

2019

# Mentorship Programs, Depression Symptomatology, and Quality of Life

Tiesha L. Scott  
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# Walden University

College of Social and Behavioral Sciences

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Tiesha Lynn Scott

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Walden University  
2019

Abstract

Mentorship Programs, Depression Symptomatology, and Quality of Life

by

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MS, Walden University, 2014

BA, Rutgers University, 1999

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Clinical Psychology

Walden University

March 2019

## Abstract

Depression is a debilitating mental health disorder that has the potential to affect an individual's lifespan adversely; adolescents who reside in low-income urban environments are more at risk of developing the disorder. The purpose of this quantitative ex post facto study was to compare depression symptomatology and quality of life rates among emerging adults who enrolled and emerging adults who did not enroll in a mentorship program as an adolescent while in high school. Beck's cognitive model of depression was used as a theoretical foundation to determine how negative schemas are formed in adolescents who show symptoms of depression. The sample consisted of 128 participants from two groups who included emerging adults between the ages of 18 and 30, half of whom enrolled in a Mentorship Program in Northern New Jersey (MPNNJ) while the other half did not enroll in the mentorship program in Northern New Jersey (non-MPNNJ). ANCOVA analyses were used to investigate whether emerging adults from the MPNNJ versus non-MPNNJ reported differences in depression symptoms and quality of life rates while controlling for job satisfaction and substance use. It was concluded that The MPNNJ group reported significantly lower depression symptomatology rates and higher quality of life rates than the non-MPNNNJ while controlling for covariates, job satisfaction and substance use. Study findings provide empirical evidence to support the long-term positive effects of mentorship programs on depression symptomatology and quality of life. Community planners may be able to use study findings to design youth development programs that have long-term beneficial impacts on participants.

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## Dedication

This research study is dedicated to all the women around the globe, young or old, who find that they do not believe in themselves or think that no one believes in them. I am living proof that there is no glass ceiling that you cannot breakthrough! The sky is the limit if you do not give up on yourself and chase your dreams. “For the vision is yet for an appointed time, but at the end it shall speak, and not lie: though it tarry, wait for it; because it will surely come, it will not tarry.” Habakkuk 2:23.

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## Chapter 1: Introduction to the Study

Mentoring programs are one type of intervention that communities, schools, and faith-based organizations use in their work with youth at risk for mental health disorders. As researchers have noted, potential positive mental health outcomes can occur for emerging adults who enroll in a mentorship program as an adolescent in high school.

There is a gap in the literature, however, on the long-term mental health outcomes of mentorship programs, which was the focus of this study. More research is warranted on a person's enrollment in a mentorship program and its relationship with depression symptomatology and quality of life several years after the mentorship program has ended.

This chapter begins with a consideration of research showing that participation in mentorship programs helps to minimize mental health outcomes from past participants. An overview is provided of the connection between depression symptomatology, quality of life, and the involvement of a mentoring program. Following this overview, the study's purpose is offered along with the research questions and hypotheses. Then, a summary of Beck's (1976) theory of cognitive depression, which served as the study's theoretical foundation, is provided. The chapter also includes an overview of the research design, along with a list of key terminology. I explain the study's retrospective data collection approach to examining the significance of mentorship programs. The chapter concludes with a summary of key points and a transition to Chapter 2.

### **Problem Statement**

Depression is a debilitating mental health disorder that has the potential to affect an individual's lifespan adversely. Depression can affect the way in which a person interacts with family and friends, cause physical disorders, and change a person's temper (Moreh & O'Lawrence, 2016). A psychological disorder, it causes a person to have constant feelings of sadness and not want to do activities that used to make the individual happy (Moreh & O'Lawrence, 2016). The two main symptoms of depression, according to the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)*, are anhedonia, or the inability to feel pleasure, and hopelessness (American Psychiatric Association [APA], 2013). As noted in DSM-5, two other symptoms of depression are feelings of worthlessness and irritability in adolescents (APA, 2013).

Depression can affect the psychological well-being of individuals of all ages, especially adolescents. Adolescence is generally when a child is between the ages of 12 and 21 years old (Curry, 2014). Many individuals have an onset of depression during their adolescence, and most adults who have a long history of the disorder had an original episode during their adolescent years (Hankin et al., 2015).

Depression is a mental health disorder that has a classification of a category of disorders. Depression can also be known as an affective or mood disorder. Throughout the rest of this dissertation, depression is referred to as a mood or affective disorder. The most prevalent affective disorders among adolescents are depression, dysthymia, and bipolar disorder (Meadus, 2007). Affective disorders are a class of mental health issues



that can cause adverse outcomes. The unfavorable results of affective disorders can lead to issues such as substance use, delinquency, and impairment of social relationships (Aebi, Metzke, & Steinhausen, 2009). Depression is the most pathological disorder among youth between 10 and 20 years of age (Ciubara et al., 2015a). Depression in adolescents is often associated with underachieving in school, poor peer relations, and an increased risk of taking one's life (Low et al., 2012). Low et al. (2012) reported that daily life stressors such as a new extended family, divorce, a move from home, and a new school location are all triggers that can initiate an episode of depressive symptoms. Similarly, Ciubara et al. (2015b) noted that depression in adolescence is a disorder that can cause grave consequences for the emotional, interpersonal, and cognitive health of the young person. Ciubara et al. demonstrated that adolescents with a sudden or chronic traumatic life event were more susceptible to distress. This amount of suffering can lead to panic attacks, aggressive behaviors, and anxiety. Adolescents are more irritable when they experience depression as opposed to the adult population (Ciubara et al., 2015a). Thus, depression is a mental health disorder that should not be overlooked in adolescents, as it can lead to a more severe episode of depression in later years of their lives.

