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Effective Treatment Modalities, Recommendations, and Desired Outcomes for Adolescents with Co-Occurring Disorders

Madelynn J. Revord, BS

A Capstone Project submitted in partial fulfillment of the requirements for the Master of Science Degree in Counselor Education at Winona State University

Fall 2022

Winona State University

College of Education

Counselor Education Department

CERTIFICATE OF APPROVAL

CAPSTONE PROJECT

Effective Treatment Modalities, Recommendations, and Desired Outcomes for Adolescents with Co-Occurring Disorders

This is to certify that the Capstone Project of

Madelynn J. Revord, BS

Has been approved by the faculty advisor and the CE695 – Capstone Project Course Instructor in partial fulfillment of the requirements for the Master of Science Degree in Counselor Education

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Approval Date: 10 January 2023

Abstract

This Capstone Project analyzes and assesses recent research of different modalities of treatment for adolescents with co-occurring disorders. While conducting research on this topic, the common goal of effective treatment for adolescents with co-occurring disorders includes eliminating continued substance abuse, resolving conduct concerns, developing appropriate coping skills, correcting negative thoughts and/or behaviors, decreasing delinquency, and addressing reoccurring mental health symptoms. Multidimensional family therapy, cognitive behavioral therapy, motivational interviewing, group therapy, and individual therapy are compared to formulate effective clinical approaches for adolescents with co-occurring disorders. Adverse childhood experiences, risk and protective factors, suicidality, community involvement, parental education and early intervention, and truancy and juvenile justice involvement will also be reviewed and considered. Utilizing an integrative and multifaceted approach supplies adolescents the opportunity to eradicate continued substance abuse, reduce mental health symptoms, resolve negative behaviors, and provide proper coping skills to sustain their recovery and stability. Providing clinicians, schools, parents or caregivers, and communities with proper training, resources, and information can better support an adolescent to effectively manage their mental health symptoms and reduce substance abuse and behavioral concerns.

Keywords: Adolescents, treatment, psychoeducation, counseling, multidimensional family therapy, cognitive behavioral therapy, group therapy, individual therapy, parents, community, co-occurring disorders, substance use, mental health, addiction, delinquency, resources.

Table of Contents

Introduction…………………………………………………………………………………..5

Review of Literature…………………………………………………………………………9

Treatment Modalities……………………………………………………………………….22

Gaps & Limitations…………………………………………………………………………34

Applications to Program Area……………………………………………………………...36

Conclusion & Discussion…………………………………………………………………...37

References…………………………………………………………………………………..39

Effective Treatment Modalities, Recommendations, and Desired Outcomes for Adolescents with Co-Occurring Disorders

In recent years, substance abuse and mental health disorders among adolescents has become a fast-growing concern across the world (Smith & Estefan, 2014). The definition of co-occurring disorders was developed by an "expert consensus panel, and under this definition such individuals have at least one mental disorder as well as an alcohol or drug use disorder" (Anderson & Gittler, 2005, p. 36). Due to this rapid increase in prevalence of co-occurring disorders among adolescents, mental health therapists and researchers have sought to find the most effective treatment method to eliminate continued substance abuse, correct maladaptive thoughts and behaviors, resolve conduct concerns, decrease delinquency, and address mental health symptoms (Henderson et al., 2010). Although group settings are a traditional modality of treatment for adolescents with co-occurring disorders, this modality of treatment may have the potential to generate issues with supplying adolescents the opportunity to obtain innovative ideas on how to use illicit substances, creatively obtain these substances, and harmful behaviors from their peers (Kaminer, 2005).

This concern has led researchers to delve into new ways to combat this issue to formulate innovative evidence-based practices to better suit favorable outcomes with adolescents diagnosed with co-occurring disorders. Recent research has shown that cognitive behavioral therapy has been effective with targeting maladaptive thoughts, feelings, and behaviors with this target population (Liddle et al., 2010) and multidimensional family therapy that has also proved to be effective with targeting the reduction of delinquency and substance abuse (Baldwin et al., 2011). Implementing a variety of diverse therapeutic models and techniques that may include, but is not

limited to, multidimensional family therapy, cognitive behavioral therapy, motivational interviewing, group therapy, and individual therapy can strengthen an adolescent's opportunity to reduce mental health systems, eliminate substance use, address conduct disorders, provide insight into the adolescent's thoughts, beliefs, and behaviors, and provide adequate coping strategies to sustain long-term recovery and symptom reduction.

As research expands on treatment options for adolescents with co-occurring disorders, further information regarding community and parental education becomes available. According to Mueser et al., familial involvement or interventions can help lower psychiatric symptoms and improve relatives' knowledge of co-occurring disorders (2012). Current literature suggests that parent involvement is associated with positive mental health, reducing symptoms, and decreasing substance use (Wolff et al., 2018). Research has shown that grandparents may contribute to an adolescent's overall well-being by providing unrestricted love, regard, or counteracting brash parenting styles while also indicating increased grandparent involvement with adolescents to be associated with positive outcomes (Wolff et al., 2018). Parent and family involvement in an adolescent's treatment experience can drastically improve the likelihood of an adolescent to assist in remedying negative thought patterns and behaviors, rectify conduct issues, eliminate substance use, and decrease mental health symptoms (Curtis et al., 2017). Although parent and family participation would be ideal in an adolescent's treatment, not all adolescents have relationships with their parents or family members that would facilitate healthy involvement in their treatment. Due to this lack of support in an adolescent's life, it is imperative for educators, schools, and communities to have access to resources to open the door for successful mental health symptom reduction and elimination of substance use in adolescents (Oh et al., 2021). Previous research has suggested the use of substances during adolescence can interfere with

critical development such as interpersonal and educational skill development, prosocial identify formation, and the assumption of family and work responsibilities (Waldron & Kaminer, 2004). Therefore, adolescents who have heavily used substances throughout this critical development period may not have sufficient opportunities to acquire specific coping skills due to the effects of drugs and alcohol during this time (Waldron & Kaminer, 2004).

Additional factors to consider when reviewing the complexity of co-occurring disorder treatment of adolescents are Adverse Childhood Experiences (ACEs), risk and protective factors, suicidality, community involvement, parental education and early intervention, and truancy and juvenile justice involvement. Due to the intricacy of the developmental stages of adolescence, several components play a role in an adolescent's level of engagement in services, requirements to receive services, identifying problematic behaviors, and access to community resources (Mayberry et al., 2009). There are several elements that may determine an adolescent's risk of developing a mental health disorder and/or substance use disorder, however, there are protective factors that may decrease the potential risk of developing either one or both disorders. These protective factors can include an affectionate and valuing family environment, non-violent and cohesive school environment, sense of self-worth and social cohesiveness, family harmony, experiences of achievement, economic security, empathy, belief in control over life circumstances, belonging to a positive peer group, having a positive role model or mentor, and belief in own achievements (Jessor et al., 1995).

