 2014). Future directions include partnering with community organizations, community centers, and churches, as well as work with school districts to implement diversion programs to students struggling with addictive behavior. Additionally, Teen AA has provided training to 30 charter schools so it can be a part of

their transitional support for teens on probation, parole, and released from correctional institutions (Teen AA, 2014).

Research

Teen AA (2013) examined 60 high school students from six school districts throughout Arizona from 2011-2012. The sample included 35 Hispanic, 20 Caucasian, two African American, one Native American, and two youth who did not disclose their ethnicity. Upon entering the program, each student filled out a questionnaire regarding his or her academic performance, substance use, maladaptive behavior, and attitudes related to personal change. After attending six Teen AA meetings, students were given the same questionnaire while 21 who continued to attend Teen AA meetings for an additional 6 weeks completed a third questionnaire. In addition to the self-report questionnaires, students' grade point averages (GPA) and absences throughout the school year were tracked. Results indicated that those who used substances on a daily basis reported a significant decrease in their substance use after attending the initial six meetings. Improvements in GPA and lower absences in school were also noted for those who attended meetings. This study lacked a control group making it difficult to attribute results directly to participation in Teen AA. The small sample size was an additional limitation, leading to difficulty in generalizing the results to a larger population. False-positive results or an over-estimate of the magnitude of an association can occur with smaller sample sizes (Hackshaw, 2008). Hackshaw (2008) indicated data collected from smaller sample studies should be used to design larger confirmatory studies. Thus, while the concept of Teen AA may seem promising due to the benefits identified by this study,

additional research should be conducted to substantiate Teen AA as a viable intervention for adolescents.

Incarcerated Youth

This study purposely utilized a sample of incarcerated youth, as this particular population presents with a number of vulnerabilities and has been identified as highly disadvantaged in regard to the services they receive (Dryfoos, 1990; Kosidlak, 1976; Stathis et al., 2013). In addition, limited research has been done with this population. Often, the juvenile justice system is utilized as the last means of intervention to rehabilitate adolescents before their problematic behavior results in increasingly harmful consequences (The Center for Substance Abuse Treatment, 1999). Many adolescents who enter the juvenile justice system have participated in repeated delinquent behaviors and have multiple encounters with law enforcement. The Center for Substance Abuse Treatment (1999) indicated that by the time many adolescents enter the juvenile justice system, they have already developed serious substance use disorders and associated psychosocial dysfunction.

Youth involved in the juvenile justice system rank amongst the most disadvantaged, as this unique population presents with a number of vulnerabilities including chronic social, family, and educational adversities, as well as histories of trauma and abuse (Stathis et al., 2013). High levels of stress, poverty, unemployment, and violence are common in the lives of incarcerated youth and their families (Stathis et al., 2013). Stathis et al., (2013) indicated that approximately half of all incarcerated youth have an IQ of less than 79. In comparison to the general population, delinquent youth report more sexual activity, more substance use, poorer academic performance,

poorer interpersonal relationships, poorer problem solving skills, and less overall family involvement in their lives (Dryfoos, 1990; Kosidlak, 1976).

Almost half of adolescents referred to substance abuse treatment are referred by the criminal justice system (CASA, 2011). According to McLellan and Meyers (2004), the fact that criminal justice system is often a primary source of referrals to treatment programs reflects a lack of proactive measures in addressing substance use, before the use has caused severe and costly consequences. Stathis et al., (2013) identified the complex link between substance abuse and offending behavior among incarcerated youth. These adolescents begin using alcohol and other substances at an earlier age and more frequently when compared to non-incarcerated youth (Stathis et al., 2013). The National Center on Addiction and Substance Abuse (2011) reported that of the 1.9 million juvenile offenders diagnosed with substance abuse or dependence, only 3.6% received any form of treatment in the community. In addition, 70% of juvenile offenders reported they were under the influence of a substance at the time of their offense (Stathis et al., 2013). Furthermore, Young, Dembo, and Henderson (2007) reported juvenile offenders who continue to use substances are more likely to continue their offending patterns. SAMHSA recommended that treating substance abuse among adolescent offenders is imperative, as it leads to a significant decrease in criminal recidivism (Center for Behavioral Health Statistics and Quality, 2012).

Continuing care services play a major role in maintaining long-term outcomes including sobriety and other gains achieved in treatment (Ouimette, Moos, & Finney, 1998). Poor compliance and limited engagement with aftercare services, among adolescents has been clearly documented as an issue in maintaining sobriety (Godley et

al., 2007). The shortage of aftercare services and lack of service coordination in the juvenile justice system is a primary issue for adolescents (Chassin, 2008). Chassin (2008) expressed a need to develop treatment models that integrate and coordinate aftercare services for juvenile offenders who are returning to the community.

Mental Health Issues

Current research examining psychiatric and behavioral disorders among youth in the juvenile justice system is minimal; however, it has been consistently reported that incarcerated youth have higher prevalence rates of substance use disorders and mental health disorders than the general population (Aarons, et al., 2001; Abram, Teplin, McClelland, & Dulcan, 2003; D'Amico, E. J., Edelen, M. O., Miles, J. N., & Morral, A. R. (2008); Dembo, R., & Sullivan, C., 2009; Drerup, L. C., Croysdale, A., & Hoffmann, N. G., 2008; Otto, Greenstein, Johnson, & Friedman, 1992; Marmorstein, N. R., 2010; Melton, 1992; Timmons-Mitchell et al., 1997; Teplin, Abram, McCelland, et al., 2002). The overrepresentation of many psychiatric disorders in juvenile justice-involved youth has been supported by a number of epidemiological studies. Otto, et al. (1992) reviewed 32 studies that explored the mental health conditions of youth involved in the juvenile justice system and concluded that of 1.25 million referrals in 1989, approximately 12% presented with mental health disorders. Timmons-Mitchell et al. (1997) examined the prevalence of mental disorders among 173 incarcerated youth from 1995-1996 who were randomly selected from juvenile justice institutions in Ohio. Participants completed a diagnostic interview and were administered the Millon Adolescent Clinical Inventory (Millon, 1993) and the Symptom Checklist-90-Revised (Derogatis & Unger, 2010). Prevalence of mental health diagnoses in males was 27% while the prevalence in females

was 84%. Common diagnoses included Conduct Disorder (100% males; 96% females), substance abuse (88% males; 56% females), Attention Deficit Hyperactivity Disorder (76% males; 67% females), mood disorders (72% males; 88% females), sleep disorders (68% males; 76% females), anxiety disorders (52% males; 72% females), psychotic disorders (16% males; 12% females); and eating disorders (0% males; 16% females). These findings have important implications for treatment and program planning within the juvenile justice system, as mental health needs must be addressed, in addition to the health concerns and environmental stressors faced by these youth. Despite the fact that these studies are dated and rely solely on self-report, it is apparent that mental health diagnoses are prevalent among incarcerated youth.

Teplin et al. (2002) examined a random sample of 1829 African American, Caucasian, and Hispanic adolescents ages 10 to 18 (64% male; 36% female), detained in Cook County, Illinois between November 1995 and June 1998. Each youth was interviewed using the Diagnostic Interview Schedule for Children (Johnson et al., 1999). Half of the males (50.6%) and almost half of the females (46.8%) met criteria for a substance use disorder and more than 40% of participants met criteria for disruptive behavior disorders. Other diagnoses were also noted: Affective disorders (18.7% of males and 27.6% of females), anxiety disorders (21.3% of males and 30.8% of females), and ADHD (16.6% of males and 21.4% of females). Teplin et al. (2002) also examined differences among ethnic backgrounds. Compared to African Americans, Caucasian participants had significantly higher rates of disruptive behavior disorders, substance use disorders, and ADHD. Additionally, Hispanic participants had significantly higher rates of anxiety disorders than Caucasian and Hispanic participants. Caucasian females

presented with significantly higher rates of disruptive behavior disorders and substance use disorders than African American and Hispanic females. However, Hispanic and African American participants presented with higher rates of affective disorders and anxiety disorders than Caucasian females (Teplin et al., 2002).

Mental health issues and substance use have a correlational relationship in that individuals with mental health issues often report comorbid substance use and those who struggle with substance use often present with additional mental health issues (Abram, Teplin, McClelland, & Dulcan, 2003; Teplin et al., 2002). It is imperative to simultaneously address mental health issues and comorbid substance use when treating juvenile offenders, as continued substance use significantly increases risk of recidivism (CASA, 2011; Stoolmiller, & Blechman, 2005).

Interventions

Research has shown there are particular forms of therapy and interventions that produce greater clinical outcomes for incarcerated and substance using youth. As previously stated, Motivational Interviewing is particularly useful (Austin, Hospital, Wagner, & Morris, 2010; Clair et al., 2011; Feldstein & Ginsburg, 2006; Slavet et al., 2005). Miller and Rollnick (2012) indicated that the confrontation and authority often displayed in correctional settings elicit resistance in youth. Motivational Interviewing techniques facilitate a collaborative approach with the youth and treatment staff, while drawing upon their inherent desires and ability to make changes (Miller & Rollnick, 2012).

Austin et al. (2010) conducted a study to examine factors related to incarcerated youths' motivation to make changes in their substance use. The sample consisted of 310

ethnic minority males with an average age of 16.69 years. Assessments were administered that explored demographic variables, externalizing disorders, substance use disorders, motivation to change (Problem Recognition Questionnaire), and information on their families including their substance involvement and parenting behaviors. Results indicated that those who reported parental substance involvement felt less supported by their parents and less motivation to change their behavior. On the other hand, those participants who perceived their parents to be supportive reported greater levels of motivation to change their behavior. Additionally, participants' report of the severity of their substance use was related to motivation to change. Those who reported their substance use to be more severe also reported greater motivation to make changes in their substance use. Further, those participants who endorsed externalizing behavior disorders such as Conduct Disorder, reported lower levels of motivation to change (Austin et al., 2010). This data reveals the complexity of motivational aspects when working with incarcerated youth. Motivation to change is directly linked to participation and positive treatment outcomes; thus, motivation to change must be continuously assessed during the treatment process. Parental support was rated to be an important factor in youths' motivation to change. Thus, treatment providers should consider this and include supportive parents in the process while incarcerated and assist youth with absent or unsupportive parents identify other reasons to change their behaviors.

Arizona Department of Juvenile Corrections

In 2012, there were 975,022, 8 to 17 year olds living in Arizona (Administrative Office of the Courts Juvenile Justice Services Division, 2012). From July 2011 to June 2012, 33,617 (3.5%) were referred to Arizona's juvenile court system on at least one

occasion due to delinquent acts or incorrigible behavior (Administrative Office of the Courts Juvenile Justice Services Division, 2012). This represents approximately one in every 29 Arizona youth. Of the referrals made, 7,641 (23%) were detained at least once, while there were 15,737 (47%) juveniles diverted to programs in Arizona's juvenile justice system to avoid formal court processing (Administrative Office of the Courts Juvenile Justice Services Division, 2012).

The Arizona Department of Juvenile Corrections (ADJC) is a secure care facility responsible for all juveniles adjudicated to its jurisdiction by county courts (ADJC, 2015). The department is responsible for public safety through the management, education, rehabilitation, and treatment of juvenile offenders (ADJC, 2015). In 2015, 290 juveniles were committed to the Arizona Department of Juvenile Corrections (ADJC). The facility represents a final rehabilitation option, as the majority of youth have had multiple referrals and adjudications. Of the total, 14.5% had received 16 or more court referrals, 24.5% received six to 11 to 15 referrals, and 34.8% had received six to 10 referrals and 26.2% received one to five referrals (ADJC, 2015). Ten percent of youth have been adjudicated on one occasion, 38.6% have been adjudicated on two to three occasions, 31% on four to five occasions, and 15.3% have been adjudicated on six or more occasions (ADJC, 2015).

Of the 290 youth adjudicated to ADJC in 2015, 92.8% were male and 7.2% female (ADJC, 2015). The ethnic breakdown included 37.9% Hispanic, 29.7% Caucasian, 9.3% African American, 3.8% American Indian, 6.2% Mexican National, 1% Asian, 12.4% Biracial, and .3% other (ADJC, 2015). Ages ranged from 13 to 17 years.

Seventy-eight percent of the youth in 2015 were diagnosed with substance use disorder (ADJC, 2015).

Teen AA. As previously mentioned, Teen AA has been incorporated into treatment programming facility wide at ADJC. While the facility has three specialty units that focus on the treatment of substance use disorders (two male and one female), 11 of the 13 units offer Teen AA as a voluntary program. Meetings are held on a weekly basis by trained group facilitators and utilized as an adjunct to other treatment programs. In an effort to promote continuing care, youth are often referred to Teen AA meetings in the community once they are released from the facility.

In the 2015 fiscal year, 262 Teen AA groups were facilitated at ADJC. The total number of unique participants was 319 (89% male and 11% female). A number of youth attended meetings on a frequent basis while others attended meetings sporadically during their incarceration (ADJC, 2015).

The present study explored the perceptions and opinions of incarcerated youth who voluntarily attend Teen AA groups at ADJC. Participants were asked to provide demographic information, information regarding their substance use, past and current participation in substance use treatment, and about their experiences in the Teen AA group, including their reason for attending, the perceived helpfulness and importance of the groups, specific questions regarding the material presented, and their future plans to attend Teen AA post release from ADJC.

CHAPTER THREE: METHODOLOGY

Participants

All male and female youth (14- 17 years old) incarcerated at the Arizona Department of Juvenile Corrections (ADJC) who participated in at least one Teen AA meeting were approached to participate in the study. Subjects were recruited from 10 of the 13 units of the facility (8 male and 2 female), as they were the units offering Teen AA. To determine a prospective sample size, facility Teen AA attendance reports were examined over a 3-month period in 2014, which indicated that 160 youth attended at least one Teen AA meeting. Given this number, a total of 60 survey and 10 interview participants were targeted. However, given multiple unforeseen problems including parent/guardian unavailability, transfers to county jail or release from the facility, a final sample of 51 participants was available. In addition, a shortage of clinical staff at the time of the study affected the number of Teen AA groups being conducted at the facility. Due to the smaller available sample size, the principal investigator extended the number of interviews conducted to 24 rather than the original 10 planned.