Socioeconomic status is a common reason why adolescents may develop symptoms of depression. Researchers have found, for instance, that adolescents from deprived areas are more likely to develop depression. Adolescents who reside in low-income urban environments have a greater risk of developing psychopathology, which includes depression (Ofonedu, Percy, Harris-Britt, & Belcher, 2013). Individuals from low-income families may experience more financial hardships due to a decrease in

socioeconomic status compared to their suburban counterparts with higher economic statuses (Schöllgen, Huxhold, Schüz, & Tesch-Römer, 2011). Adolescents from rural areas may also have drawbacks, such as limited access to resources, funds, and geographical limitations (Curtis, Water, & Brindis, 2011). The focus of this study was on the urban adolescent population. I decided to focus on this geographic, demographic group because of the additional risks faced by young people having low socioeconomic status and living in urban locations. These youth may encounter more mental and physical risks in their lives because they may have exposure to violence, gang involvement, and substance abuse use and lack financial stability in their families (Ofonedu et al., 2013).

Participation in a mentoring program may be effective in mitigating the risk of depression for urban adolescents. Adolescents from urban communities who are involved in mentorship programs are more likely to avoid becoming depressed due to their positive relationships with adults (Kogan, Brody, & Chen, 2011). The positive relationship with an adult from a mentorship program can enhance the social life of an adolescent at risk for depression. Mentorship programs were created to help youth at risk of mental health disorders develop into productive citizens in their neighborhoods. Mentorship programs have fewer costs to maintain than other types of programs and interventions, plus contribute to reducing delinquency in local communities (Miller, Barnes, Miller, & McKinnon, 2013). Positive outcomes such as fewer acts of delinquent behavior, although may vary in frequency, can occur from adolescents entering into mentorship programs (Rhodes & Lowe, 2008). The positive outcomes can also change depending on the

structure of the mentorship program (Rhodes & Lowe, 2008). Rhodes and Lowe (2008) noted that mentorship programs with different training timelines, educational goals, and duration of mentoring can vary and thus have an impact on outcomes. Time spent in the mentorship program can also influence the relationship between the mentor and mentee (Rhodes & Lowe, 2008). An aim of this study was to assist in closing a significant gap in the research about the benefits of mentorship programs for helping to reduce or eliminate depression in the adolescent population (Kogan et al., 2011).

Research shows that the positive outcomes of mentorship programs are due to the relationship and bonds that can form between the mentor and mentee. Mentorship programs have been found to be effective when students are matched correctly with the appropriate mentor (Little, Kearney, & Britner, 2010). Mentoring programs rely on the kindness of neighboring towns and warmhearted people (Miller et al., 2013). Similarly, Miller et al. (2013) noted that the central focus of mentorship programs is to give positive guidance to adolescents who may not have a positive adult in their lives. Mentorship programs have also gained popularity because the mentor-mentee relationship fosters a reduction in internal behaviors that may arise among individuals who develop depression symptoms, such as loneliness and social withdrawal (Miller et al., 2013). The positive outcomes of mentorship programs not only assist with providing social activities for at risk adolescents, but they also assist with their social and emotional well-being. Hurd, Zimmerman, and Reischl (2011) suggested that mentorship programs can also be effective in minimizing internal symptoms such as depression in adolescents due to the supportive roles that the mentors play in the lives of these youth.

I conducted this study to examine the mental health outcomes of mentorship programs years after the mentorship program has ended. Depression can become a mental health disorder that is detrimental during any part of a person's life (Ciubara et al., 2015). In this study, though, I collected data from current emerging adults who enrolled in a mentorship program as an adolescent while in high school. I also examined current depression symptomatology and quality of life. Depression and quality of life rates were explored to compare if the mentorship program that participants were enrolled in while they were an adolescent in high school had a beneficial effect on present depression symptomatology and quality of life.

An emerging adult who was a participant in a mentorship program as an adolescent in high school may have better present-day mental health outcomes. Most mentorship programs are known for assisting in minimizing or alleviating behavioral outcomes, such as delinquency and substance abuse (Rhodes & Lowe, 2008). There is a paucity of information about the benefits of mentorship programs and mental health outcomes several years later. I aimed to investigate the positive outcomes of an adolescent having a positive adult attachment in his or her life by examining the emerging adulthood population. Most research on the topic of emerging adulthood, which is the period of life of an individual between adolescence and young adulthood, is becoming a prominent subject among investigators (Hill, Lalji, van Rossum, van der Geest, & Blokland, 2015). The topic of emerging adulthood is sought after due to the postponement of this group divulging into the traditional roles of parenting and finding a life partner (Hill et al., 2015). Research about the emerging adulthood population agrees

that it can be a stage of transition for a young person. Where some of the research differs is the age of the emerging adulthood population. Emerging adulthood is a stage in an individual's life between the ages of 18 and 25 (as cited in Mawson, Best, Beckwith, Dingle, & Lubman, 2015). There is research that extends that age range to 30 years old. As noted in Yu et al. (2016) the emerging adulthood population has two stages; the first stage is between the ages of 18 and 24 which follows the years after high school, while the second stage is the span in which an individual would endorse more traditional roles between the ages of 25 and 30 (Yu et al., 2016). Similarly, Hill et al. (2015) wrote that the emerging adulthood generation is between the ages of 18 and 29. It is an era that allows individuals to have more adult responsibilities, such as more flexibility from parents and less stringent legal limitations (Hill et al., 2015). Emerging adulthood is a duration in which an individual can have more time to explore what his or her life choices will be for the future. For the purposes of this research study, emerging adults were between the ages of 18 and 30.