Although several research studies have been conducted regarding treatment options, symptom reduction, student resources, parental education, and community involvement for adolescents with co-occurring disorders, there are still gaps and limitations. Mental health and substance use disorders affect millions of adolescents in the United States of America, but only

approximately 10% of adolescents receive treatment (Anderson & Gittler, 2005). Current literature highlights the lack of resources and options for adolescents with co-occurring disorders and remains an ongoing concern across diverse communities. Anderson & Gittler, 2005, note that current "efforts to improve care must focus on adolescent, familial, program, funding and policy factors that act as barriers to unifying philosophies and practices needed to advance appropriate care" (p. 35). Research also suggests that adolescents that grow up in a resource-poor environment might have difficulties developing the skills necessary to succeed in school, stay out of trouble, make positive or 'pro-social' choices, and achieve independence as an adult (Kowaleski-Jones, 2000). This Capstone Project seeks to continue developing effective treatment modalities while maintaining focus on adolescent recovery processes, decreasing mental health symptoms, improving academic performance, enhancing familial relationships, and eliminating substance abuse.

Review of Literature

Adolescents diagnosed with mental health disorders and substance use disorders has been a rapidly increasing concern throughout the United States (Smith & Estefan, 2014). Adolescence is a period of increased vulnerability for the onset and exacerbation of mental health concerns (e.g., depression, inattention or impulsivity, and anxiety), as well as a time of risk for substance use experimentation (Russell & Odgers, 2019). Due to the drastic increase in co-occurring diagnoses in adolescents, research and recommendations have been evolving and expanding (Russell & Odgers, 2019). Researchers and providers have delved deeper into the impact Adverse Childhood Experiences (ACEs), familial relations, socioeconomic status, academic achievement, and peer pressure has on an adolescent's development and the likelihood of an adolescent developing co-occurring disorders (Hogue et al., 2008). Cognitive behavioral therapy (CBT), multidimensional family therapy (MDFT), motivational interviewing (MI), group therapy, and individual therapy are proven to be effective modalities of treatment for adolescents with co-occurring disorders. However, when these methods are used together, the probability of remaining abstinent from mood-altering chemicals and eliminating maladaptive behaviors drastically increases (Hogue et al., 2008).

Several external factors have been identified that may determine the success of adolescents that includes a combination of receiving proper education about what community-based resources are available if adolescents have concerns about their mental health or substance use, parental education on the warning signs of mental health or substance use issues, familial relationships impacting the likelihood of developing a mental health disorder or substance use disorder, socioeconomic factors, school-based interventions developing to be better equipped to work with adolescents with co-occurring disorders, and counselors understanding the referral

process when necessary and appropriate (Russell & Odgers, 2019). The following literature compares cognitive behavioral therapy, multidimensional family therapy, motivational interviewing, group therapy, and individual therapy while outlining their strengths and areas for improvements with each modality. Additional literature reviewed includes information correlating ACEs to co-occurring diagnoses, early intervention techniques and concerns to look for, risk and protective factors, peer support and peer pressure, truancy, juvenile justice involvement, and lower education levels may be correlated with an increased likelihood of co-occurring disorders (Hogue et al., 2008).

Adverse Childhood Experiences (ACEs)

The conceptualization of Adverse Childhood Experiences (ACEs) was first established in 1998 by Dr. Vincent J. Felitti and colleagues (Wolff et al., 2018). ACEs encapsulates seven adverse life experiences that may occur during childhood and includes: "physical abuse, sexual abuse, psychological (emotional) abuse, household substance abuse, household mental illness, witnessing violence towards one's mother, and history of incarceration within the household" (Wolff et al., 2018, p. 2280). The initial seven adverse life experiences included in ACEs have since been expanded to incorporate three additional branches of adversity such as: "parental separation or divorce, physical neglect, and emotional neglect" (Wolff et al., 2018, p. 2280). ACEs coupled with the first five years of a child's life can be detrimental to development, formation of trusting relationships, and increase the risk of co-occurring disorders (Ghosh Ippen et al., 2011). The first five years of life are a key period for brain development, progression of the stress response system, growth of emotion regulation strategies, and evolution of fundamental relationship structures (Ghosh Ippen et al., 2011). Due to the first five years of life being the most crucial period of childhood development, it is imperative to facilitate proper

interventions for vulnerable populations, such as minorities and low-income children who are at greater risk to exposure of multiple adverse childhood experiences (Ghosh Ippen et al., 2011).

Research has shown that minority and low socioeconomic children or adolescents are more often involved with Child Protection Services (CPS) and are at an increased risk to have exposure to abuse, neglect, and/or living with a caregiver that is unable to meet their needs due to untreated substance use, mental health, and domestic violence (Brown & Shillington, 2016). According to Brown and Shillington (2016), "early life adversity has significant long-term effects on psychological, emotional, and behavioral outcomes. Research indicates that ACEs can threaten a youth's development and well-being, contribute to issues including substance abuse and delinquency, in addition to other negative mental and physical health problems that occur later in life" (p. 211). Due to ACEs fostering a negative trajectory throughout an individual's lifespan, it is important for school professionals, licensed counselors, and community-based agencies to recognize warning signs, implement ACEs assessments, review initial reports made to CPS, and evaluate support networks to effectively treat or counsel children and adolescents to process these experiences (Ghosh Ippen et al., 2011). Research has been conducted to demonstrate traumatic childhood experiences are directly correlated with physical and behavioral health issues across the entire lifespan; not just in adolescence and early adulthood (Brown & Shillington, 2016). Another research study has been conducted by Baglivio et al. provided evidence of preventing ACEs related to witnessing physical or sexual abuse and experiencing physical abuse would decrease suicide attempts by 33% in men and 50% in women (2015). ACEs and traumatic or stressful events can have a lasting impact on individuals as they progress through their lives, however, it is important to highlight protective factors that may help in reducing the risk of substance use, mental illness, delinquency, and maladaptive behaviors.

Protective & Risk Factors

In contrast to risk factors such as low socioeconomic status, caregiver's criminal justice involvement, substance use or mental illness, and ACEs, positive protective factors such as healthy relationships, support networks, use of resources, and community involvement should also be identified and promoted in the lives of adolescents. As Brown and Shillington (2016) stated, "early adversity may be considered as "tolerable stress" when youth are surrounded by protective relationships, specifically those that facilitate adaptive coping skills" (p. 212). Most of what contributes to long-term concerns that are typically associated with prolonged exposure to early adverse experiences is the lack of a compassionate or 'buffering' adult (Brown & Shillington, 2016).