Instruments

All participants were assigned a number that was used to maintain confidentiality. The survey was created by the principal investigator using multiple sources of information, including the relevant literature (e.g., Breda & Heflinger, 2007; Brown, Seraganian, Tremblay, & Annis, 2002; Fisk, Rakfeldt, & McCormak, 2006; Kelly & Myers, 2007; Kelly, Myers, & Brown, 2002; Kelly, Myers, and Rodolico, 2008), discussions with Teen AA stakeholders (e.g., S. Rothery, W. Brown, & R. Schneider) and the principal investigator's research committee (See Appendix A).

SOCRATES

The Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES; Miller & Tonigan, 1996) was designed to measure readiness for change in alcohol or other substance use. This assessment was used to assess participants' level of motivation to make changes in substance use behaviors. It was hypothesized that those youth who express greater motivation to change would choose to participate in voluntary support groups.

The SOCRATES was developed as a parallel measure of the stages of change model described by Prochaska and DiClemente (1986). The assessment is a 19-item, self-report measure that identifies readiness for change using 3 main scales: *Recognition* (pre-contemplation and preparation), *Ambivalence* (contemplation), and *Taking Steps* (action and maintenance). Items are scored on a 5-point scale and then summed to obtain total scores on each of the 3 scales. For the current study, the SOCRATES Version 8D was utilized as it addresses all substance use, as opposed to other versions that solely assess alcohol use. Version 8 is a reduced scale of the original SOCRATES that was developed using factor analyses of prior versions. Reliability coefficients of the SOCRATES 8D subscales include: *Ambivalence* r = .83, *Recognition* r = .94, and *Taking Steps* r = .93 and internal consistency measures *Ambivalence* 60-.88; *Recognition* .85-.95; *Taking Steps* .83-.96 (Miller & Tonigan, 1996). Validity studies have also been conducted using measures of criterion and construct validity (Miller & Tonigan, 1996; Mitchell & Angelone, 2006). Mitchell and Angelone (2006) examined the validity of the SOCRATES utilizing a sample of military service members participating in substance

treatment. Results indicated scores on the SOCRATES predicted length of stay in treatment and successful completion of treatment.

The SOCRATES assessments were hand scored by the principal investigator. High and low scores on all three scales (*Recognition, Ambivalence, and Taking Steps*) were examined and general guidelines provided by Miller and Tonigan (1996) were utilized for interpretation.

Procedures

The principal investigator first obtained Argosy University IRB certification to conduct the study and permission was obtained from the Research and Development Bureau at ADJC. Subsequently, all male and female youth incarcerated at the Arizona Department of Juvenile Corrections (ADJC) who had attended at least one Teen AA meeting were approached to participate in the study. The "Script for Participant Recruitment" (See Appendix D) was read out loud to each prospective participant in a private office on his or her respective housing units. The strictly voluntary nature of the project and the absence of incentives or negative consequences were stressed. All participants were given a copy of the assent form. They were asked to read the form and indicate whether they would like to participate in the study by checking YES or NO. This procedure was hypothesized to minimize the influence of group/peer pressure, as the youth did not know who was volunteering to participate or opting out. The principal investigator answered any questions regarding the information presented in the oral script or the informed assent.

Upon the youth providing assent to participate in the survey or both the survey and interview portions of the study, informed consent from a legal guardian(s) was also

required. Legal guardian(s) were contacted via telephone and informed of their child's interest in participating in the study. The principal investigator obtained contact information for each legal guardian through an ADJC database. Upon obtaining verbal consent, arrangements were made to obtain written consent at weekly visitation sessions, through the youth's parole officer, or via US mail, in which a self-addressed stamped envelope was provided with a parent/legal guardian consent form (See Appendix H). If a legal guardian did not provide consent, the youth was not allowed to participate in the study.

Once all informed assent/consents were signed, the principal investigator assigned each participant a code number beginning at 100. This process assisted in protecting participant confidentiality, as the number was unrelated to inmate identification number.

The principal investigator met with each youth individually on their respective housing unit to administer the paper and pencil surveys. Prior to completing the survey, the principal investigator reminded each youth of the strictly voluntary nature of the project and the lack of incentives or negative consequences if they chose not to complete the survey. Each youth completed the survey and SOCRATES assessment. The principal investigator was available to answer questions and briefly reviewed the survey to ensure instructions were followed and all questions were completed. For the purposes of this study, the youth were informed that the current assessment and survey information would not be included in their clinical file and was strictly for the purposes of this study. Once completed, the documents were stored in a manila envelope and secured in a locked file cabinet at the facility.

Youth who also volunteered to participate in the interview portion completed the interview following completion of the written survey. While the intent was to audiotape all interviews, four youth requested not to be audiotaped. In this case, the principal investigator wrote down all responses and transcribed them. Interviews lasted 10 to 15 minutes. Follow up questions were asked during the interview and varied depending on participants' responses to the survey questions. The research project data collection began in June 2015 and was completed in September 2015.

Conflict of Interest

Potential conflicts of interest in this study must be addressed, as the principal investigator was employed at the Arizona Department of Juvenile Corrections as a Psychology Associate. As an employee, the principal investigator conducted treatment with approximately 35 youth, 10 of who participated in Teen AA. It should be noted that the principal investigator had no affiliation with Teen AA at the facility or in the community. The principal investigator did not facilitate any Teen AA groups and Teen AA groups on the high-risk substance treatment unit were conducted on a day when the principal investigator was not working as an employee.

In order protect youth from coercion and address the principal investigator's role as an authority figure at the facility, certain steps and procedures were implemented. The use of a recruitment script (See Appendix `D) was utilized to ensure all youth were provided with the same information before deciding to participate or opt out of the study. As part of the script, the principal investigator's role of researcher was clearly identified. Youth were also informed that their participation of refusal to participate would have no effect on the treatment they received at ADJC.

CHAPTER FOUR: RESULTS

Research Questions

This clinical research project sought to explore: 1) What motivates incarcerated youth to voluntarily attend Teen AA meetings? 2) Do those who participate in Teen AA perceive their substance use as a problem? 3) What elements of Teen AA do they perceive to be most helpful? 4) Are Teen AA participants motivated to change their behavior, as measured by the SOCRATES? 5) Do participants intend to attend Teen AA meetings post release? 6) What barriers do they anticipate might prevent them from continuing to participate? 7) Are there personal characteristics and/or perceptions of Teen AA that may be related to motivation to change?

Quantitative Data Analyses

Quantitative data collected from surveys was analyzed utilizing SPSS 22.0. Descriptive statistics were used to provide information related to research questions one through six: Demographic makeup of the sample, perceived substance use severity, past and present participation in substance use treatment, why participants reported attending Teen AA, perceived helpfulness of the groups, perceived differences in Teen AA versus other groups, level of motivation to change substance using behaviors (SOCRATES), future plans to participate in Teen AA, and barriers anticipated to future participation.

Descriptive Statistics

Fifty-one youth participated in the study including, 41 (80.4%) males and 10 (19.6%) females. Ages ranged from 14 to 17 (SD=.948) with an average of 16.3. Forty-three percent of participants were Hispanic, 25.5% Caucasian, 17.5% Biracial, 10% African American, 4% American Indian.

Table 1
Demographic Information

Age (Years)	Number (n)	Percentage (%)
14	4	7.8%
15	5	9.8%
16	13	25.5%
17	29	58.8%
Ethnicity	**Number (n)**	**Percentage (%)**
Hispanic	22	43.1
Caucasian	13	25.5
Biracial	9	17.6
African American	5	9.8
American Indian	2	3.9

Seventy five percent of participants reported previously engaging in substance use treatment with a like percentage assigned to a substance treatment unit at the time of the study. Additionally, three-fourths (69%) indicated they had attended some form of Twelve Step group in the past, while one third (37%) indicated their participation in these groups was required. To address the research question "Do those who participate in Teen AA perceive their substance use to be a problem," participants were asked to rate the perceived severity of their substance use on a 5-point scale from "Not a Problem" to "Very Severe." Over half (57%) of participants reported their substance use to be "Very Severe" or "Severe." Eighteen percent indicated they were "Undecided, 13.7% "Somewhat Severe," and 11.8% reported their substance use was "Not a Problem."

Participants were asked to rate their "drugs of choice" by listing their preferences. Results indicated that of the 51 participants, 13.7% rated alcohol as their first choice, 43% reported marijuana as such, 16% rated amphetamines as their first choice, 16% reported opioids to be their first choice, 8% rated spice (synthetic marijuana) to be their

first choice, and 2% reported cocaine to be their first choice. In addition, one participant reported having never used any substances.

Table 2
Drug of Choice

Substance	First Choice (%)	Second Choice (%)	Third Choice (%)
Alcohol	13.7%	26.6%	15.7%
Marijuana	43%	21.6%	11.8%
Amphetamines	16%	17.6%	17.6%
Opioids	16%	10%	7.8%
Cocaine	2%	5.9%	9.8%
Spice	8%	9%	6%
Hallucinogens		2%	
PCP			2%
Sedatives		4%	
Inhalants			2%

Teen AA attendance at ADJC. Teen AA groups are offered once per week at the facility. Approximately half of the participants (47%) reported attending 10 or more Teen AA groups while at ADJC, 15.7% reported attending 5 to 10 groups, and 37% indicated attending less than five groups. In regard to the research question "What motivates youth to voluntarily attend Teen AA meetings," almost half of participants (47%) indicated they attended Teen AA because they were "curious what Teen AA was about," 45% indicated they wanted to learn new skills, 31% indicated they wanted to receive support from their peers, 27.5% reported they wanted to discuss personal issues, 25% reported wanting to focus on Twelve Step material, 13.7% stated they initially attended because they had a friend in the group, and 4% marked "Other." "Other" reasons for attending Teen AA included, they "had to go," they enjoyed the group being held outside on occasion, and one participant indicated they "started the group as a guest and liked it" so he continued to attend.

Perceived helpfulness of Teen AA. In regard to the research question "How helpful is Teen AA," 84% reported Teen AA to be "Somewhat helpful" or "Very Helpful." Approximately 12% of participants were undecided, and 4% rated Teen AA as "Not Very Helpful." Participants were also asked which elements of Teen AA were perceived to be the most helpful. More than half of participants (53%) indicated knowing they are not the only one with a problem was helpful to them, 45% reported learning to interact with others in a positive manner to be helpful, 43% stated hearing success stories from others was helpful, 39.2% reported the opportunity to express their feelings was helpful, 35.3% stated the opportunity to act as the leader of the group to be helpful, 33% reported the support they received from the group to be helpful, 23.5% indicated the structure of the group to be helpful, and 6% indicated the Twelve Step specific material to be helpful to them. Additionally, participants were asked which "Life Challenges" they found to be the most helpful. More than half of participants (67%) reported Letting Go of Painful Emotions to be helpful, Coping with Anger (60.8%), Addictive Behaviors (64.7%), Healthy Teen/Parent Relationships (59%), Healthy Relationships (51%), Depression (49%) Abusive Relationships (35.3%), Coping with Grief (35.3%) and Coping with ADHD (23.5%) to be helpful.

Table 3
Perceived Helpfulness

	Number (n)	Percentage (%)
Very Helpful	20	39.2%
Somewhat Helpful	23	45.1%
Undecided	6	11.8%
Not Very Helpful	2	3.9%
Universality	*	53%
Pro-Social Interaction	*	45%
Instillation of Hope	*	43%
Catharsis	*	39.2
Leadership Role	*	35.3
Peer Support	*	33%
Group Structure	*	23.5
Twelve Step Material	*	6%

* Participants had the option to choose more than one response

Importance of similar age participants. Participants were asked to rate how important it was for them to attend groups with others similar in age. More than a third (39%) indicated attending groups with similar aged peers was "Somewhat Important," 29% reported it to be "Very Important," 17.6% "Undecided," 7.8% "Not Very Important," and 6% indicated it was "Not Important at All."

Relative preference to attend Teen AA. Participants were asked if they were more motivated, less motivated, or equally motivated to attend Teen AA versus other groups. More than half (53%) reported they were more motivated to attend Teen AA groups, while 41% were equally motivated, and 6% preferred to attend groups other than Teen AA. Further, participants were asked what they believed made Teen AA different from other groups. More than half (59%) reported they felt as though they were able to openly discuss their thoughts and feelings in Teen AA, 47% indicated Teen AA covered content they felt was relevant to them, 45% percent reported Teen AA was more structured than other groups, 45% reported Teen AA provides a leadership role not

offered in other groups, and 9.8% indicated Teen AA was less structured than other groups.

Future attendance in Teen AA. In regard to the research question "Will you attend Teen AA meetings after you are released from ADJC? " slightly over half (53%) indicated they did not plan to attend Teen AA in the community, while 47% reported they planned to continue attending Teen AA. To explore the barriers the participants anticipated might prevent them from continuing to participate in Teen AA, participants were asked to share all of the possible reasons they did not plan to attend. Of the 24 (53%) who reported they would not attend Teen AA, 14 (21.6%) reported they did not know where Teen AA meetings were held, 10 (19.6%) indicated there were no meetings offered in their area, three (5.9%) reported they did not have consistent transportation to get to meetings, three (5.9%) stated they did not have a problem and would no longer attend Teen AA in the community, and two (3.9%) indicated Teen AA meetings were not relevant to them. Additionally, three (5.9%) participants marked "Other" and stated they would not attend as they "did not have time to," "did not want to," and one participant indicated they planned to attend AA/NA, as they were turning 18 years old.