The term *emerging adults* were the target population that was presented throughout the study. The emerging adult population is significant because it is a transitional developmental period in a young person's life that can be difficult. The emerging adult developmental period can be difficult because an individual may be trying to find his or her self-identity, a career, and continued social support from family and friends (Settersten & Ray, 2010). The emerging adult population is a target for various mental health disorders such as depression.

Emerging adulthood can be a time in a person's life where life stressors can lead to symptoms of depression. An emerging adult that has a bout with depression is at risk for having another episode later in life (Kenny & Sirin, 2006). Almost a quarter of the emerging adult population is affected by depression. Life stressors such as drug abuse, job satisfaction, and financial instability are all common reasons as to why this population suffers from depressive symptoms (Martínez-Hernández, Carceller-Maicas, DiGiacomo, & Ariste, 2016). Even though this population is more likely to have depressive symptoms, they are the least likely to obtain mental health treatment and instead make use of social networks to help alleviate symptoms (Martínez-Hernández et al., 2016). Emerging adults who have lasting social relationships are more likely to talk to about any disorders they may be having in their present life situations that cause stress in their lives (Martínez-Hernández et al., 2016). The emerging adult population is most likely to seek assistance from current social support systems rather than mental health professionals for depression symptomatology.

The mentor-mentee relationship has the potential to make a notable change in the life of an adolescent. The experiences of the relationship between the mentor and mentee bond may help repair emotional disorders that an adolescent may have encountered in the past with an unhealthy attachment to a caregiver or other adult figure (Hurd & Zimmerman, 2014). The mentor-mentee relationship has an association with youth, having reduced consumption of alcohol and symptoms of depression (Chan et al., 2013). The mentor-mentee relationship that can occur through a mentorship program can be an effective bond that can enhance the development of an adolescent.

The outcomes of a mentorship program assist with the positive development of an adolescent who may be at-risk for poor academic and psychological outcomes. In contrast, Rhodes and Lowe (2008) asserted that the benefits of the impact on adolescents about the reduction of delinquency and reduction in the use of illegal substances are almost non-significant, with an effect size in comparison to Cohen's *d* standards of .02 and .05, respectively (Rhodes & Lowe, 2008). Miller et al. (2013) noted that there are many benefits to mentorship programs, such as helping youth gain a positive self-image, reducing delinquency and use of illegal substances, and helping with personal relationships with peers and family (Miller et al., 2013). Rhodes and Lowe (2008) also reported that the benefits could change depending on the mentorship program structure and the length of the relationship between the mentor and mentee. The goals and organization of a mentorship program are essential for positive outcomes for at-risk youth.

Data collected for the study was used to examine the current depression symptomatology and quality of life outcomes of emerging adults who enrolled in a mentorship program while he or she was an adolescent in high school. I sought to explore emerging adults' mental health outcomes presently to examine if the mentorship program in which they were enrolled in at the time when they were an adolescent has made a positive impact on their current mental health status. Several life stressors, such as searching for a job or moving away from childhood home to live on his or her own, can occur when a youth enters adulthood (Kogan et al., 2011). The pressures of life can cause emotional distress that may cause a person to choose paths that hinder psychological

growth, such as substance abuse (Ritchie et al., 2013). Emerging adulthood can be a difficult stage of life, and the help of a positive adult during adolescence can make all the difference in his or her life to help buffer the disorders that may occur.

The period in the life of an emerging adult can have many emotional unknowns. Research has shown that emerging adulthood can be a time for an individual that seems confusing, stressful, and uncertain about where life will take them (Ritchie et al., 2013). Emerging adulthood is also a time when people may engage in high-risk behaviors such as substance abuse due to life stressors (Ritchie et al., 2013). Life stressors can include finding or keeping a job, loss of a loved one, finding a place to live, or lack of parental or adult support (Ritchie et al., 2013). As emerging adults try to navigate their world, they gain more independence from parents and may experience less support from others as they try to find their identity (Kogan et al., 2011). The lack of social support throughout emerging adulthood may exacerbate external disorders such as aggressive behavior and emotional turmoil because an individual may not find a resolution to their present situations (Kogan et al., 2011). A positive adult attachment can make a difference in the psychological outcomes of an emerging adult's life.

Job satisfaction and substance abuse were chosen as covariates in the study because they are common stressors that emerging adults experience (Ofonedu et al., 2013). These variables can be common contributing factors as to why adolescents and emerging adults may experience internalizing disorders such as depression.



### **Purpose of the Study**

The purpose of this quantitative study was to compare depression symptomatology and quality of life rates among emerging adults who enrolled and emerging adults who did not enroll in a mentorship program as an adolescent while in high school. I wanted to investigate the gap in the literature in which prior research has not examined the long-term impact of having been mentored as an adolescent on emerging adults' depression symptomatology and quality of life. Rhodes and Lowe (2008) performed a meta-analysis of the outcomes of mentorship programs. Is found that most mentorship programs examined the quality of the mentor-mentee relationship from a minimum of 6 months to up to 18 months (Rhodes & Lowe, 2008). Due to the outcomes of this study, I chose to compare depression symptomatology and quality of life rates among emerging adults who were enrolled in a mentorship program in high school, and emerging adults who were not enrolled in a mentorship program as an adolescent while in high school.