Jessor et al., 1995, conducted a research study analyzing the correlation between protective factors and problem behaviors with the results of "protective factors have been shown to relate both directly and indirectly to adolescent involvement in problem behavior—the greater the protection, the less the problem behavior—and, in interaction with risk factors, protective factors can moderate their relation to problem behavior" (p. 931). This research study considered protective factors as independent variables that can have direct effects on behavior while also moderating the relationship between risk factors and behavior (Jessor et al., 1995). Jessor et al.'s study included 2,140 students between seventh and ninth grade where seven measures of protection (Protective Factor Index), six measures of risk (Risk Factor Index), and four different areas of problem behaviors (Multiple Problem Behavior Index) were obtained (1995). Protective Factor Index (PFI) examines Positive Orientation to School, Positive Orientation to Health, Attitudinal Intolerance to Deviance, Positive Relations with Adults, Perceived Regulatory Controls, Friend Models for Conventional Behavior, and Prosocial Activities (Jessor et al., 1995,

p. 925-926). Risk Factor Index (RFI) assesses Expectation for Success, Friends Models for Problem Behavior, Friend Orientation, School Record Grade Point Average, Self-Esteem, and Hopelessness (Jessor et al., 1995, p. 926). Four different areas of problem behaviors include problem drinking, delinquent-type behavior, marijuana involvement, and sexual intercourse experience in adolescents (Jessor et al., 1995, p. 926).

The results from Jessor et al.'s study concluded that protector factors have been shown to relate to adolescent's problem behavior directly and indirectly; the vaster the protection, the less problem behaviors (1995). The researchers also concluded that although the moderator role for protection (RFI x PFI) was not statistically significant in each study, it corroborates a differential impact of protection in the relation between risk and problem behavior (Jessor et al., 1995). The most significant impact is displayed when protection is high and its influence is more constricted when the protection is absent or low (Jessor et al., 1995).

Suicidality

Substance abuse disorders and mental health disorders among adolescents have become a rapidly increasing concern across the world (Smith & Estefan, 2014). As co-occurring disorder diagnoses become more prevalent, the likelihood of suicidality also escalates (LeCloux et al., 2017). Suicide is a major public health problem among adolescents who reside in the United States that is quickly increasing to become the third leading cause of death for adolescents and young adults (LeCloux et al., 2017). The Substance Abuse and Mental Health Services Administration's Strategy for Suicide Prevention implements effective suicide prevention strategies through health care settings and community-based programs that include access to services, affordability, primary care, school, and parental screenings, community education, as well as school-based trainings (U.S. Department of Health and Human Services, 2012).

Adolescents that meet the criteria for mental health disorders, substance use disorders, or co-occurring disorders, are more likely to have an increase in risk factors, minimal protective factors, and Adverse Childhood Experiences (Brown & Shillington, 2016). These adolescents are also at an increased likelihood for suicidal ideation and suicidal attempts (LeCloux et al., 2017).

Presently, only seventeen out of fifty states enacted laws that mandate training for school staff members and only ten out of these seventeen states require their mandated training to be conducted yearly (LeCloux et al., 2017). Although the Affordable Care Act (ACA) requires an increase in funding for school-based health centers, school-based mental health services offered through these programs are typically limited to short-term interventions and assessment services (LeCloux et al., 2017). A study conducted by LeCloux et al. found that several public schools with school-based suicide prevention procedures only specify that a parent may be contacted if their child is deemed at risk; there are not any procedures listed for follow up or further interventions (2017). In fact, Utah is the only state in which their schools offer educational conferences for parents concerning suicide prevention, awareness, and other risk-related topics (LeCloux et al., 2017). With growing concerns and continued research published on co-occurring disorders, risk factors, and increased possibility of suicidality amongst adolescents within the United States, it is imperative to provide adequate training, community resources, and population-specific care (LeCloux et al., 2017).

The health and wellbeing of adolescents plays a crucial role in policy change and development in relation to prevention, outreach programs, education, and treatment of adolescents with co-occurring disorders (LeCloux et al., 2017). Educating an adolescent's family system is another key consideration as the family is a crucial aspect of adolescent's support network and is likely to be the central communication point for school and medical care

professionals (LeCloux et al., 2017). There are several additional family factors, e.g., parental mental health history, parental loss, low quality child-parent attachment, familial conflict, and disorganized family systems, that have been correlated to suicide amongst adolescents (Brown & Shillington, 2016). Implementing policies and procedures that adequately and proactively prepare schools, parents, educators, and medical professionals with resources, tools, interventions, and warning signs to deteriorating mental health and suicidality among adolescents could greatly reduce suicide rates (LeCloux et al., 2017).

Community Involvement

Adequate schools, a baseline for public safety, strong economic foundation, and residential security could set the trajectory for adolescent success (Kowaleski-Jones, 2000). Residing in a neighborhood with fewer options for resources ma prohibit interventions, referral processes, and finding prosocial activities (Kowaleski-Jones, 2000). Without sufficient resources, the likelihood of maladaptive adolescent development drastically increases and can include increased truancy or dropout rates, low cognitive performance, and higher rates of behavioral problems (Kowaleski-Jones, 2000). Minimal resources have been linked to adolescents struggling with "developing the skills necessary to succeed in school, stay out of trouble, avoid mistimed pregnancies, and achieve financial independence as adults" (Kowaleski-Jones, 2000, p. 449). Community resources can be classified as money, time, institutional support, and interpersonal links that assist parents and communities to further the development of adolescents. Essentially, these resources are considered "investments" into the growth and development of adolescents to maximize their positive future behaviors (Kowaleski-Jones, 2000). Access to evidence-based school programming, parental education, early interventions, substance use and mental health assessments, and treatment options for substance use, mental

health, or co-occurring disorders is imperative to ensuring adolescents are supported and set on a positive trajectory to lead successful lives into adulthood (Williams & Merten, 2015).