Table 4
Future Attendance

Future Attendance	Number (n)	Percentage (%)
Yes	24	47%
No	27	53%
Reason for Not Attending	**Number (n)**	**Percentage (%)**
Location Unknown	11	21.6
No Meetings Offered	10	19.6%
No Transportation	3	5.9%
Not Relevant	2	3.9%
Other	3	5.9%

Motivation to change. To address the research question "Are Teen AA participants motivated to change their substance use behavior," level of motivation was assessed using the SOCRATES. High and low scores were examined. A high score on the problem recognition scale is indicative of directly acknowledging a substance use problem, expressing a desire to change, and recognizing that harm will continue if they do not make changes (Miller & Tonigan, 1996). Low scores on the problem recognition scale suggests denial of a substance use problem and lack desire to make any changes (Miller & Tonigan, 1996). Twenty-six percent of participants reported high problem recognition, while 51% percent reported low problem recognition. A high score on the Ambivalence scale indicates they "sometimes wonder if they are in control of their drinking, are drinking too much, and are hurting other people" and suggests uncertainty or some openness to reflection (Miller & Tonigan, 1996). A low score on the Ambivalence scale suggests they do not wonder whether they have a problem with substance use, whether they are in control, or if they are hurting others (Miller & Tonigan, 1996). Thirty-five percent scored high on the Ambivalence scale while 33% scored low. Miller & Tonigan (1996) indicated a participant might score low on ambivalence either because they know their drinking is causing problems (high Recognition), or because they know they do not have a drinking problem (low Recognition). Thus, a low Ambivalence score should be interpreted in relation to the Recognition score. High scores on the *Taking Steps* scale suggests one is already doing things to make a positive change in their substance use, and may have experienced some success in this regard. The scores indicate one is in the process of change and may want help to persist or to prevent relapse. A high score on this scale has been found to be

predictive of successful change (Miller & Tonigan, 1996). A low score on this scale suggests one is not currently doing things to make changes in their substance use patterns or behaviors. Forty-five percent of participants reported high scores, while 20% reported low scored on the *Taking Steps* scale.

Chi Square Analyses

To address the research question "Are there personal characteristics and/or individual perceptions of Teen AA that may be related to motivation to change," a bivariate correlation was conducted to explore the relationship between participants' gender and ethnicity and experiential variables including past and current participation in substance abuse treatment, past Twelve Step participation, perceived severity of substance use, reasons for attending Teen AA, number of Teen AA groups attended, how helpful Teen AA is to them, why Teen AA is helpful, the importance of attending groups with similar aged individuals, the differences between Teen AA and other groups, motivation to attend Teen AA versus other groups, future attendance and anticipated barriers, and level of motivation to change as measured by the SOCRATES. Two statistically significant relationships were identified.

Analyses of gender and perceived differences between Teen AA and other groups indicated a significant relationship X^2 (1, N = 51) = 4.992, p = .025. A greater percentage of females (90%) than males (51.2%) felt they were able to openly discuss personal issues in Teen AA. The relationship between ethnicity and reasons for discontinuing Teen AA participation post release from ADJC was also examined. All American Indian participants (n=2) marked lack of transportation as a barrier for their continued attendance X^2 (4, N = 51) = 17.109, p = .002. While a number of Chi Square

correlations were completed, the sample size may have limited the ability to find statistically significant relationships.

ANOVA

A one-way ANOVA was conducted to compare the effect of gender and ethnicity on the perception of Teen AA helpfulness and the perceived importance of attending groups with similar aged individuals. No significant differences were identified between gender or ethnicity in the way they reported Teen AA to be helpful. Additionally there were no differences in ratings of importance of attending groups with similar aged individuals.

T-Test

An independent samples T-test was conducted to examine differences between male and female participants in their rating of how helpful they perceived Teen AA to be and whether attending groups with similar aged individuals was important to them. Results indicated no statistically significant differences between male and female participants in the way they rated Teen AA to be helpful or in the way they rated the importance of attending groups with others similar in age.

Logistic Regression

A logistic regression analysis was conducted to predict participants' future attendance in Teen AA meetings. Results indicated no statistically significant predictors for future Teen AA attendance**.**

Qualitative Data Analyses

Qualitative data was analyzed using NVivo 10 as a way to explore thematic content obtained in the interviews. A total of 24 interviews were completed and the

principal investigator transcribed all audio recordings. Four participants requested not to be recorded, in which case the principal investigator transcribed them. Responses to each question were coded into common themes and sub-themes. Themes and connections are presented to aid in further explaining findings of the quantitative data. Themes emerged including: Leadership role, group structure, peer support, pro-social skill development, and Twelve Step content.

Leadership Role

The majority of participants interviewed, identified the significance of the leadership role offered in the Teen AA groups. Some of the responses were:

> "I like that group members run it because if there's an adult running it, usually they pick what we do in group, and whenever a kid runs it, we do the picking."
>
> "I can teach them [other group members] what I've learned, what you guys teach me."
>
> "I feel like I'm being a leader, but in the right way. I don't know if that was what you mean. I like to be the leader in groups."
>
> "We get to run the meeting and it's really helpful because a lot of people talk then."
>
> "I think it's from people my own age running groups. I think about it more, because there's someone my age telling me that they messed up but they're making the change, and if they can do it I can do it."
>
> "When a group member leads it, it's like ... Not disrespectful, but it's more interesting, because who would think a teenager would try to run a group or something. It is just more interesting."
>
> "Yeah, like because the kids run the groups and ask all of the questions and not the adults."
>
> "Oh yeah, I love being the leader. I got to do it three times now. Once we got in a fight over who was going to be the leader and [another youth] ended up in separation and we didn't get to do the group. Everyone loves being the leader."
>
> "They are helpful because our other groups are not like that. Its mostly them talking and we have to listen and remember what they are saying so we can say it

back to them later. I don't even care about the things they say."

"I never got to be the leader in a group before and I didn't think it was that hard, but it low key is hard. You have to make sure everyone is participating and being respectful and get them back on track when they are not doing good. Its hard but its cool, its my favorite part actually."

"Those things make it our group. Not the staff's group. We lead, we tell our stories and we pick whatever we are going to cover in that group."

Peer Support

A number of Yalom's (2005) group factors believed to support the change process among individuals attending support groups were referenced during the interviews including themes of: Universality, altruism, interpersonal learning, instillation of hope, pro-social skill development, and catharsis.

Universality. The concept of Universality suggests group members experience similar issues and feel, as though they are not alone in their struggles (Yalom, 2005). Some responses included:

"This group is filled with a bunch of people that have similar issues, so whenever I come to them with an issue, they can really help me out and I feel ... they help me out a lot."

"I get to hear other peoples stories and how drugs have hurt them too, we are all in the same lake and we are all sinking."

"I think everybody has gone through our issues so we just talk about them."

"I just feel like I can open up because people wouldn't judge me because they have the same problem."

"Well before I felt like I was a bad person because I used drugs, then I went to a group and everyone uses drugs so I didn't feel like a bad person anymore, just a person with issues that's all. I like to talk in group and tell them how I am feeling, even though we are all dudes its not weird."

"I know I'm not the only one with a problem, we are all here for a reason."

"You know others have the same problem because they give you feedback on he

problem and they wouldn't know how to give feedback if they didn't have the same problem or kind of the same problem."

Altruism. This concept proposes that when group members are able to share their experiences and help others in the group, it may contribute to an increase in self-esteem and confidence (Yalom, 2005). The responses included:

"Those kids want feedback from me so I have to go to group and help."

"I mostly like to help my peers, that makes me feel better and more happy."

Interpersonal learning. This concept suggests that interacting with others and receiving feedback from the group contributes to a greater understanding of oneself through interaction with the group (Yalom, 2005). Some responses included:

"The whole group is a healthy relationship. Everybody wants to be clean and everybody's bonding with you, so I consider that a relationship."

"I think that because it helps me learn about myself and get out of this place. I talk to the group about it when I hurt myself and they help me and give me their advice."

"I can receive good feedback from my peers and I can give feedback to my peers also if they have any troubles."

"It is helpful because other people are giving you other types of information and feedback."

"Because I can get feedback on things like ... I go to group and I want to know some things and then I open up and tell them and maybe I can get some good feedback from them on what it stands for and what it means and tell me that. They can tell me what skill I can use."

Instillation of hope. This concept suggests groups include members in all stages of the recovery process. Thus, witnessing others coping or successfully abstaining from substances provides a sense of hope and encouragement to those earlier in the recovery process (Yalom, 2005). Some responses included:

"So in a positive way will make me think like, "Yeah, I can do it." I can actually

be positive if I want to."

"Yeah, it made me think about situations more and take a step back and know what I could actually do with my life if I get out of here and make good choices. It helped me feel like I maybe could make good choices."

"Hearing success stories really motivates me."

"Because when someone tells me about how they were a full-blown drug addict, but now they have a job, have a family, they're doing all this, it brings me up and makes me want to be like them, you know? Be successful."

"The one you said about the stories, I like to hear stories about how other people did the same staff as me and then did better. I want to try to do what they did so I can do better too."

Pro-social skill development/ imitative behavior. The group setting is an optimal place to practice new skills and behaviors. The group provides a safe and supportive place where group members can experiment and learn to interact in a pro-social manner (Yalom, 2005). Some responses included:

"I do learn how to interact better with everyone else, mainly kids of my age, because like I said, I usually interact with older people, so I don't really know how to interact as much with kids my age."

"Interacting with people in a positive way because I'm used to being around negative people and doing negative things."

"We try not to fight in that group. We try to get a long and act like "civilized humans" like [group facilitator] calls it. I guess we all just like the group and don't want to be kicked out if we don't act civilized, whatever that means."

"I just think we don't know how to talk to other people very good. We get in fights with our teachers and staff so in group [group facilitator] makes us practice talking to each other better and helping teach us how to be nicer to others."

"I guess that we practice good relationship skills in group because we have to respect each other and that has been helping me when my mom comes to visit me, we don't yell at each other that much anymore."

"That's like a way a group can really function. It goes well like that because everybody is sharing their opinions and how they think they should ... their opinion, all kinds of coping skills are put together to make more helpful decisions."

> "Just coping skills, like relationship-building skills and just other skills to stay away from negative things."

Catharsis. Yalom (2005) suggested emotional expression and discussion of experiences with a group of people could help relieve painful emotions or stress. Some responses included:

> "I think it's important to me because if I couldn't share my feelings with nobody."

> "It helped me be more honest with myself and try to figure out why I keep coming back here."

> "We can talk freely about things and not only focus on one situation we talk about lots of different things. Whatever we want really."

> "I put helpful because everyone is happy during group and we just get to talk, real talk with each other."

> "I can tell these kids what I've been through and it helps."

> "How I said you can express your feelings, so you can actually learn how to do it."

> "Teen AA helps me do that because there I can express my feelings, and people laugh with me about it and stuff."

> "Well I learned you can't be angry all the time and how to deal with those emotions more better. I can actually talk and say what is on my mind and it works great."

> "We get to talk about our problems and you look back at what you have done and how we can fix things or move on with our lives."

Group Structure

Several participants reported the format of the group to be helpful to them, specifically referencing the structure and written materials utilized. Some responses included:

> "The structure… like it's the same every time. We don't talk about the same stuff, but it's mostly the same thing we do each time, like stand up and read the pledge, read the handouts and things like that."

> "Just how the papers are read, how we have to read the papers and that prayer, its good."
>
> "It's way more formatted and way more structured. I kind of like that because it's not all random all the time."
>
> "I think it's just the group or maybe the people actually take it more seriously than the other groups."
>
> "To focus on the Twelve Steps, um, mostly I like it because there are steps and I know what I should work on first and then second and whatever, we also get handouts in group which is cool because they tell us what activities to do."
>
> "One, it's just funner, we get to do activities and talk about a grip of different things."
>
> "I mean you always know what you are going to be doing in that group. Handouts, pledge, pick a step and whatever. Its not a surprise so you can kind of even like prepare ahead for group if you know what step or challenge you are going to do.

Relevant content. Participants referenced being able to determine what is discussed during group. They also reported the Life Challenges (Teen AA, 2014) to be particularly helpful, as they are relevance to issues they experience.

> "We talk about stuff that relates to us because that's what I'm working on and that is what we need help with."
>
> "The life challenges all help me because those are all of my problems."
>
> "We just talk about things that are related to us."
>
> "I have problems with certain things. They teach me to talk about the issues and they helped me ... I don't know. It's just been brought up and this is why I have the same problem, they give me different coping skills to cope with it."
>
> "I really liked the teen/parent relationship one. It helped me see how my relationship should have been different and skills that helped me get my relationship better with my mom. She can really be a pain sometimes but I got some help from the other guys and she is still a pain, but now I know how to deal with her."
>
> "Because we talk about stuff that really pertains to you, not just out-of-the-book stuff, you know?"

"I actually look at what I have problems with and what I need to work on, and to think I don't have problems with something and it's just my fault, you know what I mean?"

"It helps you work on everything. It helps me work on my emotion regulation, my drug problems, everything."

"I have been in this group a long time so I think I have covered all of the challenges. Some of them even twice, but it's a little different each time if there are different people in the group."

"Well, I really suck at all of those [life challenges] so that's why I marked them that I need to learn more about them."

"I seriously need some more coping skills. Want to know what my coping skills are, well you know because you come talk to me, but I sometimes punch myself in the face and get mad at staff when they take me down."

"The group talks about drugs, but not really, it talks about a lot of other things related to drugs like having bad friends and relationships and being angry all the time. So we get to learn skills to help us with those things too."

Safe environment. Participants also referenced feeling as though the Teen AA group creates a safe environment to discuss thoughts and feelings. Some responses included:

"I can trust that I can say certain things in this group."

"Because I'm used to always going to Teen AA and, I don't know, it makes me feel comfortable when I go."

"Yeah, it feels comfortable to go. I know everyone will help me."

"Well I mean I sometimes like groups because we can all get together and not argue for once, we argue with each other all the time over here. So it's cool for us to get to talk and listen to each other."

"I think its like I said before, Teen AA is special time where we are not arguing, I'm not sure why. We just all know its group time and we need to be serious."

"I like it because its calm and we don't have to think that much, we just get to talk about things we are having problems with and listen to each other."

Twelve Step Content

Many participants referenced the importance and helpfulness of the Twelve Step material covered in these groups. A number of participants referenced the Twelve Steps of Teen AA.

> "I wanted to focus on the 12-step because it's more widely used. My mom went to AA when I was younger."

> "To focus on the Twelve Steps, um, mostly I like it because there are steps and I know what I should work on first and then second and whatever, we also get handouts in group which is cool because they tell us what activities to do."

> "I never went to Teen AA before, and I wanted to work on the step where you make repairs with you family. I can't remember what step that is because we're not there yet, but I wanted to do that step and maybe my mom wont hate me too much."

Specific components of the Twelve Step material was also referenced including the concept of a higher power and the serenity pledge. Some participants mentioned the higher power to be particularly beneficial.

> "Since there's a higher power, and then I was kind of able to figure out what my higher power was more and stuff because I've been in Teen AA."

> "I think it has been helpful to me because I have learned about the higher power."

> "I wanted to learn mostly about the higher power."