The study performed has the potential to close the gap in the literature about the positive outcomes that a mentorship program can have on the life of an at-risk adolescent's mental health. Positive mental health outcomes may extend throughout emerging adulthood and impact current depression symptomatology or quality of life (DeWit et al., 2016a). Most research on mentorship programs has focused on the behavioral consequences of mentorship programs for a brief time after the program ends (Rhodes & DuBois, 2008). Significant advantages may occur when investigators examine mentorship programs with mentor-mentee relationships for longer periods of time after

the program finishes (Rhodes & Lowe, 2008). Mentorship programs have the potential to create positive outcomes in the life of an at-risk adolescent, such as reporting an increase in psychological well-being, lower depression symptomatology, and higher quality of life rates.

Research studies involving mentorship programs examined outcomes shortly after the duration of the program. Outcomes that are studied immediately after a youth has left a program may not last over time (Rhodes & Lowe, 2008). I aimed to explore more about mentorship programs and their outcomes by exploring depression symptomatology and quality of life in individuals who enrolled in the mentorship program of Northern New Jersey (MPNNJ) and individuals who did not enroll in the MPNNJ program. As stated earlier in the chapter, there are many benefits to mentorship programs, as the literature has displayed that they have the potential to minimize internal mental health disorders such as depression. The supportive quality of a mentor-mentee relationship from previous research has shown that depression is one internal behavior that can be in reduction when a caring, supportive adult is in the life of an at-risk youth (Haddad, Chen, & Greenberger, 2011).

I examined the MPNNJ program as an intervention to explore if depression symptomatology was lower in emerging adults who enrolled in the program while they were an adolescent in high school versus emerging adults who did not enroll in the MPNNJ mentorship program while they were an adolescent in high school. I also examined the MPNNJ program to investigate if the quality of life was higher in emerging adults who enrolled in the program while they were an adolescent in high school versus

emerging adults who did not enroll in the MPNNJ mentorship program while they were an adolescent in high school. An exploration was performed of the national community-based mentorship program of the Northern New Jersey (MPNNJ).

### **Research Questions and Hypotheses**

Research Question 1: Is there a significant difference in depression symptomatology between emerging adults who enrolled in a mentorship program as an adolescent in high school and emerging adults who did not enroll in a mentorship program as an adolescent in high school, while controlling for job satisfaction and substance abuse?

*H<sub>0</sub>1*: There is no significant difference in depression symptomatology between emerging adults who enrolled in a mentorship program as an adolescent in high school and emerging adults who did not enroll in a mentorship program as an adolescent in high school, while controlling for job satisfaction and substance abuse.

*H<sub>a</sub>1*: There is a significant difference in depression symptomatology between emerging adults who enrolled in a mentorship program as an adolescent in high school and emerging adults who did not enroll in a mentorship program as an adolescent in high school, while controlling for job satisfaction and substance abuse.

Research Question 2: Is there a significant difference in quality of life between emerging adults who enrolled in a mentorship program as an adolescent in high school and emerging adults who did not enroll in a mentorship program as an adolescent in high school, while controlling for job satisfaction and substance abuse?

$H_02$ : There is no significant difference in quality of life between emerging adults who enrolled in a mentorship program as an adolescent in high school and emerging adults who did not enroll in a mentorship program as an adolescent in high school, while controlling for job satisfaction and substance abuse.

$H_a2$ : There is a significant difference in quality of life between emerging adults who enrolled in a mentorship program as an adolescent in high school and emerging adults who did not enroll in a mentorship program as an adolescent in high school, while controlling for job satisfaction and substance abuse.

I investigated three variables. The first variable was the two-level independent variable of mentorship programs. The first level of the independent variable was the emerging adults who enrolled in the MPNNJ mentorship program while in high school. The second level of the independent variable was the emerging adults who did not enroll the MPNNJ mentorship program or any other mentorship program while in high school. The second variable, which was the first dependent variable, was depression symptomatology. I used the Simplified Beck Depression Inventory Scale (BDI-S19; Sauer, Ziegler, & Schmitt, 2013) to measure depression symptomatology in the participants in the study. The second dependent variable was quality of life. I used the Quality of Life Scale (QoL; Gill, Reifsteck, Adams, & Shang (2015) to measure the quality of life of the participants in the study. The two covariates for the research study were job satisfaction and substance abuse. Time enrolled in the mentorship program was to be added as a covariate if found to be a factor in the final SPSS analysis. I included the

covariates as they can contribute to why participants for the study may self-report (Radloff, Rohde, Stice, Gau, & Marti, 2012).

### **Theoretical Framework**

Beck's (1976) cognitive theory of depression was the foundational theory for the study. Beck's cognitive theory of depression explains how the cognitive processes of the mind are negative forming. The cognitive processes are recurrent and can cause an individual to have schemas and thought patterns that further exacerbate the disorder over the lifetime of the person (Auerbach, Webb, Gardiner, & Pechtel, 2013). The comprehension of behaviors that cause depression can enhance professionals' understanding of the disorder so that appropriate interventions are in place to help minimize or eliminate the harmful effects of the mental health illness (Auerbach et al., 2013). Beck's theory provides an explanation of specific processes in the mind that can cause a young person to develop depression.

Beck's cognitive theory of depression is a diathesis-stress model that has empirical evidence to support its claim about how depression can manifest in children and adolescents. The cognitive vulnerability-stress perspective has a theoretical basis that is relevant for comprehending how adolescents are susceptible to depression (Abela et al., 2011). The foundation of diathesis-stress models is that depression is due to the interrelation between the vulnerable cognitive characteristics (the diatheses) and particular elements of the environment. As an example, life stressors such as financial instability that activate such cognitive vulnerabilities into action and cause emotional suffering (Abela et al., 2011). There are several cognitive vulnerable stress models of

depression, but for this dissertation, the focus was on Beck's (1976) cognitive theory of depression.