Understanding the factors that propel adolescents to take risks can assist communities, agencies, and guardians with implementing appropriate interventions, recognize warning signs, and make appropriate referrals. Risk taking behaviors can include but are not limited to: “motor vehicle accidents, substance use, unprotected sexual activity, and interpersonal violence” and can correlate directly to increased aggressive behaviors, delinquency, higher likelihood of run aways, and drug or alcohol addictions (Kowaleski-Jones, 2000, p. 461). Low-income neighborhoods or “resource-poor” communities have an increased risk of adolescents engaging in risk taking behaviors due to an increased rate of crimes related to the frustration of poverty, externalizing behaviors, lack of resources, and disproportionately low policing in low-income housing (Kowaleski-Jones, 2000). Social disorganization theory attributes delinquent behavior to socially disorganized communities that can be characterized by low-income economies and conditions that limit a community’s ability to influence adolescent behaviors (Mayberry, et al., 2009). School quality, resource availability, and policy reform can improve the quality of public schools in relation to positive outcomes for adolescents in both social development and academic achievement (Kowaleski-Jones, 2000). Half of the American children population have experienced some degree of economic deprivation and one in five American children experience poverty which can cause long-term effects on early life hardship and later maturation (Williams & Merten, 2015). Family factors such as income, parental education, parent-child relationships, and parental stress lead children and adolescents on the trajectory for developmental difficulties (Williams & Merten, 2015).

There are several potential barriers to voluntarily attending substance use prevention and mental health awareness programs outside of the mandated school requirements (Moreland et al., 2020). Some of these barriers include: “stigma, time constraints, and unwillingness to prioritize with other school, job, and familial demands” (Moreland et al., 2020, p. 2346). Students who receive mandated school-based substance use and mental health awareness programming found that it was useful, however, only 35% of schools offer evidenced-based programming (Moreland et al., 2020). Moreland et al. conducted a study with 145 adolescent participants to assess drug or alcohol use, engagement in substance use education courses, and perceived risk (2020). The results of Moreland et al.'s study indicated 18% of the surveyed adolescents had been to a course or program related to the prevention of substance use within the past thirty days and 50.7% had either read, heard, or watched an advertisement about the prevention of substance use within the past year (2020). This study concluded that more efforts should be attempted to extend evidence-based programming, preventions, and interventions to public schools, community organizations, and pediatric health care settings (Moreland et al., 2020). A positive sense of community, availability of resources, and positive school climate is associated with less substance use amongst adolescents and a positive sense of community acts as a protective factor against negative parental and peer influences on substance use (Mayberry et al., 2009).

Parental Education & Early Intervention

Substance use amongst adolescents in the United States has remained a critical public health and policy priority due to the linkage between several long-term detrimental outcomes that includes but is not limited to continued substance use, substance dependence, mental health issues, and adjustment concerns into adulthood (Nair et al., 2022). Current research specifies adolescents are exceptionally vulnerable to the introduction of substance use and the progression

into addictive or problematic substance use and consequently are at an ‘at-risk’ period for the development of continued substance use (Nair et al., 2022). Due to this increased risk of substance use and dependence, researchers and public health experts have called for evidence-based interventions that could delay early introduction of substance use and discontinue the development into problematic substance use (Nair et al., 2022). Universal and mandated school-based prevention programming may be less effective in stopping adolescent use of tobacco and alcohol in comparison to illicit substance while parent-based attempts have been found to be especially useful in preventing cannabis, tobacco, and alcohol use amongst adolescents aged ten to eighteen (Nair et al., 2022).

Evidence-based programs are necessary to increase parental awareness and knowledge of strategies to decrease adolescent substance use (Nair et al., 2022). Direct engagement with community agencies, expanding resources, parental awareness, and adolescent education can drastically decrease the likelihood of adolescent’s development of a substance use dependence or disorder (Nair et al., 2022). A state-specific plan to Indiana that was implemented in 2017 that has the potential to be applied to all states across the United States included, “1) identify and support the implementation of age-appropriate evidence-based addictive substance use and misuse prevention programs for children and youth. Encourage school-based programs that support positive peer relationships and social competence and evidence-based family strengthening programs and 2) Encourage and support community-based coalitions aimed at prevention, treatment, and recovery. Encourage significant involvement of community-based organizations, Purdue Extension, chambers of commerce and other organizations from the public, for-profit, and not-for-profit sectors” (Nair et al., 2022, p. 2).

There is overwhelming evidence that indicates family plays a role in the introduction and exacerbation of substance use amongst adolescents but can also act as a protective factor in the prevention, education, and treatment of adolescent substance use (Curtis et al., 2017). Parental behavior has been related to adolescent substance use; when parents believe their child(ren) is experimenting with alcohol and illicit drugs, they are more likely to intervene to prevent continued substance use (Curtis et al., 2017). Early intervention, availability of resources, and effective treatment are critical for preventing substance use problems amongst adolescents. The National Institute on Drug Abuse (NIDA) advises legal guardians or parents who suspect their child(ren) have engaged, or are currently engaging, in substance use to have a health care professional or addiction professional assess the adolescent for signs or symptoms of substance use and related conditions (National Institute on Drug Abuse et al., 2014). A study conducted by Curtis et al. (2017) sought to answer the questions: "What would you do if your child used [substance] to intoxication?" and "what would you do if your child had a serious problem with [substance] use?" (p. 178). Their findings concluded parental reactions were similar across all drug classes (cannabis, illicit drugs, alcohol, and prescription opioids) by citing they would seek help for their child(ren) through community resources and health care professionals (Curtis et al., 2017). Furthermore, physical punishment or withholding of privileges were among the least likely actions for all drug classes (Curtis et al., 2017).

Historically, parents have been poor at identifying both initial substance use and problematic substance use (Curtis et al., 2017). National surveys indicate that 25-28% of children have used alcohol or other drugs while parents included in Curtis et al.'s study reported most children were unlikely to engage in substance use (2017). The National Institute on Drug Abuse, National Institutes of Health, and U.S. Department of Health and Human Services recommend

parents have their children seen by medical professionals if any form of substance use is suspected or identified (2014). Curtis et al.'s study concluded there is disconnect between the recommendations put forth by professionals and what parents reported they would do if they suspected their adolescents to be using substances (2017). Parents in Curtis et al.'s study reported they would rather talk to or punish their children if they had knowledge, they were using substances rather than consult with medical professionals; the only substances that were an exception to these results were the recreational use of prescription opioids or 'more severe' substances such as amphetamines or heroin (2017).

Truancy & Juvenile Justice Involvement

Adolescents with mental health disorders, substance use disorders, and co-occurring disorders are at an increased risk for truancy, delinquency, and becoming involved in the juvenile justice system (Bassett et al., 2016). Adverse Childhood Experiences (ACEs) is a known contributor to the development of co-occurring disorders; however, ACEs can have a "domino effect" and lead to behavior problems, development of a mental disorder, insecure attachment to guardians or adults, substance use, and juvenile delinquency (Davis et al., 2019). Children and adolescents involved in Child Protection Services (CPS) system may experience several early adversities that may contribute to an increased risk of substance use and delinquency (Brown & Shillington, 2016). Adolescents and children responding to stressful events through delinquent behavior can be an attempt for these individuals to minimize the repercussions of early adversity. Social and environmental circumstances such as familial mental health, harsh discipline, and low parental supervision or involvement are a few factors that have been directly correlated to an increased risk for ACEs and deviant behaviors (Brown & Shillington, 2016). Educating, identifying, intervening, and making proper referrals could help deter adolescents from

problematic behaviors, worsening mental health, and increasing substance use by eliminating the 'domino effect' (Davis et al., 2019).