> "I wanted to see if I could learn something new that I don't learn in my other groups and obviously we don't learn about the Twelve Steps and Higher Power in those groups."

When asked about the most helpful aspect of Teen AA one participant indicated,

> "Probably having a higher power."

Further, three participants also mentioned the Serenity Pledge to be of importance to them.

> "Yeah, the Serenity Pledge. I just think that it's really good."

> "We even say the Serenity Pledge, so we get to do that here. That's special about Teen AA."

> "Now that I have been to a lot of meetings, I know there a lot more things in Teen AA, like One day at a time, and saying the Serenity Pledge a lot."

Age Similarity

Additionally, the participant's responses to the question "Is it important to you to attend groups with others of similar age" were reviewed. Two participants indicated they were indifferent to attending groups with others of different ages.

> "I guess I don't think it has to be that way, like if there were older people or younger people in there we could still have the group; it just might be a little different."

> "I used to go to AA on the outs so I am used to having older people in the meetings with me, it doesn't bother me."

However, most participants explained they prefer to be in groups with others similar to their age. Some responses included:

> "It helps if we are the same age so we can know what the other person is talking about."

> "Maybe an older person would know a little bit, but we might not listen to them because they are older and we won't think they get it. They might not get it."

> "It's good being like around people my age because they've been through similar things."

> "I know they are experiencing the same things I have been through. And we are all the same age so we talk about cool stuff that relates to us and not adult stuff."

> "I want the people in my group to be the same age as me so they don't judge me for being a dumb kid."

> "I do not want to be in a group with people who are older than me."

> "I know that's how regular AA goes so that's why I told [the facilitator] I probably wouldn't attend on the outs if I didn't get to do Teen AA."

Additional Comments

Participants were asked to share any additional information on their experiences in Teen AA groups. Some responses included:

> "I think Teen AA needs to happen for all of us or any drug program. That's a good idea."
>
> "Teen AA is just a good group for kids who have addictive behavior of any kind."
>
> "It's been good so far. I've been going every week, and I'm going to attend when I get out, I think it will help me stay out there."
>
> "I wondered what everyone liked that group for. I really enjoyed going my first group and now I don't ever want to miss it."
>
> "Well I marked I am not going to go to Teen AA when I go home because there is not one in my neighborhood so I don't know where they are done at."
>
> "When I got here there was a waiting list for that group and that was weird to me so I asked to be on the waiting list too. All the girls were in Teen AA and the waiting list was so long, they started doing two groups so we could all do it. Then I liked going to that group and I have been to a lot of groups now."
>
> "My mom asked if there is a group I can go to when I go home, I told her probably not because [group facilitator] said there is not as many places that have groups in the community."
>
> "I guess I marked addictive behavior as helpful, not really because of drugs but for self-harm, does that count?"
>
> "Whenever I am frozen [displaying negative behavior], I only go to Teen AA. I refuse DBT group, AOD group, and [case managers] groups."
>
> "I never want to miss Teen AA even if I am already frozen [displaying negative behavior]. I will miss a whole step or something and will be behind the next week."
>
> "This is the best group I have gone to. First I thought it was because of [group facilitator] and how she ran the group, but then [another facilitator] took over and it's still really good."
>
> "I talked to [group facilitator] about maybe starting a group in [participants town]. There are no groups around there and I know a lot of people who would go to them. [Group facilitator] said you have to have an adult there though and I don't

know who would do it, but I might talk to someone about it."

"I really hate all groups you know, but if I was forced to go to a group, I would pick Teen AA."

Further, one participant requested to make a suggestion in regard to future Teen AA groups.

"You should incorporate more role play. Everyone says they hate to do role-plays and every one makes it a big deal and says they wont do it. But most of us actually really like to do role-plays during group; we just don't want to admit it. We can act out what we would do in different situations, like on the Life Challenges where we talk about health relationships and problems with our parents."

CHAPTER 5: DISCUSSION, CLINICAL IMPLICATIONS, LIMITATIONS, AND AREAS FOR FUTURE RESEARCH

Discussion

The purpose of this study was to provide preliminary information and insights into why incarcerated youth voluntarily attend Teen AA groups. Almost half of adolescents referred to substance abuse treatment are referred by the criminal justice system (CASA, 2011). The literature suggests incarcerated youth are disadvantaged and vulnerable to continued substance use, its associated effects, and delinquent behavior if intervention is not provided (Stathis et al., 2013). These youth are oftentimes difficult to engage in treatment, lack motivation to change, and have limited resources in the community to aid in their sobriety (Austin et al., 2010; Clair et al., 2011). Thus, it is imperative to understand exactly what attracts youth to attend treatment and what they perceive to be the most beneficial in their treatment and after care.

The majority of this study's sample (75%) consisted of ethnic and racial minorities, which is consistent with national statistics and highlights disporportionate trends in the juvenile justice system. The Office of Juvenile Justice and Delinquency Programs (2014) indicated 6% of Arizona's incarcerated youth are African American and 43% are Hispanic, whereas, 15% of juveniles who are incarcerated nationwide are African American and 24.5% are Hispanic. Further, the US Department of Justice, Federal Bureau of Investigation (2007) examined census data from 2006 and reported ethnic minority youth are overrepresented among incarcerated youth. African Americans were more than five times, Hispanics over two times, and Native American youth over three times more likely to be incarcerated compared to Caucasian youth. Of note,

Hispanic youth represent the largest ethnic group at ADJC (38%) and almost half (43%) of this study's sample. Given the study's unique ethnic sample, results may not be applicable to incarcerated youth in other areas of the United States.

Seventy-five percent of this study's sample reported participating in substance abuse treatment prior to being incarcerated at ADJC, 69% reported past attendance at Twelve Step meetings, and 75% indicated they were assigned to a substance abuse treatment unit at ADJC. Many participants reported their "drug of choice" as marijuana (43%), alcohol (14%), opioids (16%), and amphetamines (16%), while none endorsed hallucinogens, PCP, sedatives, or inhalants as their "drug of choice." These substances are consistent with national samples indicating that marijuana, alcohol, opioids and amphetamines continue to be the most frequently used substances by juveniles, while hallucinogens, sedatives, and inhalant use has decreased significantly (CASA, 2012; Johnson et al., 2014). Over half (57%) of this study's sample reported their substance use to be "severe" or "very severe." This finding may aid in explaining Teen AA attendance rates, as Austin et al. (2010) suggested that those adolescents who reported their substance use to be more severe were more motivated to change and possibly more willing to voluntarily attend treatment groups. Thus, treatment programs would benefit from evaluating the perceived severity of clients substance use and utilizing the information to inform treatment.

As anticipated and consistent with previous literature (Kelly & Myers, 2007), Yalom's group factors were reported to be imperative in the group environment. Participants reported the importance of feeling as though they were not the only one with a problem (Universality), helping their peers, learning to interact with others in a positive

manner, and the instillation of hope provided by other group members as appealing. Study participants also cited the opportunity to be group leaders as one of the most attractive factors in the Teen AA group. Of interest is the fact that very few youth reported the Twelve Step content to be an attractive factor for attending Teen AA on the survey; however, many youth identified the importance of the specific Twelve Step material during the interview portion of the study. A study by Kelly et al. (2008) found similar results as participants reported group dynamics to be more important than the specific Twelve Step content on a survey. This may have been the result of confusion or poor word choice on the survey utilized in this study. It may also suggest the sample of youth utilized in this study were unique from other adolescent populations.

As indicated, the majority of the sample consisted of racial and ethnic minorities. Sue and Sue (2012) reported religion and spirituality to be an important factor in African American, Native American, and Hispanic culture. Sue and Sue (2012) suggested religion and spirituality might offer individuals comfort in the face of oppression and provide opportunities for self-expression, leadership, and community involvement. Additionally, for many ethnic minority families, spirituality plays an important role, as it is often utilized as a coping strategy to deal with life stressors (Sue & Sue, 2012). As such, the spirituality component of Teen AA may be an important aspect of the program for minority youth and not a factor that causes skepticism or resistance as past literature indicated (Kelly & Meyers, 2007; Kelly et al., 2008).

While Solhkhah, Galanter, Dermatis, Daly, and Blunt (2009) noted adolescents have more concrete cognitive and developmental capabilities that may preclude them

from fully taking advantage of the spirituality piece of Twelve Step programs, this may not be the case for all populations.

More than half of this study's participants (53%) stated they were more motivated to attend Teen AA than other treatment groups and indicated the format of Teen AA was different in that it was more structured, the content discussed was relevant to them, and they reported feeling safe to discuss their feelings and experiences in the group. Participants also stated they were not provided with the opportunity to lead in other groups as they are in Teen AA. These factors are all imperative aspects in the adolescent developmental process. As discussed previously, one of the main tasks during adolescence is to establish one's identity and having a sense of belonging within a social group is crucial to the development of self-concept. Adolescents oftentimes look to their peer groups for a sense of belonging, to experiment, and learn about issues such as trust, respect, intimacy, autonomy, and acceptance (Erikson, 1968; Seltzer, 1982). In this sense, assisting adolescents in finding a pro-social peer group is imperative in their development and recovery.

The structured approach of Teen AA was noted to be beneficial to participants. Adolescents may require or prefer a more structured format due to their cognitive developmental level, as they are moving from a concrete thought process to engaging in more complex thinking. Given this information, the progression through the Twelve Steps, the structured organization of the groups, and the handouts and booklets offered during groups are essential to the group process.

Offering adolescents with an opportunity to act in a leadership role assists them in building their own leadership attitudes, skills, and experiences. Participants in the study

often indicated the leadership role Teen AA offers to be beneficial to them and reported it assisted them in learning to be a leader in a pro-social manner rather than in a delinquent one. Additionally, the structure of the groups and topics covered were specifically selected to be relevant to the adolescent population and the issues they struggle with such as depression, anxiety, grief, anger, abusive relationships, and addictive behaviors. This was affirmed as participants reported feeling as though the topics covered were relevant to them and they felt safe discussing them during groups.

The results of the SOCRATES indicated half of all participants (51%) had low problem recognition, as they did not acknowledge a problem in regard to their substance use. However, almost the same number (45%) reported already taking steps to make changes in their substance use. The discrepancy in these numbers may be the result of confusion when completing the SOCRATES, as logically, participants would likely report their substance use to be problematic if they indicated they were making changes in their behavior. This finding may also be related to the fact that many of these youth had been incarcerated for a long period of time and may not have identified substance use to be a problem at the time of the study. A large number may have felt they were making changes in their behavior either by participating in treatment or being incarcerated and not having access to these substances. Furthermore, there may be a developmental explanation for the reported low problem recognition, as youths' frontal lobe of the brain are still developing which can lead to limited self-awareness (Siegel, 2013; Solhkhah et al. 2009).

Half of all participants (53%) reported they were not planning to attend Teen AA once they returned to the community. Of these, 22% stated they were not planning to

attend because they did not know where Teen AA meetings were held and 20% indicated that Teen AA meetings were not offered in their community. Perhaps youth would choose to continue attending Teen AA post-release if they knew where convenient meeting locations were.

Clinical Implications

The literature (Kelly, 2003; Kelly et al., 2002; McKay, 2009) indicates motivation is crucial to treatment engagement, retention, and positive outcomes; thus, clinicians must successfully identify and target predictors of motivation among substance using adolescents, specifically those involved in the juvenile justice system. To increase motivation, substance use treatment groups must be seen as an attractive option for youth. The current study found that Teen AA is appealing to incarcerated youth. While participants reported various reasons for attending these groups, the fact that participation is voluntary may be particularly motivating, as youth are provided with a sense of power and choice in their treatment, which is oftentimes non-existent within the juvenile justice system. Allowing adolescents to be involved in planning their treatment and providing them with options to choose from may increase their buy-in and follow through, and lead to positive treatment outcomes.

While organizations and clinicians may not be able to incorporate Teen AA into their treatment programs, this study offers insight that can be incorporated into all adolescent treatment groups. Offering groups that incorporate the opportunity to act as a group leader may be beneficial, as it allows adolescents to develop a sense of self-efficacy and self-esteem, and an opportunity to develop prosocial leadership skills. Additionally, utilizing a more structured curriculum and group model (as opposed to

open discussion or process groups) may encourage more participation and engagement. Participants in this study indicated handouts, booklets, and being aware of what was going to be covered during groups to be helpful to them. Utilizing these interventions in other groups may also prove to be beneficial.

In the Juvenile Justice System, comorbid diagnoses are the expectation rather than the exception (Cocozza & Skowyra, 2000; Teplin et al., 2003). Cocozza and Skowyra (2000) suggested oftentimes youth with mental health issues "fall through the cracks" once they enter the juvenile justice system and indicated recent innovations to treat comorbidity rarely reach the juvenile justice system. As such, Teen AA has sought to address substance use and other addictive behaviors, in addition to focusing on other mental health issues that may contribute to or exacerbate substance use. Thus, Teen AA may be a valuable resource to a wider range of youth than anticipated. In general, programs that address comorbid diagnoses are imperative in treating incarcerated youth.

The importance of continuing care has been reiterated on several occasions in this study. While it is imperative to have treatment options that are available and convenient, youth often lack resources to access these services. Consequently, it may be beneficial to focus on transition plans and referrals to community resources, particularly as incarcerated youth re-enter the community. Referring youth to services they find to be attractive increases their motivation to attend, thus, producing more positive overall treatment outcomes. Furthermore, addressing substance use and comorbid mental health issues among adolescents is imperative in reducing the prevalence of delinquent acts, lowering juvenile incarceration rates, and creating a safer community by fostering more productive members of society.

Limitations

The current study presented with several limitations. Many of the limitations were anticipated prior to beginning the study, thus, steps were taken to minimize their impact.

Researcher bias. Goodwin and Goodwin (2013) indicated experimenter bias to be a potential confound in most research, where the researcher influences the results, often unintentionally, in order to portray certain preconceived expectations. Given the principal investigator was employed at the agency where the study was conducted, her familiarity with the juvenile corrections population, and having previous interaction with some youth who participated in the study, additional measures were put into place. For example, the principal investigator utilized standardized procedures as much as possible while administering the surveys, conducting the interviews, and interpreting the data. Scripts were used for participant recruitment, survey administration, and throughout the interview process. All participants completed identical versions of the Teen AA survey (Appendix A) and SOCRATES (Appendix C). Participants were encouraged to follow the instructions on the survey and SOCRATES assessment. Additionally, open-ended questions were utilized in the interview to avoid leading questions.