The theoretical basis of Beck's (1976) model is that there are four elements in need for depression to develop. The four elements are: (a) schemas, (b) errors of cognition, (c) a trio of logic, and (d) thinking that is automatic (Pössel & Thomas, 2011). Schemas have a basic definition of being hardwired genetic beliefs or values of life knowledge that allows a person to create new data (Seeds & Dozois, 2010). Errors of cognition are when a person has a distorted negative view of the future, world, and that he or she has a moral or natural defect (i.e., an opposing view of self; Pössel & Thomas, 2011). The distorted views make up the trio of logic (Pössel & Thomas, 2011). Finally, thinking that is automatic is non-feeling mind events that are the most common reasons as to the physical, psychological, and motivations of depression (Pössel & Thomas, 2011). Carter and Garber (2011) reported that there is empirical evidence that supports the cognitive model of depression for children and adolescents. Kercher and Rapee (2009) performed a study about the pathway of depression in adolescents from the cognitive diathesis-stress model. The study had 756 adolescents and the investigators showed that the cognitive diathesis-stress model displayed the path in which adolescents were vulnerable to depression due to situational stressors that can lead to repetitive cognitions.

Depression symptoms in adolescents can be activated by a series of cognitive and environmental events that can cause a young person to have emotions and thinking that hinder his or her psychological well-being. Depression is a mental health disorder that

can affect the life of a young person at an early age if he or she does not have their emotional, social, and physical needs met. As noted by Seeds and Dozois (2010), Beck's schemas of depression start early in the life of a child in response to negative life events. The attachment style during the infant and childhood stages of development is generally where the foundation for feelings and memories (Seeds & Dozois, 2010). During early disadvantageous events, such as neglect, psychological or physical trauma, and harsh parenting, the child may develop conflicting views about themselves, the world, and their future through schemas (Seeds & Dozois, 2010). For individuals who create self-schemas that revolve around socialization and connection with others, adverse life stressors that pertain to interpersonal matters such as being rejected by peers or family members may mean devastation for a young person (Seeds & Dozois, 2010). The cognitions lay latent until a life stressor occurs and activation begins. The diathesis-stress model is an empirically-based theory that provides information as to how depression symptomatology can affect the cognitions of adolescents.

Beck's cognitive theory of depression is a model that explains how and why an adolescent may react in environments that are stress-provoking. According to the diathesis-stress model, the schema of self-dictates how a person lives and defines a tense situation (Seeds & Dozois, 2010). Not everyone who experiences a negative life stressor will develop depression or depressive symptoms, as a predisposed cognitive vulnerability must be present for symptoms to become an issue (Seeds & Dozois, 2010). The comprehension of behaviors that cause depression can enhance professionals' understanding of the disorder so that appropriate interventions are in place to help

minimize or eliminate the harmful effects of the mental health illness (Auerbach et al., 2013). Depression is a mental health disorder that not only affects adults but can also have adverse ramifications for adolescents.

I aimed to show in the research study the outcomes of the mentorship program of Northern New Jersey (MPNNJ) mentorship program. As stated earlier in this chapter, the outcomes can be of use to help minimize depressive symptoms in an emerging adult because of the positive adult attachment in their life as an adolescent while they were in a mentorship program. The theory of mentorship programs is that a person has a trusting relationship with a positive adult that has a foundational basis of empathy. The relationship can foster emotions that are positive about their social development and alleviate external behaviors (Bodin & Leifman, 2011).

### **Nature of the Study**

The research design that best answered the research question was a quantitative research methodology. In quantitative research, an investigator wants to test theories through looking at relationships with different variables (Bernerth, Cole, Taylor, & Walker, 2018). There are two types of quantitative research designs: experimental and nonexperimental (Sousa, Driessnack, & Costa Mendes, 2007). For this study, a nonexperimental causal comparative design was used. A further description of this design is explained in Chapter Three of this dissertation. I used three variables in the study. The first variable was a two-level independent variable of the MPNNJ mentorship program. The first dependent variable was depression, while the second dependent variable used was quality of life. There were also two covariates of job satisfaction and substance



abuse. Time enrolled in the mentorship program was considered after SPSS analysis. The following four instruments were used to measure the domains of depression: The Job Satisfaction Scale (JSS; Ellwardt, Labianca, & Wittek, 2012), the Quality of Life (QoL) Survey Version 2 (Gill et al., 2011), the BDI-S19 (Sauer et al., 2013), and Substance Use Measures (SUM; Knyazev, Slobodskaya, Kharchenko, & Wilson, 2004).

Participants retrospectively recalled their enrollment in a mentorship program or decision not to enroll and how it related to their present depression symptomatology or quality of life outcomes. One group of emerging adults were enrolled in the Union County MPNNJ mentorship program as an adolescent while in high school. The second group of emerging adults were not enrolled in the MPNNJ mentorship program or other mentorship program as an adolescent while in high school. The demographics for each group are provided in Chapter Four for each group of participants. Chapter Four provides a description of the groups' range of socioeconomic status, age range, and demographic location. The educational background is also detailed in the discussion in the results section of the study. The literature provides information that mentorship programs may be helpful in minimizing internal behaviors such as depression and anxiety and may increase the psychosocial well-being of individuals that participate in them. The comparison group was peers who had similar demographic backgrounds and did not enroll in the MPNNJ mentorship program as an adolescent while in high school. The populations for both groups were recruited from similar environments. Individuals from the MPNNJ program (control group) and experimental group participants were recruited from low-income urban areas in Northern New Jersey.

## Definitions

*At-risk youth:* Young people who have a high risk of succumbing to the perilous environmental factors that surround their communities, such as substance abuse and continued low-incomes, throughout their lifespan (Kingston, Mihalic, & Sigel, 2016).