If prior interventions are ineffective and adolescents become involved in the juvenile justice system, recently developed evidence-based practices to treat co-occurring disorders have been implemented in juvenile correctional facilities in the United States (Bassett et al., 2016). A national survey of substance use treatment for juvenile offenders concluded that 51% of juvenile correctional facilities offered CBT interventions, 89% offered education on substances, and 93% provided group therapy treatment (Bassett et al., 2016). A research study conducted by Bassett, et al. implemented two treatment modalities that can be used by counselors and supervisors: one for group-based cognitive behavioral therapy (CBT) and the other for combined Substance Education and Twelve-Step Introduction (SET) for adolescent substance abuse (2016). This study evaluated the integrity and reliability of conducting treatment utilizing CBT and SET in juvenile correctional facilities (Bassett et al., 2016). Through the assessment of CBT practices, MI practices, group engagement, as well as counselor and supervisor evaluations, Bassett et al. concluded these interventions and treatment methods are effective in reducing adolescent substance use and increasing awareness or education on substance use (2016). Generating a standardized, evidence-based program for substance using adolescents in juvenile correctional facilities can allow counselors to have proper training, tools, self-monitoring skills, and facilitate appropriate discussions to assist this population upon the end of their criminal sentencing (Bassett et al., 2016).

Treatment Modalities

Co-occurring disorders present complex and difficult challenges to traditional substance use and mental health treatment systems (Hawkins, 2009). Without effective intervention, adolescents with co-occurring disorders are at an increased risk of serious legal and medical problems, incarceration, suicide, school difficulties (i.e., running away, truancy, or dropping out), unemployment, and poor interpersonal relationships (Hawkins, 2009). Current practices and systems in place inadequately meet the needs of this population due to a variety of circumstances such as "clinical, administrative, financial, and policy barriers" (Hawkins, 2009, p. 197). Through the increase in prevalence of co-occurring disorders, research studies have been conducted to examine the effectiveness of different modalities of treatment of adolescents with co-occurring disorders. Multidimensional family therapy (MDFT), cognitive behavioral therapy (CBT), motivational interviewing (MI), group therapy, and individual therapy are among the most prevalent modalities to be researched to weigh the positives, negatives, limitations, and effectiveness when treating adolescents. The common goal for treating adolescents with co-occurring disorders is to eliminate continued substance use, resolve conduct concerns, correct negative thoughts and/or behaviors, decrease delinquency, and address reoccurring mental health symptoms (Anderson & Gittler, 2005). Although providing treatment services to adolescents diagnosed with co-occurring disorders has made advancements throughout the years, only a small percentage of adolescents who have co-occurring disorders receive treatment and therefore are unable to take advantage of these improvements (Mayberry et al., 2009). Due to the increased risk of adolescents residing in low-income households, it is imperative for more cost-effective options be provided from communities and agencies while considering the systems that influence adolescent behaviors and development (Mayberry et al., 2009).

Cognitive Behavioral Therapy (CBT)

Cognitive behavioral therapy (CBT) is viewed as an 'umbrella term' that includes a variety of interventions that focus on present, goal-directed behavior change (Hawkins, 2009). CBT can be defined as "a method that aims to reduce psychological distress and dysfunction by exploring and addressing how the integration of the client's thoughts, feelings, and behaviors are contributing to the presenting problem" (Sharf, 2016, p. 62). Major features of CBT include challenging and identifying cognitive distortions and maladaptive behaviors, cognitive restructuring, and developing coping strategies through modeling (Hawkins, 2009). Viewed through a CBT lens, co-occurring disorders and the correlated problems are learned behaviors that have originated through environmental factors and have been sustained through reinforced behaviors (Hawkins, 2009). CBT-based interventions seek to understand the contexts of substance use (i.e., setting, time, place, etc.) and events to cause mental health symptoms (i.e., adverse childhood experiences, trauma, etc.) and how these contexts influence potential triggers (Waldron & Kaminer, 2004). Exploring and identifying these triggers can assist clients with regulating emotions, managing behaviors, and developing coping skills (Waldron & Kaminer, 2004). Once these strategies have been recognized, clinicians can start working with their clients on self-monitoring, self-control, emotion regulation, labeling triggers, and identifying warning signs for relapse (Hawkins, 2009). CBT interventions have been researched and well supported in treating adolescents with co-occurring disorders (Hogue et al., 1998).

Liddle et al. (2008) recruited 224 adolescents with the average age of fifteen years old to participate in a research study evaluating the effectiveness of CBT and Multidimensional Family Therapy (MDFT). The CBT portion of this research study included 112 participants with 80% of participants identifying as male, 20% of participants identifying as female, and 100% of

participants meeting qualifying criteria for a substance use disorder (Liddle et al., 2008). The goals implemented in this research study originated from CBT manuals and instructions focused on increasing coping skills and reducing behaviors that threaten the safety, health, and quality of life for adolescents (Liddle et al., 2008). Standard CBT manuals suggest interventions including: "providing information and education, contingency contracting, self-monitoring, problem-solving training, communication skills training, identifying cognitive distortions, increasing healthy recreational activities, and homework assignments" (Liddle et al., 2008, p. 1662). The goal of adolescent substance abuse-related treatment is harm reduction – not abstinence (Liddle et al., 2008). Intake interviews were conducted with each participant to collect data on demographic and background information such as age, gender, race and ethnicity, age of first substance use, juvenile probation status, family income, family structure, and diagnosis obtained from the Diagnostic Interview for Children (DISC) (Liddle et al., 2008). Self-report instruments, such as the *Personal Experience Inventory* and *Personal Involvement with Chemicals* scale, were employed to gauge frequency of substance use, type of substance used, consequences of substance use, and reason for substance use (Liddle et al., 2008). CBT was delivered to the participants in this study in 60-to-90-minute sessions once weekly in an office for approximately five months (Liddle et al., 2008). Six and twelve month follow up assessments were conducted on the participants to evaluate the effectiveness of CBT and found 44% of adolescents receiving outpatient CBT treatment reported zero or one use since the conclusion of their sessions and clinical trial (Liddle et al., 2008). There was a significant decrease in cannabis use and moderate decrease in alcohol use as a result of receiving CBT treatment (Liddle et al., 2008).