Self-monitoring and supervision by the research committee were utilized in order to maintain objectivity and minimize biases. As a form of self-monitoring, the principal investigator employed a journaling approach in which she recorded her thoughts and feelings before and after each interview. Reading and transcribing the records later helped to identify unclear or unrecognized thoughts, feelings, and impressions, which likely reduced the effects of bias (Chenail, 2011; Meloy, 1994).

Self–report. Given the self-report method of the current study, social desirability bias may have occurred, in that participants may have responded to questions by presenting themselves in a favorable light (Goodwin & Goodwin, 2013). Some participants may have responded to the survey or the interview portion in accordance with how they anticipated the principal investigator wanted them to respond. To minimize this, the principal investigator attempted to remain as neutral as possible by utilizing scripts during survey administration and used minimal encouragers and neutral statements during the interview portion.

SOCRATES. The SOCRATES was normed using an adult sample and as a result, may not be applicable to an adolescent population. The principal investigator observed participant confusion regarding some of the questions on the SOCRATES including "I have a drug problem," "My drug use is causing a lot of harm," or "There are times when I wonder if I use drugs too much." Participants were asked to respond based on whether they "agree" or "disagree" with a statement "right now." Many participants indicated they were unsure how to respond to these questions. It should be noted some participants had been incarcerated for many months to multiple years and did not have access to alcohol or illicit substances. This may have contributed to confusion in answering questions. Additionally, some participants questioned the meaning of certain words and terms such as " I sometimes wonder…" to which youth stated they do not "sometimes wonder," but "knew [the item] to be true." This caused some uncertainty to which they would answer, "disagree" as they know the statement to be true or "agree" in which they acknowledged their substance use to have caused problems in their life.

Generalizability. Given the sample utilized in this study, the ability to extrapolate results to the larger population is limited. Participants included adolescents 14 to 17 years old, all of who were from one state in the Southwestern United States. Study participants were adjudicated to ADJC, which may affect the ability to generalize the results to other adolescents, as incarcerated youth may be attracted to Teen AA groups for different reasons than non-incarcerated adolescents. Additionally, ADJC's population differs from that of teens involved in diversion programs, probation, parole, or other juvenile justice systems across the United States. Furthermore, all participants were recruited on a volunteer basis, lacking random selection and a comparison group. As a result, generalization of findings to other populations is limited and in fact, may only apply to this specific group of incarcerated adolescents.

Areas for Future Research

This study utilized an exploratory model to obtain preliminary data and insight into why incarcerated youth voluntarily attend Teen AA groups. Since Teen AA is primarily conducted in community settings (schools, community centers, etc.), it would be beneficial to gather similar data from youth in the community who are attending Teen AA. Participants could be examined to determine whether there are differences in motivation to attend Teen AA, perceived helpfulness of Teen AA, and the importance of attending groups with similar aged peers. This may provide results that are generalizable to a larger population, especially if results are similar amongst incarcerated youth and youth in the community.

References

Aarons, G. A., Brown, S. A., Hough, R. L., Garland, A. F., & Wood, P. A. (2001). Prevalence of adolescent substance use disorders across five sectors of care. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*(4), 419-426.

Aarons, G. A., Monn, A. R., Hazen, A. L., Connelly, C. D., Leslie, L. K., Landsverk, J. A., et al. (2008). Substance involvement among youths in child welfare: The role of common and unique risk factors. *American Journal of Orthopsychiatry, 78*(3), 340-349.

Abram, K. M., Teplin, L. A., McClelland, G. M., Dulcan, M. K. (2003). Comorbid psychiatric disorders in youth in juvenile detention. *Archives of General Psychiatry, 60,* 1097-1108.

Acri, M. C., Gogel, L. P., Pollock, M., & Wisdom, J. P. (2012). What adolescents need to prevent relapse after treatment for substance abuse: A comparison of youth, parent, and staff perspectives. *Journal of Child and Adolescent Substance Abuse, 21*, 117-129.

Administrative Office of the Courts Juvenile Justice Services Division. (2012). *Arizona's juvenile court counts: Statewide statistical information.* Retrieved from: http://www.azcourts.gov/Portals/29/JJSD%20Publication%20Reports/Juveniles%20Processed/Arizonas_Juvenile_Court_Counts_FY2012.pdf

Alcoholics Anonymous (2001). *Big Book Fourth Edition*. Retrieved from: http://www.aa.org/pages/en_US/alcoholics-anonymous

Alcoholics Anonymous (AA). (2003). *A survey of membership.* New York: Alcoholics Anonymous World Services Inc.

Alcoholics Anonymous (AA). (2014). Information on Alcoholics Anonymous. Retrieved from http://www.aa.org/lang/en/subpage.cfm.

Aloise-Young, P. A., Cruickshank, C., & Chavez, E. L. (2002). Cigarette smoking and perceived health in school dropouts: A comparison of Mexican American and non-Hispanic white adolescents. *Journal of Pediatric Psychology, 27*(6), 497-507.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.

Applebaum, A. (1972). A critical re-examination of the concept of "motivation for change" in psychoanalytic treatment. *International Journal of Psychoanalysis, 53,* 51-59.

Arizona Department of Juvenile Corrections. (2013). Annual Report 2013.

Arizona Department of Juvenile Corrections. (2014). Annual Report 2014.

Arizona Department of Juvenile Corrections (2015), Research & Development Bureau.

Arizona Department of Juvenile Corrections. (2015). *About ADJC*. Retrieved from http://www.azdjc.gov/AboutADJC.

Austin, A., Hospital, M., Wagner, E. F., & Morris, S. L. (2010). Motivation for reducing substance use among minority adolescents: Targets for intervention. *Journal of Substance Abuse Treatment, 39*, 399-407.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1997). Self-efficacy: Toward a unifying theory of behavioral change. *Psychology Review, 84*, 191-215.

Barnes, G. M., & Farrell, M. P. (1992). Parental support and control as predictors of adolescent drinking, delinquency, and related problem behaviors. *Journal of Marriage and the Family, 54*, 763-776.

Beck, J. (2011). *Cognitive behavior therapy; Basics and beyond*. New York: The Guilford Press.

Beckman, L. J. (1980). An attributional analusis of Alcoholics Anonymous. *Journal of Studies on Alcohol*, 41, 714-726.

Berglund M (2003). Pharmacotherapy for alcohol dependence. In Berglund M, Thelander S, Johsson E (eds.). Treating Alcohol and Drug Abuse: An Evidence Based Review (pp. 247–312). Weinheim, Germany: Wiley.

Blonigen, D. M., Timko, C., Moos, B. S., & Moos, R. H. (2009). Treatment, Alcoholics Anonymous, and 16 year changes in impulsivity and legal problems among men and women with alcohol use disorders. *Journal of Studies on Alcohol and Drugs, 70*, 714-725.

Boisvert, R. A., Martin, L., Grosek, M., & Claire, A. J. (2008). Effectiveness of a peer-support community in addiction recovery: Participation as intervention. *Occupational Therapy International, 15(*4), 205-220.

Boyd, C. J., McCabe, S. E., & Teter, C. J. (2006). Medical and nonmedical use of prescription pain medication by youth in a Detroit-area public school district. *Drug and Alcohol Dependence, 81*, 37-45

Brannigan, R., Schackman, B. R., Falco, M., & Millman, R. B. (2004). The quality of highly regarded adolescent substance abuse treatment programs: Results of an in-depth national survey. *Archives of Pediatrics and Adolescent Medicine, 158*(9), 904-909.

Breda, C. S. & Heflinger, C. A. (2007). The impact of motivation to change on substance use among adolescents in treatment. *Journal of Child and Adolescent Substance Abuse, 16* (3) 109-124.

Brown, S. A., D'Amico, E. J., McCarthy, D. M., & Tapert, S. F. (2001). Four-year outcomes from adolescent alcohol and drug treatment. *Journal of Studies on Alcohol, 64*, 381–388.

Brown, T. G., Seraganian, P., Tremblay, J., & Annis, H. (2002). Process and outcome changes with relapse prevention versus 12-step aftercare programs for substance abusers. *Addiction 97*, 677–689.

Caruth, G. D. (2013). Demystifying Mixed Methods Research Design: A Review of the Literature. *Mevlana International Journal of Education,* 3 (2), 112-122.

Center for Substance Abuse Treatment. (1999). *Treatment of adolescents with substance use disorders*. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Center for Substance Abuse Treatment (2005). *Substance abuse treatment: Group therapy.* Rockville, MD: Substance Abuse and Mental Health Services Administration.

Centers for Disease, Control, and Prevention (CDC) (2011). *Youth risk behavior surveillance report*. Retrieved from http://www.cdc.gov/HealthyYouth/yrbs.htm

Centers for Disease Control and Prevention. (2010a). Youth risk behavior surveillance - United States, 2009. Surveillance summaries, June 4, 2010. *Morbidity and Mortality Weekly Report, 59*(SS-5).

Chassin, L. (2008). Juvenile justice and substance use. *The Future of Children, 18*(2), 165-183.

Chenail, R. J. (2011). Interviewing the investigator: Strategies for addressing instrumentation and researcher bias in qualitative research. *The Qualitative Report, 16*(1), 255-262.

Chi, F., Kaskutas, L. A., Sterling, S., Campbell, C. I., & Weisner, C. (2009). Twelve step affiliation and 3-year substance use outcomes among adolescents: Social support and religious service attendance as potential mediators. *Addiction, 104*, 927-939.

Chung, T., & Maisto, S. A. (2006). Relapse to alcohol and other drug use in treated adolescents: Review and reconsideration of relapse as a change point in clinical course. *Clinical Psychology Review, 26,* 149–161.

Ciesla, J., Valle, M., & Spear, S. (2008). Measuring relapse after adolescent substance abuse treatment: A proportional hazard approach. *Addictive Disorders & Their Treatment, 7*(2), 87–97.

Claire, M., Stein, L. A. R., Martin, R., Barnett, N. P., Colby, S. M., Monti, P. M., Golembeske Jr., C., & Lebeau, R. (2011). Motivation to change alcohol use and treatment engagement in incarcerated youth. *Addictive Behaviors, 36*, 674-680.

Cocozza, J. J., Skowyra, K. R. (2000). Youth with mental health disorders: Issues and emerging responses. *Juvenile Justice*, 7, 3–13.

Cornelius, J. R., Maisto, S. A., Pollock, N. K., Martin, C. S., Salloum, I. M., Lynch, K. G., and Clark, D. D. (2003). Rapid relapse generally follows treatment for substance use disorders among adolescents. *Addictive Behaviors, 28*(2), 381-386.

Crowe, A. H., & Bilchik, S. (1998). *Drug identification and testing summary*. Retrieved from http://www.ojjdp.gov/pubs/drugid/contents.html.

D'Amico, E. J., Edelen, M. O., Miles, J. N., & Morral, A. R. (2008). The longitudinal association between substance use and delinquency among high-risk youth. *Drug and Alcohol Dependence, 93*(1-2), 85-92.

Dawe, S., & Loxton, N. J. (2004). The role of impulsivity in the development of substance use and eating disorders. *Neuroscience and Biobehavioral Reviews, 28*(3), 343-351.

Deas, D. & Clark, A. (2009). Current state of treatment for alcohol and other drug use disorders in adolescents. *Alcohol Research and Health, 32*(1), 76-82.

Deas, D., Riggs, P., Langenbucher, J., Goldman, M., & Brown, S. (2000). Adolescents are not adults: Development considerations in alcohol users. *Alcoholism: Clinical and Experimental Research, 24*(2), 232-237.

DeLeon, G. (1996). Integrative recovery: A stage paradigm. *Substance Abuse, 17*(1), 51-63.

DeLeon G (2000). *The Therapeutic Community: Theory, Model, and Method*. New York: Springer Publishers.

DeLeon. G. & Deitch, D. (1985). Treatment of the adolescent substance abuser in a therapeutic community. *National Institute of Drug Abuse,* 216-230.

Dembo, R., & Sullivan, C. (2009). Cocaine use and delinquent behavior among high-risk youths: A growth model of parallel processes. *Journal of Child and Adolescent Substance Abuse, 18*(3), 274-301.

Dennis, M. L. (1999). Global appraisal of individual needs (GAIN), *Journal of Substance Abuse Treatment, 27*, 197–213.

Dennis, M., Godley, S. H., Diamond, G., Tims, F. M., Babor, T. F., & Donaldson, J., Liddle, H., Titus, J. C., Kaminer, Y., Webb, C., Hamilton, N., & Funk, R. (2004). The cannabis youth treatment study: Main findings from two randomized trials. *Journal of Substance Abuse Treatment, 27*(3), 197-213.

Di Chiara, G., Tanda, G., Cadoni, C., Acquas, E., Bassaero, V., & Carboni, E. (1998). Homologies and differences in the action of drugs of abuse and a conventional reinforcer on dopamine transmission: An interpretative framework of the mechanism of drug dependence. *Advances in Pharmacology, 42*, 983-990.

Dowden, C. & Latimer, J. (2006). Providing effective substance abuse treatment for young offender populations: What works! *Child and Adolescent Psychiatric Clinics of North America, 15*(2), 517-537.

Drerup, L. C., Croysdale, A., & Hoffmann, N. G. (2008). Patterns of behavioral health conditions among adolescents in a juvenile justice system. *Professional Psychology: Research and Practice, 39*(2), 122-128.

Drug Strategies. (2003). *Treating teens: A guide to adolescent programs.* Washington, DC: Drug Strategies.

Dryfoos, J. G. (1990). *Adolescents at risk: Prevalence and prevention*. New York: Oxford University Press.

Elkins, I. J., McGue, M., & Iacono, W. G. (2007). Prospective effects of attention-deficit/hyperactivity disorder, conduct disorder, and sex on adolescent substance use and abuse. *Archives of General Psychiatry, 64*(10), 1145-1152.

Erickson, K. G., Crosnoe, R., & Dornbusch, S. M. (2000). A social process model of adolescent deviance: Combining social control and differential association perspectives. *Journal of Youth and Adolescence, 9*(4), 395-425.

Erikson, E. H. (1968). *Identity, youth and crisis*. New York: Norton & Company.