*Community-based mentorship programs:* Programs that are situated outside of school and in faith-based settings for the purpose of this study. They provide a vast amount of services for mentored youth where they can develop personally and socially with others (Larose, Savoie, DeWit, Lipman, & DuBois, 2015). The activities of a community-based mentorship program can include but are not limited to tutoring services, social support, and other bonding activities (Larose et al., 2015).

*Emerging adulthood:* A period of development for a young adult between the ages of 18 and 29 which is marked with a higher probability of challenges, such as self-identity disorders and instability (Celen-Demirtas, Konstam, & Tomek, 2015).

*Mentorship programs:* Programs that are created as an incentive for young people to develop into productive individuals in the societies in which they live (Dowd, Harden, & Beauchamp, 2015). The aim of such programs is to assist youth in achieving positive outcomes in educational, social, and emotional areas (Dowd et al., 2015).

*School-based mentoring:* Mentoring programs that have goals of assisting teenagers with meeting educational goals to have a successful academic career post-high school (Karcher, Kuperminc, Portwood, Sipe, & Taylor, 2006).

### **Assumptions**

I conducted with the following assumptions:

- Study participants would understand and answer questions, as the surveys had a minimum 7th-grade reading level.
- Participants would answer the surveys openly and honestly.
- The hypotheses were relevant to increase the understanding about mentorship programs, positive adult attachments, and correlations between depression symptomatology and the quality of life.
- The BDI-S19 and demographics questionnaire would provide reliable and valid measurements of the study variables.
- The demographic survey which I developed would provide reliable and valid measurements of the study variables.
- The research methodology underlying the causal comparative ex post facto research design was accurate.
- Limitations of internal validity about the ex post facto research design with regard to the independent and dependent variables of the study would be provided.

### **Scope and Delimitations**

The scope of this study was limited to a quantitative study using data from participants with involvement in a mentorship program in Northern New Jersey. I collected data from participants who met the criteria of being an emerging adult between the ages of 18 years and 30, having entered a mentorship program while in high school

between 7th through 12th grade. The participants in the study were obtained from a convenience sample, which limited the generalizability of the study results because participants who agreed to take part in the study were a group from a mentorship program. All participants completed four self-report measures (BDI-S19, JSS, QoL, and SUM) and a demographic questionnaire. The theoretical foundation of this research was based on Beck's cognitive theory of depression.

No assumptions were made about previous or future episodes of depression for either comparison group in the study. I did not know if a participant experienced an episode of depression. A comparison was made between depression symptomatology among emerging adults who enrolled in the MPNNJ mentorship program versus depression symptomatology among emerging adults who did not enroll in the MPNNJ mentorship program. The emerging adults from the comparison group were participants who did not enroll in the MPNNJ program.

Mentorship programs are interventions that are known for having positive behavioral outcomes for adolescents. The QoL measure was added to the study to account for the positive outcomes, as there was no history of mental health for participants in the study. A demographic questionnaire was provided that addressed the length of time in participation with the MPNNJ mentorship program. The duration of the time was used as a variable in SPSS and charted. The length of time was to be considered as a correlation of length of time with either of the two dependent variables that would warrant its use as a covariate if it was needed.

### **Limitations**

There are several ways of gathering data about a research project. The primary method of testing theories or gathering information in the social sciences about a phenomenon or natural occurrence is through research (Kostewicz, King, Datchuk, Brennan, & Casey, 2016). Data collection is a valuable form of learning about the environment, processes, and how individuals function in the world. An investigator can gather information about a topic through several modes of communication. An investigator can reach potential participants through handwritten paper and pencil survey questionnaires, through telephone calls, or in recent times the internet. An internet-based or web-based questionnaire can be cost-effective and quick form of gathering of information. Researchers who choose to gather participant responses from the internet can obtain information from respondents in real-time and add additional features, such as uploading of videos or pictures (Revilla, Ochoa, & Turbina, 2017).

Although easy to administer, there are certain limitations that researchers should be aware of when using internet research methods. The first limitation of this internet-based research study was that there was no personal interaction with the participants. I had no prior knowledge about the participants while they participated in the study, nor was there a personal relationship after the study was performed. As noted in Farrell and Peterson (2010) a limitation of internet research is that investigators using the internet may face an obstacle of not being able to establish rapport with the participants in the study. The second limitation of this internet-based study was that respondents needed to be motivated to start and finish the questionnaire. Participants who are not engaged in an

internet-based study may not answer all the questions, leave the survey incomplete, or provide misleading information. Participants who provide misleading information about age, educational status, or personal demographics can cause a researcher to have inaccurate results (Kılınç & Fırat, 2017). Researchers who use internet-based studies need to engage potential participants, as they are the primary reason for I to realize success of the study with precise results (Kılınç & Fırat, 2017). The final limitation in this study pertained to the internal validity threats with performing a causal comparison ex post facto research design. The main limitation of an ex post facto design is the loss of control of external variables that can possibly impact the distinctions between the groups, such that they afford only a minor clue about the significance of the association (Schenker & Rumrill, 2004). In short, not having the ability to mold the independent variable or arbitrarily assign participants means the investigator cannot make a conclusive decision that the independent variable influenced the dependent variable. In an ex post facto design, groups being compared are different conducive to that specific dependent variable (Schenker & Rumrill, 2004).

### **Significance**

The performance of this study was significant because the research plan may have led to the identification of positive outcomes in mentorship programs. Detailed below are several points of significance.

- More mentorship programs can be implemented in schools and communities to help foster academic, emotional, and social success.