While CBT has been proven to be effective while treating adolescents with substance use disorders, there are some limitations to this modality of treatment. Sharf (2016) outlined CBT

may sometimes be damaging when focusing on the client's past and some of their negative or traumatic experiences (p. 67). Sometimes, when a client is not ready, only focusing on a client's negative experiences can lead them towards poor self-image, depression, anger, regret, guilt, and other adverse emotions that cause more harm than good. Although CBT is still commonly used throughout counseling settings across the United States and has several empirical studies to support the effectiveness of using this treatment method, utilizing a family-based theory, such as Multidimensional Family Therapy (MDFT), or more modern approach, such as Solution-Focused Therapy (SFT), can be more beneficial during counseling sessions with adolescents who have a traumatic or adverse childhood experiences (Sharf, 2016).

Multidimensional Family Therapy (MDFT)

Multidimensional Family Therapy (MDFT) has a variety of diverse approaches, however, MDFT that is specifically tailored towards families of adolescents that are diagnosed with co-occurring disorders can be defined as: "system-oriented approaches that aim to change dysfunctional family patterns that contribute to the onset and maintenance of adolescent delinquency, substance use, and mental health symptoms" (Flicker et al., 2008, p. 167). MDFT can be especially useful in conjunction with family education groups to allow parents and families to gain a better understanding of the underlying causes of adolescent co-occurring disorders (i.e., externalizing versus internalizing behaviors and emotions, mental health impacting the use of substances, etc.) (Waldron & Kaminer, 2004). Family education groups allow parents and guardians to understand the impact of their own substance use, problematic or not, on their adolescent's substance use (Smith & Estefan, 2014). To sustain progress made in MDFT, therapists focus on "helping parents and adolescents better communicate with each other

and reduce conflict, help parents improving their parenting skills, and helping adolescents become better integrated with their extrafamilial environment" (Baldwin et al., 2011, p. 284).

Liddle et al. (2018) conducted a research study to evaluate MDFT as community-based alternative to residential treatment for adolescents with co-occurring disorders. In this study, the researchers utilized an 'intent-to-treat' design and had 113 adolescents who had been referred to residential treatment (Liddle et al., 2018). The participants of this study had an average age of 15.4 years old, 75% identified as male, 68% identified as Hispanic, and 71% had at least one previous episode in residential treatment (Liddle et al., 2018). Participants were randomly assigned to either residential treatment (RT) or MDFT in their homes or communities (Liddle et al., 2018). The sampled participants were assessed at baseline utilizing Timeline Follow-Back Method (TLFB), Personal Involvement with Chemicals (PIC) scale, National Youth Survey (NYS) Self-Report Delinquency Scale (SRD), and Externalizing and Internalizing subscales of the Youth Self-Report (YSR) (Liddle et al., 2018). These assessments focus on psychological and behavioral characteristics of substance use, criminal and delinquent acts, related consequences, frequency of substance use, and internalizing and externalizing symptoms of distress (Liddle et al., 2018). Participants were assessed at baseline, and again at two-, four-, twelve-, and eighteen-months post-baseline to record the effectiveness of treatment received (Liddle, et al., 2018). Therapists providing RT or MDFT services adhered to parameters of treatment (i.e., session duration and frequency) through the evaluation of weekly contact logs to record the type of session provided and the length of each session (Liddle et al., 2018). Evaluation of weekly contact logs showed that both RT and MDFT services were delivered appropriately and in accordance with their treatment guidelines (Liddle et al., 2018). RT and MDFT were compared analyzing the outcomes of externalizing symptoms, internalizing

symptoms, frequency of criminal or delinquent behaviors, and substance use (Liddle et al., 2018). Participants in this study were at considerable risk for being place in long-term juvenile correctional facilities, probation, and residential treatment facilities for substance use at some point during the assessment period due to "the severity of substance use symptoms and delinquency, number of psychiatric diagnoses, and the number of previous substance use treatment placements" (Liddle et al., 2018, p. 50). The results of this study indicated MDFT provided significant reductions in substance use, frequency of use, delinquency, internalizing symptoms, and externalizing symptoms in comparison to RT (Liddle et al., 2018). Results also indicate that MDFT is a more effective alternative to RT for youth with substance use or co-occurring disorders and suggests adolescents who meet appropriate criteria to be referred to RT can be adequately managed in a non-residential setting (Liddle et al., 2018).

Although MDFT is widely used and recognized as a successful modality of treatment for adolescents with substance use or co-occurring disorders, there are still some limitations to this modality. The first limitation is funding; specifically, the cost of training for each individual therapist to become professionally trained in providing MDFT services (Henderson et al., 2010). The approximate cost for agencies or private practices to have therapists professionally trained to provide MDFT services is $4,500 per clinician (Henderson et al., 2010). The second limitation is the lack of traditional aftercare components offered upon 'completion' of MDFT treatment (Henderson et al., 2010). Due to the lack of aftercare, studies have shown that patients who participate in MDFT do well initially and respond positively to MDFT treatment as indicated in the reduction of substance use and behavioral concerns but decline within one year (Henderson et al., 2010). The last limitation discussed with this treatment modality is MDFT works best with adolescents and family members who agree to an 'abstinence-focused model' and MDFT is less

effective with this population when the parents do not remain abstinent from mood-altering chemicals; including alcohol (Liddle et al., 2008).

Motivational Interviewing

Motivational interviewing (MI) is an effective intervention for promoting behavior changes in adolescents with substance use disorders (Jensen et al., 2011). MI was initially introduced by William Miller and Stephen Rollnick and combines characteristics of CBT and person-centered therapy strategies to elicit behavioral changes (Miller & Rollnick, 2002). Miller and Rollnick defined MI as “a client-centered, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence” (2002, p. 102). MI has also been characterized as a collaborative method of guiding a client to motivate to change through reflecting and reframing their thoughts and behaviors (Jensen et al., 2011). The most common co-occurring disorders with adolescents are externalized disorders such as attention deficit hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), and conduct disorder (CD) with the most common internalized disorders of depression and anxiety (Brown et al., 2015). Therapists and providers could see great benefits demonstrated in the change of client behaviors when utilizing at least one component of MI during sessions (Jensen et al., 2011). The continued application of MI with adolescents diagnosed with substance use or co-occurring disorders should be encouraged to motivate clients in a person-centered manner to stimulate change (Jensen et al., 2011). Although there are 25 years of robust evidence suggesting the effectiveness of MI to modify behaviors in adults, evidence suggesting the effectiveness of MI with adolescents diagnosed with co-occurring disorders continues to emerge as research progresses (Jensen et al., 2011).