Evenden, J. L. & Ryan C. N. (1999). The pharmacology of impulsive behavior in rats: The effects of ethanol and selective serotonergic drugs on response choice with varying delays of reinforcement. *Psychopharmacology*, 146, 413-421.

Feldstein, S. W. & Ginsburg, J. I. D. (2006). Motivational interviewing with dually diagnosed adolescents in juvenile justice settings. *Brief Treatment and Crisis Intervention, 6*(3), 218-233.

Fisk, D., Rakfeldt, J., & McCormak, E. (2006). Assertive outreach: An effective strategy for engaging homeless persons with substance use disorders into treatment. *American Journal of Drug and Alcohol Abuse, 32*, 479-487.

Friese, B., Moore, R. S., Grube, J. W., & Jennings, V. K. (2013). How parents of teens store and monitor prescription drugs in the home. *Drug Education, 43*(3), 223-233.

Gallant, D.M. (1988). *Alcoholism: A Guide to Diagnoses, Intervention, and Treatment*. New York: Norton.

Gardner, B. R., Godley, M. D., Funk, R. R., Dennis, M. L., & Godley, S. H. (2007). The impact of continuing care adherence on environmental risks, substance use, and substance-related problems following adolescent residential treatment. *Journal of Addictive Behaviors, 21*(4), 488–497.

Godley, M. D., Godley, S. H., Dennis, M. L., Funk, R. R., & Passetti, L. L. (2007). The effect of assertive continuing care on continuing care linkage, adherence and

abstinence following residential treatment for adolescents with substance use disorders. *Addiction, 102*, 81-93.

Godley, M. D., Kahn, J. H., Dennis, M. L., Godley, S. H., & Funk, R. R. (2005). The stability and impact of environmental factors on substance use and problems after adolescent outpatient treatment for cannabis abuse or dependence. *Psychology of Addiction Behavior, 19*(1), 62–70.

Godley, M. D. & White, W. L. (2005) A brief history and some current dimensions of adolescent treatment in the united states. In M. Galanter, C. Lowman, G. M. Boyd, V. B., Faden, E. Witt, & D. Legressa. *Recent developments in alcoholism*, Vol. 17. *Alcohol problems in adolescents and young adults* (367-382). New York: Kluwer Academic Press.

Goodwin, C. J. & Goodwin, K. A. (2013). *Research in psychology: Methods and design*. Hoboken, NJ: Wiley & Sons, Incorporated.

Gossop, M., Green, L., Phillips, G., & Bradley, B. (1989). Lapse, relapse and survival among opiate addicts after treatment: A prospective follow-up study. *The British Journal of Psychiatry, 154*, 348-353.

Gossop, M., Harris, J., Best, D., Man, L. H., Manning, V., & Marshall, J. (2003). Is attendance at Alcoholics Anonymous meetings after inpatient treatment related to improved outcomes? A 6-month follow-up study. *Alcohol and Alcoholism, 38*, 421-426.

Gossop, M., Stewart, D., & Marsden, J. (2007). Attendance at Narcotics Anonymous and Alcoholics Anonymous meetings, frequency of attendance and substance use outcomes after residential treatment for drug dependence: A five year follow-up study. *Addiction, 103*, 119-125.

Graham, K., Annis, H. M., Brett, P. J., & Venesoen, P. (1996). A controlled field trial of group versus individual cognitive-behavioral training for relapse prevention. *Addiction, 91*, 1127–1139.

Groh, D. R., Jason, L. A., & Keys C. B. (2008) Social network variables in alcoholics anonymous: A literature review. *Clinical Psychology Review, 28*(3), 430-450.

Gropper, B. A. (1985). *Probing the links between drugs and crime*. U.S. Department of Justice, Office of Justice Programs, National Institute of Justice.

Guerri, C. & Pascual, M. (2010). Mechanisms involved in the neurotoxic, cognitive, and neurobehavioral effects of alcohol consumption during adolescence. *Alcohol, 44*(1), 15-26.

Hacker, K. A., Suglia, S. F., Fried, L. E., Rappaport, N., & Cabral, H. (2006). Developmental differences in risk factors for suicide attempts between ninth and eleventh graders. *Suicide and Life-Threatening Behavior, 36*(2), 154-166.

Harber, G. S. (2006). *God image, self-image, and length of abstinence among active members of alcoholics anonymous*. (Doctoral Dissertation, Capella University).

Higgins, S. T. & Petry, N. M. (1999). Contingency management: Incentives for sobriety. *Alcohol Research and Health 23*, 122–127.

Hsieh, S. & Hollister, C. D. (2004). Examining gender differences in adolescent substance abuse behavior: Comparisons and implications for treatment. *Journal of Child and Adolescent Substance Abuse, 13*, 53-70.

Hubbard, R. L., Collins, J. J., Rachal, J. V., & Cavanaugh, E. R. (1988). The criminal justice client in drug abuse treatment. *Compulsory Treatment of Drug Abuse: Research and Clinical Practice*, *86*, 57-80.

Hudson, P. (2004). *The impact of alcoholic's anonymous membership, spiritual awareness, and commitment effort on alcohol-problem adversity*. (Doctoral Dissertation, Walden University).

Humphreys, K. (2003). Alcoholics Anonymous and 12 step alcoholism treatment programs. *Recent Developments in Alcoholism, 16*, 149-164.

Humphreys, K., Kaskutas, L. A., & Weisner, C. (1998). The Alcoholics Anonymous Affiliation Scale (AAAS). *Clinical and Experimental Research, 22,* 974-978.

Humphreys, K., Mankowski, E., Moos, R., & Finney, J. (1999). Do enhanced friendship networks and active coping mediate the effect of self-help groups on substance abuse? *Annals of Behavioral Medicine, 21*(1), 54–60.

Humphreys, K. & Moos, R. H. (2001). Can encouraging substance abuse patients to participate in self-help groups reduce demand for health care? A quasi-experimental study. *Alcoholism: Clinical and Experimental Research, 5,* 711-716.

Humphreys, K., Wing, S., McCarty, D., Chappel, J., Gallant, L., Haberle, B., & Weiss, R. (2004). Self-help organizations for alcohol and drug problems: Toward evidence-based practice and policy. *Journal of Substance Abuse Treatment, 26*(3), 151–158.

Hyman, S. E. (2005). Addiction: A disease of learning and memory. *American Journal of Psychiatry, 162*(8), 1414-1422.

Isenhart, C. E. (1997). Pretreatment readiness for change in male alcohol dependent subjects: Predictors of one year follow up status. *Journal of Studies on Alcohol and Drugs, 58*, 351-357.

Jainchill, N., Hawke, J., DeLeon, G., & Yagelka, J. (2000). Adolescents in therapeutic communities: One-year post treatment outcomes. *Journal of Psychoactive Drugs, 32*, 81–94.

Johansson, B. A. (2003). Pharmacotherapy for opioid dependence. In Berglund M, Thelander S, Johsson E (eds.). Treating Alcohol and Drug Abuse: An Evidence Based Review (pp. 465–32). Weinheim, Germany: Wiley.

Johnson, S., Barrett, P. M., Dadds, M. R., Fox, T., & Shortt, A. (1999). The diagnostic interview schedule for children, adolescents, and parents: Initial reliability and validity data. *Behaviour Change, 16*(3), 155-164.

Johnson, T. P., Cho, Y. I., Fendrich, M., Graf, I., Kelly-Wilson, L., & Pickup, L. (2004). Treatment need and utilization among youth entering the juvenile corrections system. *Journal of Substance Abuse Treatment, 26*(3), 117-128.

Johnston, L. D., O'Malley, P. M., Miech, R. A., Bachman, J. G., & Schulenberg, J. E. (2014). *Monitoring the Future national results on drug use: 1975-2014: Overview, Key Findings on Adolescent Drug Use*. Ann Arbor: Institute for Social Research, The University of Michigan.

Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2013). *Monitoring the Future National Results on Adolescent Drug Use: Overview of Key Findings*, 2013. Bethesda, MD: National Institute on Drug Abuse.

Johnson, R. B. & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher, 33*(7), 14-26.

Kaminer, Y., Burleson, J. A., & Goldberger, R. (2002). Cognitive behavioral coping skills and psychoeducation therapies for adolescent substance abuse. *The Journal of Nervous and Mental Disease, 190*, 737–745.

Kaminer, Y. (2005). Challenges and opportunities of group therapy for adolescent substance abuse: A critical review. *Addictive Behaviors, 30*(9), 1765-1774.

Kaskutas, L., Bond, J., & Humphreys, K. (2002). Social networks as mediators of the effect of Alcoholics Anonymous. *Addiction, 97*(7), 891–900.

Kelly, J. F., Brown, S. A., Abrantes, A., Kahler, C. W., & Myers, M. (2008). Social recovery model: An 8-year investigation of adolescent 12-step group involvement following inpatient treatment. *Alcoholism: Clinical and Experimental Research, 32*, 1468-1478.

Kelly, J. F., Magill, M., & Stout, R. L. (2009). How do people recover from alcohol dependence? A systematic review of the research on mechanisms of behavior change in Alcoholics Anonymous. *Addiction Research and Theory, 17*, 236-259.

Kelly, J. F., McKellar, J. D., & Moos, R. (2003). Major depression in patients with substance use disorders: Relationship to 12-step self-help involvement and substance use outcomes. *Addiction, 98*, 499-508.

Kelly, J. F. & Myers, M. G. (2007). Adolescents' participation in Alcoholics Anonymous and Narcotics Anonymous: Review, implications and future directions. *Journal of Psychoactive Drugs, 39*, 259-269.

Kelly, J., Myers, M., & Brown, S. (2000). A multivariate process model of adolescent 12-step attendance and substance use outcome following inpatient treatment. *Psychology of Addictive Behaviors, 14*(4), 376–389.

Kelly, J., Myers, M., & Brown, S. (2002). Do adolescents affiliate with 12-step groups? A multivariate process model of effects. *Journal of Studies on Alcohol, 63*(3), 293–304.

Kelly, J. F., Myers, M. G., & Brown, S. A. (2005). The effects of age composition of 12-step groups on adolescent 12-step participation and substance use outcome. *Journal of Child and Adolescent Substance Abuse, 15*(1) 63-72.

Kelly, J. F., Myers, M. G., & Rodolico, J. (2008). What do adolescents exposed to Alcoholics Anonymous think about 12 step groups? *Substance Abuse, 29*, 52-62.

Kosidlak, J. G. (1976). Improving health care for troubled youths. *American Journal of Nursing, 1*, 68-99.

Krentzman, A. R. (2007). The evidence base for the effectiveness of alcoholics anonymous: Implications for social work practice. *Journal of Social Work Practice in the Addictions, 7*(4), 27-47.

Lee, J. P. (1960). Alcoholics Anonymous as a community resource. *Social Work*, 20-26.

Lee, G., Akers, R. L., Borg, M. J. (2004). Social learning and structural factors in adolescent substance use. *Western Criminology Review, 5*(1), 17-34.

Lemke, S., & Moos, R. H. (2003). Outcomes at one and five years for older patients with alcohol use disorders. *Journal of Substance Abuse Treatment, 24*, 43-50.

Liddle, H. A., & Dakof, G. A., Turner, M., & Tejeda, M. (2003). Treating adolescent substance abuse: A comparison of individual and family therapy interventions. Manuscript submitted for publication.

Liddle, H. A., Rowe, C. L., Dakof, G. A., Ungaro, R. A., & Henderson, C. E. (2004). Early intervention for adolescent substance abuse: Pretreatment to posttreatment

outcomes of a randomized clinical trial comparing multidimensional family therapy and peer group treatment. *Journal of Psychoactive Drugs, 36*, 49–63.

Lopez, B., Schwartz, S. J., Prado, G., Huang, S., Rothe, E. M., Wang, W. (2008). Correlates of early alcohol and drug use in Hispanic adolescents: Examining the role of ADHD with comorbid conduct disorder, family, school, and peers. *Journal of Clinical Child and Adolescent Psychology, 37*(4), 820-832.

Luna, B. (2009). Developmental changes in cognitive control through adolescence. *Advances in Child Development and Behavior, 37*, 233–278.

Marmorstein, N. R. (2010). Longitudinal associations between depressive symptoms and alcohol problems: The influence of comorbid delinquent behavior. *Addictive Behaviors, 35*(6), 564-571.

McCabe, S. E., Boyd, C. J., & Young, A. (2007). Medical and nonmedical use of prescription drugs among secondary school students. *Journal of Adolescent Health, 40,* 76-83.

McCabe, S. E., & Cranford, J. A. (2012). Motivational subtypes of nonmedical use of prescription medications: Results from a national study. *Journal of Adolescent Health, 51*(5), 445-452.

McCabe, S. E., West, B. T., Teter, C. J., & Boyd, C. J. (2012). Co-ingestion of prescription opioids and other drugs among high school seniors: Results from a national study. *Drug and Alcohol Dependence, 126*(1-2), 65-70.

McKay, J. (2009). Continuing care research: What have we learned and where we are going. *Journal of Substance Abuse Treatment, 36,* 131–145.

McLellan, A. T., & Meyers, K. (2004). Contemporary addiction treatment: A review of systems problems for adults and adolescents. *Biological Psychiatry, 56*(10), 764-770.

Melnick, G., De Leon, G., Hawke, J., Jainchill, N., & Kressel, D. (1997). Motivation and readiness for therapeutic community treatment among adolescents and adult substance abusers. *The American Journal of Drug and Alcohol Abuse, 23*(4), 485-506.

Meloy, J. M. (1994). *Writing the qualitative dissertation: Understanding by doing*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Melton, G. B. & Pagliocca, P. M. (1992). Treatment in the juvenile justice system: Directions for policy and practice. In J. J. Cocozza (Ed.), *Responding to the mental health needs of youth in the juvenile justice system*. Seattle, WA: The National Coalition for the Mentally Ill in the Criminal Justice System.

Miller, N. S. & Flaherty, J. A. (2000). Effectiveness of coerced addiction treatment (alternative consequences): A review of the clinical research. *Journal of Substance Abuse Treatment 18*(1), 9–16.

Miller, W. R. & Rollnick, S. (2012). *Motivational interviewing: Helping people change*. New York, NY: Guilford Press.