- New knowledge about mentorship programs has the potential to be beneficial for all involved.
- Researchers, practitioners, and other service-oriented professionals may find this study to be informative.
- The information in the study may provide researchers with empirical data for the importance of mentorship programs in the lives of youth.
- Practitioners may use this information in their practice as an alternative intervention for their young patients.
- This report may show the importance of active adults in the lives of adolescents.
- Practitioners may promote the importance of adult attachments for the maintenance of mental health wellness in adolescents.

The positive outcomes of mentorship programs have the potential go beyond high school and into emerging adulthood and sustain throughout the entire lifespan of the individual.

### **Implications for Social Change**

Social change is about making positive advancements in the lives of the people in communities to make their lives better. The social change implications for this study may highlight the psychological value of mentorship programs in schools, communities, and faith-based organizations. The study sought to add empirical evidence to support the significance of mentorship programs as a positive psychological intervention in which clinicians, school administrators, and community leaders advocate for the importance of a mentorship program in the life of an at-risk adolescent. Positive social change has the

potential to occur because when you help one generation through mentorship; it can be passed on to others for the betterment of society.

### **Summary**

The purpose of this quantitative study is to compare depression symptomatology and quality of life rates among emerging adults who enrolled and emerging adults who did not enroll in a mentorship program as an adolescent while in high school.

Chapter One introduces the study by explaining the background of the project, research questions and hypotheses, and research methods. It also lays out the objectives and significance of this study, which was to provide information about the significance of mentorship programs, positive adult attachments, and rates of depression among at-risk adolescents, for use in implementing appropriate interventions.

Chapter Two provides a review of relevant literature in this area, focused on research into the significance of mentorship programs, the components that cause depression, and on the factors, that minimize depression symptomatology, such as a positive adult attachment.

Chapter Three describes the proposed research design, instruments, and data collection and analysis procedures for investigating the relationship between the study variables. The methodological limitations are also noted.

Chapter Four provides a discussion of the results, while Chapter Five provides a discussion of the results in terms of the extant literature, followed by the limitations, and recommendations for future practice.



## Chapter 2: Literature Review

### **Introduction**

In this chapter's literature review, I review the significance of mentorship programs in the lives of at risk adolescents. There is a vast amount of research about what interventions work best for at-risk teens (Rhodes & Lowe, 2008). I explore six central themes that pertain to the impact of mentors on the psychological well-being of at-risk adolescents: the benefits of mentorship programs, the significance of types of adult attachments in the life of adolescents, the link between mentorship programs and the mental health of adolescents, depression and adolescents, quality of life, and mentorship programs and depression symptomatology in adolescents. In this review, the primary focus is on the impact of mentorship programs and the mental health outcomes of at-risk adolescents. I begin the chapter by discussing the search strategy I used to locate literature.

### **Literature Search Strategy**

The research studies that were chosen for this literature review focused on the connection between strong healthy nonparental attachments, insecure attachments, mentorship programs, quality of life, and depression symptomatology in adolescents. I used several Internet databases, which I accessed from Walden University Library, to locate peer-reviewed scholarly articles for my research: Academic Search Complete, ERIC, PsycARTICLES, PsycBOOKS, PsycINFO, and SocINDEX. I also used Google Scholar in the literature search. In selecting the articles, I decided to search for articles published within the past 17 years (i.e., from 2001 to 2018). This time frame was chosen

to ensure current research information. The keywords used to conduct the search were *adolescents, depression, attachments, insecure, secure, mentors, mentorship programs, positive, emerging, quality of life, and adults.*

### **Literature Review Related to Key Variables and/or Concepts**

#### **Benefits of Mentorship Programs**

There are many advantages for youth who enter a mentorship program. Mentorship programs provide a way in which adolescents can have an active relationship with a nonparental adult. The mentor-mentee relationship provides a need that is not being fulfilled in their current relationships with parents or peers (Hurd & Sellers, 2013). The mentee can talk with the mentor about sensitive subjects such as romantic relationships or sexual encounters without fear of chastisement (Sterrett, Jones, McKee, & Kincaid, 2011). In mentorship programs, youth can bond with an adult, improving their social interactions, emotional connections, and school outcomes (Hurd & Sellers, 2013). For these reasons, a mentor can become a significant adult attachment in the life of an adolescent. Thus, the quality of a mentor-mentee relationship is a significant factor in the success of mentorship programs.

#### **Main Functions of Mentorship Programs**

Community and school leaders have prioritized finding intervention or prevention activities for troubled youth in the United States as a means of minimizing destructive behaviors, such as drug use, violence, and not attending school. The intervention they have found most successful is mentorship programs. Mentorship programs have piqued the interest of policy stakeholders, neighborhood volunteers, and administrative workers

as a deterrent for delinquent behaviors among youth (Tolan, Henry, Schoeny, Lovegrove, & Nichols, 2014). These programs allow a caring adult and at risk teen to meet and form a relational bond that may not have been made if not for the intervention (Hamilton et al., 2006). An added incentive of mentorship programs is that they require minimal cost maintenance to provide adult attention and emotional support to a troubled youth (Brown et al., 2009). Mentorship programs are, therefore, a strategic tool to assist in bringing adults into the lives of at-risk youth to make an impact that can lead to positive social, emotional, and psychological development outcomes.