A study conducted by Brown et al. (2015) evaluated the effectiveness of MI in adolescents with co-occurring disorders. The research sample consisted of 147 participants with the average age of 15.8 years old, 88.4% identified as white, 64.9% identified as female, and 100% were hospitalized with psychiatric and substance use disorders (Brown et al., 2015). The participants in this study were randomly assigned to receive MI interventions or 'treatment as usual' (TAU) only interventions and underwent baseline assessments while the participants were hospitalized and follow-up assessments were obtained six months and twelve months post-treatment (Brown et al., 2015). Results of this study concluded that the MI group (36 days) had longer abstinence from resuming substance use following their discharge from the hospital in relation to the TAU group (11 days) (Brown et al., 2015). Results also indicated adolescents who received MI interventions reported less overall use of substances, specifically less use of marijuana, and significant reduction in delinquent behaviors during the first six months upon discharge from the hospital compared to the TAU group (Brown et al., 2015).

Although several studies have demonstrated long-term changes in adolescent substance use upon the receipt of MI interventions, other studies have shown initial positive effects but minimal treatment gains at the time of follow-up assessments (Jensen et al., 2011). Radically diverse samples (i.e., severity of substance use or mental health disorder, severity of delinquency, outpatient, or community-based sampling, etc.) are unlikely to be utilized in research studies pertaining to MI and may limit the reliability of MI effectiveness across treatment service levels (Jensen et al., 2011). Adolescents with more severe mental health diagnoses may need additional sessions (frequency and duration), resources, and stronger interventions than the current research suggests (Jensen et al., 2011).

Group Therapy

An additional modality of treatment for adolescents with co-occurring disorders is group therapy. Currently, group therapy typically integrates components of CBT, psychoeducation, and Twelve-Step guidelines as found in Narcotics Anonymous and Alcoholics Anonymous programs (Kaminer, 2005). Group therapy has been found to have favorable aspects which include unconditional acceptance from group members, peer support and relatability to similar circumstances, and receiving feedback from their peers or group facilitator in a 'live' setting (Kaminer, 2005). Assigning adolescents to group therapy with peers that are of the same severity (i.e., severity of substance use, severity of delinquency, severity of mental health, etc.) can allow adolescents to be more receptive or open to feedback regarding their maladaptive beliefs, negative behavior or attitudes, and distorted interpretations to encourage self-reflection and awareness (Waldron & Kaminer, 2004). Group therapy may give adolescents the opportunity to practice new, positive behaviors in a social environment to enhance interpersonal learning and trust building (Kaminer, 2005). Group therapy is also a more cost-effective and efficient method of treatment due to most therapists receiving training on CBT and psychoeducation throughout their education to pursue their licensure which allows them to facilitate group therapy and individual therapy upon graduation (Hogue et al., 2008).

Bassett et al. conducted a study in 2016 to research the effects of cognitive behavioral therapy (CBT) group-based therapy versus Substance Education and Twelve-Step-based (SET) group-based therapy. Participants of this study were recruited at a state juvenile correctional facility located in the northeastern region of the United States (Bassett et al., 2016). Participants of this study were between the ages of fourteen and nineteen years old, sentenced to the facility between four and twelve months, consent was obtained from legal guardians, and assent was

obtained from participants (Bassett et al., 2016). Adolescents were included in the research study if they met the following substance use disorder criteria: "(a) they used marijuana or drank at least monthly, or binge drank (≥5 standard drinks for boys, ≥4 for girls) at least once in the year before incarceration; (b) they used marijuana or drank in the 4 weeks before the offense for which they were incarcerated; or (c) they used marijuana or drank in the 4 weeks before they were incarcerated" (Bassett et al., 2016, p. 10). There were about 1,200 adolescents screened to participate in the research study, and 205 met the criteria during screening and completed the consent process (Bassett et al., 2016). The demographics of the participants was 38.8% identified as Hispanic, 36.8% identified as African American, 30.9% identified as White, 7.9% identified as Native American, 5.3% identified as Pacific Islander, 4.6% identified as Asian American, and 14.5% identified as 'other' (Bassett et al., 2016). Additional demographics of the participants was 88.2% identified as male (male and female participants were gender-segregated per juvenile correctional facility guidelines), the mean age was 16.9 years old, the average number of previously incarcerated or detained participants was 2.54 times, and 100% of participants met the criteria for a substance use disorder (Bassett et al., 2016). After baseline assessments, adolescents were randomly assigned to two sessions of motivational interviewing (MI) delivered individually or two sessions of meditation-relaxation training (RT) (Bassett et al., 2016). Adolescents receiving MI then received ten group-based sessions of CBT that was modeled after the Cannabis Youth Treatment (CYT) manuals and adolescents receiving RT then received ten group-based sessions of SET which was based upon the standard content delivered at the juvenile correctional facility (Bassett et al., 2016). Group sessions were approximately 75 minutes in duration and occurred one to three times per week with an average of eight group sessions over the course of 6.5 weeks; resulting in 586 total group sessions surveyed for this

research study (Bassett et al., 2016). This study concluded that setting specific guidelines, implementing a curriculum, and providing proper training for therapists can be beneficial in providing adequate care to adolescents with substance use disorders (Bassett et al., 2016). Creating a more standardized group-based delivery system can foster motivation to change, reduction in substance use, and reduction in delinquent behaviors (Bassett et al., 2016).

Despite these favorable aspects and outcomes of group therapy, there are some limitations. The primary limitation found in group therapy is that the group setting has the potential to provide adolescents with the opportunity to worsen their substance use, negative behaviors, and poor conduct through other adolescents in their group providing new ways to obtain illicit substances, diverse ways to use substances, and discussing negative behaviors with their peers (Kaminer, 2005). Based on this potential, it is recommended for adolescents with similar severities (i.e., severity of substance use, severity of delinquency, severity of mental health, etc.) to be placed in group therapy together with strictness of curriculum following suit (Waldron & Kaminer, 2004). This would eliminate the possibility of becoming 'better' criminals, developing more severe substance use, reinforcing use, and increasing negative behaviors (Kaminer, 2005).

Individual Therapy

Individual therapy has also had clinically significant reductions in symptoms of co-occurring disorders with the adolescent population (Waldron & Kaminer, 2004). Individual therapy assists the therapist and the client to work together towards a common goal of pinpointing why a client may use substances, what distressing events they are trying to cope with, how to discover new coping skills, and targeting maladaptive thinking and behaviors (Waldron & Kaminer, 2004). This modality of treatment also allows adolescents to get more

personalized treatment services, set specific goals, and develop problem-solving strategies (Hogue et al., 1998). Individual therapy utilized in conjunction with family therapy sessions can provide insight into "self-monitoring, communication and problem-solving skills training, contingency contracting, and substance-refusal skills" (Waldron & Kaminer, 2004, p. 99). The limitations of adolescent individual therapy include difficulty in finding a clinician to connect with (i.e., age difference, level of experience, potential lack of understanding of what the adolescent has been through, etc.), difficulty building rapport with a clinician the client would see for approximately one hour per week, and difficulty with keeping a client engaged in therapy for long-term commitment (Hogue et al., 1998).