Miller, W. R., & Tonigan, J. S. (1996). Assessing drinkers' motivation for change: The Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES). *Psychology of Addictive Behaviors 10*, 81-89.

Millon, T. (1993). *The Millon Adolescent Clinical Inventory manual*. Minneapolis, MN: National Computer Systems.

Mitchell, D. & Angelone, D. J. (2006). Assessing the validity of the stages of change readiness and treatment eagerness scale with treatment seeking military service members. *Military Medicine, 171*(9), 900-904.

Mitchell, K. J., Ybarra, M., & Finkelhor, D. (2007). The relative importance of online victimization in understanding depression, delinquency, and substance use. *Child Maltreatment, 12*(4), 314-324.

Moos, R. (2008). Active ingredients of substance use-focused self-help groups. *Addiction, 103*(3), 387–396.

Moos, R. H., & Moos, B. S. (2004). Long-term influence of duration and frequency of participation in alcoholics anonymous on individuals with alcohol use disorders. *Journal of Consulting and Clinical Psychology, 72,* 81-90.

Mokdad, A. H., Marks, J. S., Stroup, D. F., & Gerberding, J. L. (2004). Actual causes of death in the United States, 2000. *Journal of the American Medical Association, 291*(10), 1238-1245.

Moss, H. B., & Lynch, K. G. (2001). Comorbid disruptive behavior disorder symptoms and their relationship to adolescent alcohol use disorders. *Drug and Alcohol Dependence, 64*(1), 75-83.

National Center on Addiction and Substance Abuse (2003). *The formative years: Pathways to substance abuse among girls and young women ages 8-22.* New York: Author.

National Institute on Drug Abuse. (2009). *Principles of drug addiction treatment: A research based guide* (2nd ed.) (NIH Publication No. 09–4180). Rockville, MD: U.S. Department of Health and Human Services, National Institutes of Health, National Institute on Drug Abuse.

National Institute on Drug Abuse. (2011). *NIDA for Teens: Facts on drugs: Brain and addiction*. Retrieved March 10, 2011 from http://teens.drugabuse.gov.

National Institute on Drug Abuse. (2011). *Drugs, brains, and behavior: The science of addiction: Drugs and the brain*. Retrieved from http://www.nida.nih.gov.

Niemela, S., Brunstein-Klomek, A., Sillanmaki, L., Helenius, H., Piha, J., Kumpulainen, K. (2011). Childhood bullying behaviors at age eight and substance use at age 18 among males: A nationwide prospective study. *Addictive Behaviors, 36*(3), 256-260.

Office of Applied Studies. (2002). Report from the 2001 national household study on drug abuse. Volume 1: Summary of national findings. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Office of Applied Studies. (2005b). The NSDUH Report: *Substance use and need for treatment among youths who have been in foster care*. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Office of Applied Studies.

O'Leary, T. A., Brown, S. A., Colby, S. M., Cronce, J. M., D'Amico, E. J., Fader, J. S., Geisner, I. M., Larimer, M. E., Maggs, J. L., McCrady, B., Palmer, R. S., Schulenberg, J., & Monti, P. M. (2002). Treating adolescents together or individually? Issues in adolescent substance abuse treatment. *Alcoholism: Clinical and Experimental Research, 26*(6), 890-899.

O'Leary- Tevyaw, T., & Monti, P. M. (2004). Motivational enhancement and other brief interventions for adolescent substance abuse: Foundations, applications, and evaluations. *Society for the Study of Addiction, 99*, 63-75.

Ouimette, P. C., Moos, R. H., & Finney, J. W. (1998). Influence of outpatient treatment and 12 step group improvement on one year substance abuse treatment outcomes. *Journal of Studies on Alcohol and Drugs, 59*, 513-522.

Ouimette, P., Humphreys, K., Moos, R. H., Finney, J. W., Cronkite, R., & Federman, B. (2001). Self-help group participation among substance use disorder patients with posttraumatic stress disorder. *Journal of Substance Abuse Treatment, 20*, 25-32.

Passetti, L. L. & Godley, S. H. (2008). Adolescent substance abuse treatment clinicians' self-help meeting referral practices and adolescent attendance rates. *Journal of Psychoactive Drugs, 40*(1), 29-40.

Perry, J. L., & Carroll, M. E. (2008). The role of impulsive behavior in drug abuse. *Psychopharmacology, 200,* 1-26.

Pompi, R. F., & Resnick. J. (1987). Retention in a therapeutic community for court referred adolescents and young adults. *American Journal of Drug Alcohol Abuse, 13*(3), 309-325.

Prochaska, J. O. & DiClemente, C. C. (1986). Toward a comprehensive model of change. In W. R. Miller & N. Heather (Eds.), *Treating addictive behaviors: Processes of change* (pp. 3-27). New York: Plenum Press.

Prochaska, J. O. & Norcross, J. C. (2002). Stages of change. In J. C. Norcross (Ed.), Psychotherapy relationships that work (303-313). New York: Oxford University Press.

Pumariega, A. J., Kilgus, M. D., & Rodriguez, L. (2005). Adolescents. In J. Lowinson, P. Ruiz, R. B. Millman, & J. G. Langrod, (Eds.). *Substance abuse: A comprehensive textbook.* (4 ed., pp. 1021-1037). Baltimore, MD: Lippincott Williams and Wilkens.

Ramos, D. E. & Brown, S. A. (2008). Classes of substance abuse relapse situations: A comparison of adolescents and adults. *Psychology of Addictive Behaviors, 22*, 72-379.

Rivers, S. M., Greenbaum, R. L., & Goldberg, E. (2001). Hospital-based adolescent substance abuse treatment: Comorbidity, outcomes, and gender. *The Journal of Nervous and Mental Disease, 189*, 229-237.

Schacter, S. (1959). *The psychology of affiliation*. Stanford, CA: Stanford University Press.

Seltzer, V. C. (1982). *Adolescent social development: Dynamic functional interaction*. Lexington, MA: Heath.

Slavet, J. D., Stein, L. A. R., Colby, S. M. Barnett, N. P., Monti, P. M., Golembeske, Jr., C., & Lebeau-Craven, R. (2006). The marijuana ladder: Measuring motivation to change marijuana use in incarcerated adolescents. *Drugs and Alcohol Dependence, 83*, 42-48.

Smith, J. E., Meyers, R. J., Miller, W. R. (2001). The community reinforcement approach to treatment of substance use disorders. *American Journal of Addiction 10*, 51–59.

Solhkhah, R., Galanter, M., Dermatis, H., Daly, J., & Blunt, G. (2009) Spiritual orientation among adolescents in a drug-free residential therapeutic community. *Journal of Child and Adolescent Substance Abuse, 18*, 57-71.

Stathis, S., Hudson, L., & Kennedy, A. (2013). Important medical and mental health issues for incarcerated and homeless youth. In K. Steinbeck, & M. Kohn, *A Clinical Handbook in Adolescent Medicine* (205-222). New Jersey: World Scientific Publishing Company, Incorporated.

Stoolmiller, M., & Blechman, E. A. (2005). Substance use is a robust predictor of adolescent recidivism. *Criminal Justice and Behavior, 32*(3), 302-328.

Substance Abuse and Mental Health Services Administration. (2012). *Treatment Episode Data Set (TEDS) 2000-2010: National admissions to substance abuse treatment services*. Rockville, MD. Retrieved from http://www.samhsa.gov.

Sue, D. W., Sue, D., & Sue, D. W. (2003). Counseling the culturally diverse: Theory and practice. New York: J. Wiley.

Sussman, S. (2010). A review of alcoholics anonymous/narcotics anonymous programs for teens. *Evaluation and the Health Professions, 33*(1), 26-55. doi: 10.1177/0163278709356186.

Sussman, S., Silvana, S., & Ames, S. A. (2008). Substance abuse among adolescents. *Substance Use and Misuse, 43*, 1802-1828.

Swanson, C. B. (2009). *Cities in crisis 2009: Closing the graduation gap: Educational and economic conditions in America's largest cities*. Bethesda, MD: Editorial Projects in Education.

Tarter, R. E. (1988). Are there inherited behavioral traits that predispose to substance abuse? *Journal of Consulting and Clinical Psychology, 56*, 189-196.

Teen Addiction Anonymous (Teen AA) (2013). *Teen Addiction Anonymous Training Manual*. Retrieved from http://www.teenaddictionanonymous.org

Teen Addiction Anonymous (Teen AA) (2014). Retrieved from http://www.teenaddictionanonymous.org/about

Teplin, L. A., Abram, K. M., McClelland, G. M., Dulcan, M. K., & Mericle, A. A. (2002). Psychiatric disorders in youth juvenile detention. *Archives of General Psychiatry, 59*, 1133-1143.

Tharp-Taylor, S., Haviland, A., & D'Amico, E. J. (2009). Victimization from mental and physical bullying and substance use in early adolescence. *Addictive Behaviors, 34*(6-7), 561-567.

Thatcher, D. L. & Clark, D. B. (2008). Adolescents at risk for substance use disorders: Role of psychological dysregulation, endophenotypes, and environmental influences. *Alcohol Research and Health, 31*(2), 168-176.

The National Center on Addiction and Substance Abuse (CASA) at Columbia University. (2011). *CASA analysis of the National Survey on Drug Use and Health (NSDUH), 2009* Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration.

The National Center on Addiction and Substance Abuse (CASA) at Columbia University. (2012). *National Survey of American Attitudes on Substance Abuse XVII : Teens.* Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration.

Timko, C., Moos, R., Finney, J., & Moos, B., S. (1994). Outcome of treatment for alcohol abuse and involvement in AA among previously untreated problem drinkers. *Journal of Mental Health Administration, 21*, 145-160.

Timmons-Mitchell, J., Brown, C., Schulz, C., Webster, S. E., Underwood, L. A., & Semple, W. E. (1997). Comparing the mental health needs of female and male incarcerated juvenile delinquents. *Behavioral Sciences and the Law, 15*, 195-202.

Tonigan, J. S., Connors, G. J., & Miller, W. R. (1998). Special population in alcoholics anonymous. *Alcohol Health and Research World, 22*(4), 281-285.

Tonigan, J. S., Bogenschultz, M. P., & Miller, W. R. (2006). Is alcoholism typology a predictor of both alcoholic's anonymous affiliation and disaffiliation after treatment? *Journal of Substance Abuse Treatment, 30*(4), 323-330.

U.S. Department of Education. (2011). *Guidance concerning state and local responsibilities under the Pro-Children Act of 2001*. Retrieved from http://www2.ed.gov.

US Department of Justice, Federal Bureau of Investigation (2007). *Crime in the United States.* Retrieved from http://www.fbi.gov/ucr/cius2006

Volkow, N. D., Chandler, R. K., & Fletcher, B. W. (2009). Drug addiction as a brain disorder or disease. *Journal of American Medical Association, 301*(18), 1881-1882.

Wagner, E. F. (2008). Developmentally informed research on the effectiveness of clinical trials: a primer for assessing how developmental issues may influence treatment response among adolescents with alcohol use problems. *Pediatrics, 121,* 337-347.

Waldron, H. B., Brody, J. L., & Slesnick, N. (2001). Integrated behavioral and family therapy for adolescent substance abuse. In P. M. Monti, S. M. Colby, & T. A. O'Leary (Eds.), Adolescence, alcohol, and substance abuse: Reaching teens through brief interventions (pp. 216–243). New York: Guilford.

Waldron, H. B. & Kaminer, Y. (2004). On the learning curve: The emerging evidence supporting cognitive behavioral therapies for adolescent substance abuse. *Addiction, 99*, 93-105.

Waldron, H. B. & Turner, C. W. (2008). Evidence-based psychosocial treatments for adolescent substance abuse. *Child and Adolescent Psychology, 37*(1), 238-261.

Waldron, H. B., Turner, C. W., & Ozechowski, T. J. (2005). Profiles of drug use behavior change for adolescents in treatment. *Addictive Behaviors, 30*, 1775–1796.

Williams, R. J., Chang, S. Y., and the Addiction Center Adolescent Research Group, Foothills Medical Center. (2000). A comprehensive and comparative review of adolescent substance abuse treatment outcome. *Clinical Psychology: Science and Practice, 7*(2), 138–166.

Windle, M. & Windle, R. C. (2006). Adolescent temperament and lifetime psychiatric and substance abuse disorders assessed in young adulthood. *Personality and Individual Differences, 41*(1), 15-25.

Yalom, I. D. (2005). *The theory and practice of group psychotherapy.* Cambridge, MA: Basic Books.

Yen C., Wu, H., Yen, J., Ko, C. (2004). Effects of brief cognitive-behavioral interventions on confidence to resist the urges to use heroin and methamphetamine in relapse-related situations. *Journal of Nervous & Mental Disease 192*, 788-791.

Young, D. W., Dembo, R., & Henderson, C. E. (2007). A national survey of substance abuse treatment for juvenile offenders. *Journal of Substance Abuse Treatment, 23*(3), 255-266.

Zemansky, T. R. (2005). *The risen phoenix, psychological transformation within the context of long-term sobriety in alcoholics anonymous* (Doctoral Dissertation, Fielding Graduate University).

Appendix A
Teen Addiction Anonymous Survey

Teen Addiction Anonymous Survey

Please read each question carefully and follow the instructions. Check the boxes that apply to you. If at any time you would like to stop taking the survey, return the survey to the researcher. Thank you for your participation.

Gender: (Circle One) Male Female

Age: (Circle One) 14 15 16 17

Please specify your ethnicity:

_____African American

_____American Indian or Alaska Native

_____Asian

_____ Biracial (more than one ethnicity)

_____Caucasian

_____Hispanic

_____Other: _____

What is your drug of choice? (Please Rank top 3)

1=first choice 2=second choice 3=third choice

_____Alcohol

_____Amphetamines

_____Cocaine

_____Hallucinogens (LSD, Mushrooms, Mescaline)

_____Inhalants (Gasoline, Paint, Glue, Air Duster etc.)

_____Marijuana

_____Opioids (Oxycodone, Percocet, Morphine, Codeine, Hydrocodone, etc.)

_____PCP

_____Sedatives. Hypnotics, Anxiolytics (Valium, Librium, Xanax, etc.)

_____Spice

_____Other_____

Have you participated in substance abuse treatment prior to ADJC?