Gaps & Limitations

Although there are several options of modalities for adolescents with co-occurring disorders, there are still a limited amount of research studies available to support which modality is the most effective. As previously stated, each modality described and reviewed has their own specific limitations and there is not a 'perfect' modality to address continued substance use, correct maladaptive thoughts and behaviors, decrease delinquency, work through conduct concerns, develop coping skills, and address mental health symptoms (Henderson et al., 2010). Limitations of CBT include the potential for further damage when focusing on a client's past and revisiting or 'retraumatizing' negative and traumatic experiences and leading them towards poor self-image, depression, anger, regret, shame, or guilt (Sharf, 2016). Limitations of MDFT include the high cost of training individual therapists to be able to provide MDFT services, lack of a traditional aftercare component, and MDFT working best with families and adolescents who both agree to an 'abstinence-based model' (Liddle et al., 2010). Limitations of MI include long-term follow-up assessments revealing minimal treatment gains, requiring additional interventions or modalities utilized in conjunction with MI, and minimal research available for this modality of treatment in adolescents rather than adults (Jensen et al., 2011). Limitations of group therapy is the group setting providing potential for adolescents to exchange new or diverse ways of using substances and reinforcing negative behaviors if adolescents of differing severities of co-occurring disorders are placed in the same group (Kaminer, 2005). Limitations of individual therapy with adolescents include difficulty in building rapport with a clinician they typically have one session per week for one hour with and finding it difficult to connect with a clinician depending on age difference, level of experience, or not fully understanding what a client has experienced (Hogue et al., 2008).

Longitudinal studies provide the most robust evidence to assess the effectiveness of these treatment modalities, however, it may be difficult for researchers to follow up with participants due to relocating from the original city or state the study was conducted in, moving onto college, or changing phone numbers (Liddle et al., 2018). Another limitation would be receiving consent from parents or legal guardians whose adolescents are diagnosed with co-occurring disorders due to the legal guardians often struggling with their own co-occurring disorders and the possible guilt and shame associated with their use or diagnoses (Smith & Hall, 2008). The final limitation would be payment considerations and the affordability of engaging in treatment as an adolescent with co-occurring disorders. Research has shown that many adolescents struggling with co-occurring disorders originate from low-income or single-household families and cannot afford to take time off work to engage in MDFT or other individual-based modalities (group therapy, individual therapy, etc.) (Hogue et al., 2008).

A major gap in research involving adolescents with co-occurring disorders is the lack of research studies or findings that surrounds the use of integrative or multifaceted modalities, approaches, or interventions. Each modality has its strengths and weaknesses, however, there have not been any published studies that utilize more than one modality for treatment service delivery. CBT, MDFT, MI, group therapy, and individual therapy all have their advantages and should be considered in the treatment of adolescents with co-occurring disorders while selecting which aspects of these modalities could be the most effective for each individual adolescent client. Conducting a cost and benefit analysis of each modality and proceeding with an individualistic approach should be considered for future research to assess the effectiveness of combined modalities.

Applications to Program Area

Implications from this Capstone Project can assist future mental health and substance use clinicians conceptualize adolescent co-occurring disorders and proceed with the most effective modalities to ensure positive outcomes. The population of adolescents with co-occurring disorders is complex and under-researched despite this topic becoming a fast-growing concern within recent years (Smith & Estefan, 2014). Future clinicians should be informed on this subject to provide quality care, utilize the most effective modalities of treatment, understand the areas of concern for this population, and the resources available. The goal of treating adolescents with co-occurring disorders should be decreasing continued substance use, correct maladaptive thoughts and behaviors, eliminate conduct concerns, resolve delinquency, and address mental health symptoms (Henderson et al., 2010). Positive outcomes in providing treatment to adolescents with co-occurring disorders would include externalized and internalized symptom reduction, increased motivation, education on the effects of substance use, and connecting clients with the appropriate services. Remaining up to date and informed on recent published research can allow a clinician to provide the most educated decision when deciding how to proceed with treating an adolescent with co-occurring disorders.

Conclusion & Discussion

There are diverse options available for adolescents diagnosed with co-occurring disorders and it may be difficult to select which modality fits a family best. Throughout this Capstone Project, cognitive behavioral therapy (CBT), multidimensional family therapy (MDFT), motivational interviewing (MI), group therapy, and individual therapy have their benefits and limitations analyzed and reviewed. Certain families may not be suitable for MDFT due to their own substance use or mental health difficulties while some families may benefit from this modality of treatment because it could give the family an opportunity to voice their concerns, learn parenting techniques, strengthen communication skills, and learn coping strategies (Hogue et al., 2008). CBT could be more effective with individuals that may be more prepared to work on their past trauma, maladaptive behaviors, potential triggers, and relapse prevention but may have the risk of 'retraumatizing' an adolescent by revisiting adverse experiences (Sharf, 2016). MI could be beneficial for adolescents with co-occurring disorders to assess their level of change and used collaboratively with a client motivate them to change their behaviors through reflecting and reframing these actions; however, MI may work best when used in conjunction with other modalities or interventions of treatment (Jensen et al., 2011). Group therapy is a cost-effective and time-effective modality of treatment which allows clients to receive radical acceptance from the group and receive feedback from peers their age; however, group therapy may provide adolescents with the opportunity to learn how to use substances in diverse or unusual ways, worsening behaviors, and engaging in poor conduct with their peers (Kaminer, 2005). The last modality reviewed is individual therapy. Individual therapy assists therapists and clients to work collaboratively to decrease negative symptoms and behaviors while providing clients specialized attention to specifically focus on what would work best for them but can sometimes be difficult

for the clinician to build rapport with the client (Waldron & Kaminer, 2004; Hogue et al., 1998).

This Capstone Project sought to understand and review the effectiveness of CBT, MDFT, MI, group therapy, and individual therapy for adolescents diagnosed with co-occurring disorders. Further research is recommended to study the effectiveness of utilizing an integrative approach of multiple modalities, approaches, and interventions. A 'perfect' treatment modality does not exist, and it is imperative to attempt to assess an integrative approach to understand how modalities can work in conjunction with one another and complement what contrasting modalities are trying to achieve. The ultimate objective for treating adolescents with co-occurring disorders is to reduce externalized symptoms, internalized symptoms, delinquency, and substance use (Liddle et al., 2018).

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