_____ Yes

_____ No

Are you currently or in the past been assigned to a substance abuse treatment unit? (Hope, Freedom, Sunrise)

_____ Yes

_____ No

How severe is your substance use problem (Circle One)?

Very severe

Severe

Undecided

Somewhat severe

Not a problem

Have you attended 12 step meetings (Teen AA, AA, NA) prior to ADJC?

_____Yes

_____No

If Yes, was it required?

_____Yes

_____No

Why did you choose to attend Teen AA at ADJC? (Circle all that apply)

_____ Curious what Teen AA was about

_____To receive support from others

_____A friend was in Teen AA

_____To learn new coping skills

_____ To discuss personal issues with others

_____ To focus on 12 step material (working 12 steps, spirituality, etc.)

_____ Other _____

How many Teen AA meetings have you attended while at ADJC?

_____1

_____2-5

_____5-10

_____10+

Rate how helpful you think Teen AA is to you? (Circle one)

Very Helpful

Somewhat Helpful

Undecided

Not Very Helpful

Not Helpful At All

Is it important to you to attend groups with others of similar age? (Circle one)

Very Important

Somewhat Important

Undecided

Not Very Important

Not Important At All

What do you think is most helpful about Teen AA? (Rate top 3: 1 being most important, 2 next, 3 next)

_____ I know I am not the only one with a problem

_____Support from the other members

_____Structured format (the way the meetings are run)

_____Having the opportunity to run the meeting (Leadership)

_____Learning how to interact with others in a positive way

_____Hearing stories from other members of their success

_____I am able to discuss my feelings and thoughts with other teens

_____AA-specific content (working the 12 steps, spirituality)

_____Other _____

How is Teen AA different from other groups you have attended? (Check all that apply)

_____Teen AA has a more structured format

_____Teen AA has a less structured format

_____The content discussed is related to issues I experience

_____Group members get to lead the meetings instead of an adult

_____Group members can openly discuss their problems and feelings

Are you more or less motivated to attend Teen AA compared to other groups?

_____I prefer to attend Teen AA over other groups

_____I am equally motivated to attend all groups.

_____I prefer to attend groups other than Teen AA.

Teen AA also covers "Life Challenges" that address issues teens are faced with. Which do you find to be the most helpful?

_____Listening and letting go of emotions or things we cannot control

_____Recognizing abusive relationships

_____Building healthy relationships

_____Coping with Depression

_____Coping with ADHD/ADD

_____Coping with Anger

_____Coping with Grief

_____Teen and parent relationships

_____ Addictive behaviors

Will you attend Teen AA meetings after you are released from ADJC?

_____Yes

_____No

If No, Why not? (Check all that apply)

_____ I do not know where Teen AA meetings are held

_____I do not have a problem with addictive behavior

_____The content of Teen AA is not relevant to me

_____There are no Teen AA meetings offered in my area

_____I do not have transportation to get to Teen AA meetings

_____Other _____

Appendix B
Teen Addiction Anonymous Interview Questions

Teen Addiction Anonymous Interview Questions

The following questions were generated from the survey and were used to focus individual interviews.

1. Why did you choose to attend Teen AA at ADJC?
2. How helpful you think Teen AA is to you?
3. Why is it important to you to attend groups with others of similar age?
4. What do you think is most helpful about Teen AA?
5. How is Teen AA different from other groups you have attended?
6. Are you more or less motivated to attend Teen AA compared to other groups?
7. Which "Life Challenges" do you find to be the most helpful?
8. Is there anything else you would like to say about your experiences in Teen AA?

Additional follow-up questions were utilized when applicable:

Can you tell me more about that?

Can you explain your answer in more detail?

Why did you choose that answer?

Appendix C
Stages of Change Readiness and Treatment Eagerness Scale (Miller and Tonigan, 1996).
Retrieved from: http://casaa.unm.edu/inst/SOCRATES%208D.pdf

Personal Drug Use Questionnaire
(SOCRATES 8D)

INSTRUCTIONS: Please read the following statements carefully. Each one described a way that you might (or might not) feel *about your drug use.* For each statement, circle one number from 1 to 5, to indicate how much you agree or disagree with it *right now.* Please circle only one number for every statement.

	NO! Strongly Disagree	**No** Disagree	**?** Undecided or	**Yes** Agree	**YES!** Strongly Agree
1. I really want to make changes in my use of drugs.	1	2	3	4	5
2. Sometimes I wonder if I am an addict.	1	2	3	4	5
3. If I don't change my drug use soon, my problems are only going to get worse.	1	2	3	4	5
4. I have already started making some changes in my use of drugs.	1	2	3	4	5
5. I was using drugs too much at one time, but I've managed to change that.	1	2	3	4	5
6. Sometimes I wonder if my drug use is hurting other people.	1	2	3	4	5
7. I have a drug problem.	1	2	3	4	5
8. I'm not just thinking about changing my drug use, I'm already doing something about it.	1	2	3	4	5
9. I have already changed my drug use, and I am looking forward for ways to keep from slipping back into my old pattern.	1	2	3	4	5
10. I have serious problems with drugs.	1	2	3	4	5
11. Sometimes I wonder if I am in control of my drug use.	1	2	3	4	5

	NO! Strongly Disagree	**No** Disagree	**?** Undecided or Unsure	**Yes** Agree	**YES!** Strongly Agree
12. My drug use is causing a lot of harm.	1	2	3	4	5
13. I am actively doing things now to cut down or stop my use of drugs.	1	2	3	4	5
14. I want help to keep from going back to the drug problems I had before.	1	2	3	4	5
15. I know that I have a drug problem.	1	2	3	4	5
16. There are times when I wonder if I use drugs too much.	1	2	3	4	5
17. I am a drug addict.	1	2	3	4	5
18. I am working hard to change my drug use.	1	2	3	4	5
19. I have made some changes in my drug use, and I want some help to keep from going back to the way I used before.	1	2	3	4	5

Appendix D
Recruitment Script

Oral Script for Participant Recruitment

You have the opportunity to volunteer to participate in a research study. The purpose of the study is to understand why incarcerated youth attend Teen AA, identify the most helpful factors of Teen AA, and if youth who attend Teen AA are motivated to make changes in their substance use.

Participation in this study is strictly voluntary. **You can choose to leave this meeting at any time. If you do not understand the study or do not want to participate please feel free to leave at any time.** This research study has no effect on your treatment at ADJC. There will be no rewards or consequences for your participation.

While I work at this facility, my role during this study will be different. I will only play the role of the researcher with the purpose to collect and analyze data. I will not be able to assist you with any other issues during this data collection.

I will discuss more details of this study and what would be required of you if you choose to volunteer to participate. After reviewing the informed assent, you will have the opportunity to circle Yes or No and indicate if you would like to volunteer in the study. Please ask any questions you have as I review the informed assent. This will take approximately 5 minutes.

[Informed assent will be read out loud to the youth and all questions will be answered]

For youth working directly with the principal researcher: The strict researcher role will be emphasized as well as the voluntary nature of participation. The principal researcher will stress that there will be no consequences if the youth chooses to opt out of the study.

Appendix E
Survey Administration Script

Script for Survey Administration

You previously indicated you would be willing to participate in the study regarding Teen AA. You and your legal guardian have provided consent for you to participate. Please remember a few things:

1. This study is strictly voluntary. You are not required to participate. If you choose to opt out, there will be no consequences. If you choose to participate, there will be no rewards.
2. I am currently in the role of the researcher, so I cannot help you with any ADJC related issues at this time.
3. The limits of confidentiality: Danger to self or others will be reported to unit staff. Indications of child, elderly, disabled individuals will be reported to I & I (Internal Investigations).
4. Your information will be kept in strict confidentiality.

Do you have any questions? [Answer any questions]

Are you still willing to participate in the study?

If yes, please read the instructions at the top of the survey and complete to the best of your ability.

If no, thank you for your time.

If you struggle to read the assessment of survey, I can read it to you, or you can choose to discontinue your participation in the study.

[A copy of the informed assent will be available for participants to review prior to completing the survey.]

Appendix F
Interview Script

Script for Interview

You also previously indicated you would be willing to participate in an interview to provide additional information about the survey.

Please remember a few things:

1. This study is strictly voluntary. You are not required to participate. If you choose to opt out, there will be no consequences. If you choose to participate, there will be no rewards.
2. I am currently in the role of the researcher, so I cannot help you with any ADJC related issues at this time.
3. The limits of confidentiality: Danger to self or others will be reported to unit staff. Indications of child, elderly, disabled individuals will be reported to I & I (Internal Investigations).
4. The interview will be audio recorded.
5. Your information will be kept in strict confidentiality.

Do you have any questions? [Answer any questions]

Are you still willing to participate in the interview?
If yes, the interview portion will take approximately 10 minutes.
If no, thank you for completing the survey.

[A copy of the informed assent was available for participants' review prior to completing the survey if necessary]

Appendix G
Participant Assent Form

Participant Assent Form

This research study is being conducted by Brittany Pierce who is a doctoral student in the clinical psychology department at the Arizona School of Professional Psychology at Argosy University, Phoenix. The study is a requirement to fulfill the researcher's degree and will not be used for decision-making by any organization. This study is for research purposes only. The title of the study is: Incarcerated Youth Attending Teen Addiction Anonymous: An Exploratory Study.

The purpose of this study is to investigate the variables that may contribute to youth's willingness to attend and participate in Teen AA groups.

You were asked to participate in this study because you have participated in at least one Teen AA meeting while at ADJC. All youth who participate in Teen AA at the facility will have the opportunity to participate in the study after parental permission is given.

If you agree to participate in this study, you will be asked to complete a paper and pencil survey that will take approximately 5 to 10 minutes. You can also volunteer to participate in a short interview regarding responses made on the surveys to provide in depth information. Participants who volunteer to be interviewed will be randomly selected to participate. The interview will last approximately 10 minutes and will be audiotaped. All materials (surveys and audiotapes) will be destroyed 3 years after upon the completion of the project.

The risks associated with this study are minimal. Participants may become emotionally distressed as a result of taking the survey; however, the unit counselor will be available to assist if issues were to arise.

The benefits of participating in this study include the opportunity to provide personal opinions regarding the Teen AA program. There will be no compensation for participation.

The information provided during this study will be treated as anonymous, which means nobody will be able to tell which survey belongs to which participant. The information will also be treated as confidential, locked in a secure file cabinet, and only Brittany Pierce will have access to the surveys.

I understand my participation in the study is strictly voluntary. If I choose not to participate, it will not be used against me in any way. If I decide to participate, I can refuse to answer any part of the survey if I choose. I can also quit taking the survey at any time without any consequences.

This study has been reviewed and certified by the Institutional Review Board, Argosy University 2233West Dunlap Avenue, Phoenix AZ 85021. For problems or questions regarding participants' rights, the Institutional Review Board can be contacted at (602) 216-2600. If you have any questions about this study, you can contact Brittany Pierce (researcher) at (623) 869-9050. Additionally, you may also contact the CRP chair, Dr. Lawrence Sideman at Argosy University-Phoenix, by phone at (602) 216- 3104 or Dr. Jared Chamberlain, IRB Chair, Argosy University-Phoenix, at (602) 216- 3177.

I have read and understand the explanation of the study provided to me. Any questions I had were answered to my satisfaction, and I voluntarily agree to participate in this study. I have been given a copy of this consent form. By signing this document, I agree to participate in the survey portion of the study.

Name of Participant (printed) _____

Signature _____

Date _____

I would like to volunteer to participate in the interview if I am randomly selected:

YES_____ NO_____

Appendix H
Parental/Guardian Consent Form

Parental/ Guardian(s) Consent Form

This research study is being conducted by Brittany Pierce who is a doctoral student in the clinical psychology department at the Arizona School of Professional Psychology at Argosy University, Phoenix. The study is a requirement to fulfill the researcher's degree and will not be used for decision-making by any organization. This study is for research purposes only. The title of the study is: Incarcerated Youth Attending Teen Addiction Anonymous: An Exploratory Study.

The purpose of this study is to investigate the variables that may contribute to youth's willingness to attend and participate in Teen AA groups.

Your child was asked to participate in this study because they have participated in at least one Teen AA meeting while at ADJC. All youth who participate in Teen AA at the facility will have the opportunity to participate in the study after parental permission is given.

If you agree to let your child participate in this study, they will be asked to complete a paper and pencil survey that will take approximately 5 to 10 minutes. Your child can also volunteer to participate in a short interview regarding responses made on the surveys to provide in depth information to the principal researcher. Participants who volunteer to complete the interview will be randomly selected to participate. The interview will last approximately 10 minutes and will be audiotaped. Audiotapes will be utilized in examining the responses of the participants. All materials (surveys, audiotapes) will be destroyed upon the completion of the project in December 2015.

The risks associated with this study are minimal. Participants may become emotionally distressed as a result of taking the survey; however, the unit counselor will be available to assist if issues were to arise.

The benefits of participating in this study include the opportunity to provide personal opinions regarding the Teen AA program. There will be no compensation for participation.

The information provided during this study will be treated as anonymous, which means nobody will be able to tell which survey belongs to which participant. The information will also be treated as confidential, locked in a secure file cabinet, and only Brittany Pierce will have access to the surveys.

I understand participation in the study is strictly voluntary. If I choose not to let my child participate, it will not be used against them in any way. If you decide to let your child participate, your child can refuse to answer any part of the survey if they chose. They can also quit taking the survey at any time without any consequences.

This study has been reviewed and Certified by the Institutional Review Board, Argosy University 2233West Dunlap Avenue, Phoenix AZ 85021. For problems or questions regarding participants' rights, the Institutional Review Board can be contacted at (602) 216-2600. If you have any questions about this study, you can contact Brittany Pierce (researcher) at (623) 869-9050. Additionally, you may also contact the CRP chair, Dr. Lawrence Sideman at Argosy University-Phoenix, by phone at (602) 216- 3104 or Dr. Jared Chamberlain, IRB Chair, Argosy University-Phoenix, at (602) 216- 3177.

I have read and understand the explanation of the study provided to me. Any questions I had were answered to my satisfaction, and I voluntarily agree to let my child participate in this study. I have been given a copy of this consent form. By signing this document, I agree to let my child participate in the survey and interview portions of the project provided their assent is also given.

Parental Consent is required for research participants under the age of 18.

Participants Name _____

Parent/Guardian Name _____

Parent/Guardian Signature _____

Date_____