### **Challenges of Mentorship Programs**

A youth or adolescent from an at-risk population is not meeting society's categories of achievement in several areas (Kremer, Maynard, Polanin, Vaughn, & Sarteschi, 2015). An at-risk youth may be underachieving in terms of socioeconomic status, academic achievement, and family structure (Kremer et al., 2015). An at-risk youth is usually from an ethnic minority background or engages in substance abuse or truancy (Kremer et al., 2015). As noted in (Lucier-Greer, O'Neal, Arnold, Mancini, and Wickrama, 2014) at-risk youth may experience challenges such as social isolation due to strained family relationships which may lead to the individual having negative emotions about the future which may cause the youth to have depressive thoughts. The depressive thoughts adolescents may have due to social isolation can lead to destructive behaviors such as substance use or academic failure (Lucier-Greer et al., 2014). Mentorship programs are interventions which assist with providing an adolescent at risk for destructive behaviors can meet a caring adult (Coller & Kuo, 2014). Although mentorship

programs can be an intervention for at-risk youth, assessing the magnitude of a mentor's effect on the life of youth can be complex. Measuring how well a program is doing depends on the objectives, type of program, and activities that are at the core of the program (Karcher, Herrera, & Hanson, 2010). Due to various programs and goals, it is difficult to measure how well a program is meeting its objectives (Karcher et al., 2010). Similarly, mentorship programs' mental health outcomes are measured immediately after the program ends (Rhodes & Lowe, 2008). The quality and duration of relationships are significant factors in these outcomes, and some mentors may not be aware of the time and effort it takes to maintain a bond with an at-risk adolescent (Tolan et al., 2014). Thus, the type of attachment the mentor has with the mentee plays a role in the effectiveness of the mentorship program.

### **Types of Mentoring Programs**

Mentorship programs vary by size, structure, definitions, and organizational design. Due to the variability of the programs, it is necessary to break down how programs are organized and function according to their goals and objectives (Karcher et al., 2006). The plethora of mentorship programs can be an asset or a limitation because it raises the difficulty of how to measure the program's effectiveness (Karcher et al., 2006). In this section of the literature review, I categorize the different types of mentorship programs and discuss their different agendas. Although I classified the types of mentorship programs, it is important to note that they can coincide in design and not be mutually exclusive in how they function. Hamilton et al. (2006) found, for instance, that faith-based services could support youth development organizations and vice versa.

Mentorship programs vary in each organization and have diverse contexts throughout communities.

**School-based mentorship programs.** School-based mentoring is performed at locations where youth obtain an education. School-based mentorship programs have an advantage compared to other types of mentoring programs in that they provide feasible access to both mentors and mentees (Karcher et al., 2006). These programs have other great advantages that can enhance social relationships among mentees. In addition, they typically are implemented during normal school hours for at least 1 hour during a regular school week (Karcher et al., 2006). They are formal in that they are positioned to have scheduled meetings and have a primary focus of educational success, as they target youth who experience hardships with academics (Karcher et al., 2006). Teachers who are a part of a school-based mentorship program are adults whom youth can admire, become a confidant in, and receive advice with proper guidance (Hamilton et al., 2006). Through support from school-based or afterschool programs, mentor-mentee relationships can deflect obstacles to adolescence such as caregiver maltreatment (Bulanda & McCrea, 2013). Such programs can foster social and emotional support for an at-risk adolescent.

**Community-based mentorship programs.** My primary focus was on community-based mentorship programs, particularly the MPNNJ program because of the organization's mission and vision about developing at-risk youth (Carruthers & Busser, 2000). Community-based mentorship programs, although they vary in organization, style, and tasks for youth, have a primary goal of assisting with the social, emotional, and psychological well-being of at-risk youth (Larose, Savoie, DeWit, Lipman, & DuBois,

2015). There is insufficient empirical evidence in the literature that shows direct correlations between depression symptomatology and long-term outcomes with youth (Rhodes & DuBois, 2008). Community-based mentorship programs differ from school-based mentorship programs in terms of their goals and objectives. Community-based programs approach the mentor-mentee relationship from a program youth development (PYD) strategy. A PYD strategy originated from judiciary and non-judiciary agencies to encourage vulnerable and common young people (Ramsey & Rose-Krasnor, 2012). The tenets of a PYD program are to promote competence, endurance, and self-identity (Hamilton et al., 2006). PYD programs offer youth a chance to educate themselves as well as build attributes and honorable individualities (Ramsey & Rose-Krasnor, 2012). Community-based mentorship programs provide social relationships, strong organization, and a safe place for mentees to integrate kinship, educational, and neighborhood endeavors (Greene, Lee, Constance, & Hanes, 2013). Youth who participate in community-based mentorship programs, generally meet once a week between 1 to 4 hours for at least 1 year (Larose et al., 2015). Some examples of community-based mentorship programs are The Boys and Girls Club of America, a national community-based PYD organization created for the betterment of young people (Anderson-Butcher, Newsome, & Ferrari, 2003). It is one of the oldest and leading organizations in the country, with nationwide membership of over 4 million youth in over 4,000 locations (BGCA, 2016).

Youth development organizations serve an abundance of youth across the country from various demographic areas, with a focus on underprivileged youth who reside in

urban areas with low-income households (Hamilton et al., 2006). Moreover, they are designed to help adolescents gain the necessary skills in order to have a productive adulthood (Hamilton et al., 2006). YDOs' goals are to provide youth with social companionship through mentors who serve as role models to deter adolescents from outside influences, such as drugs, violence, and lives of crime (Hamilton et al., 2006). The goals of a successful mentorship program allow for youth to develop positive attributes that make them an asset to society. An organization that has a clear vision for the youth in which it serves may be more able to instill positive attributes in at-risk youth. The MPNNJ is an organization that has core values which assist in the betterment of youth throughout local communities.

The MPNNJ organization mission is to meet the needs of an at-risk youth via six specific objectives. The objectives are as follows: (a) to have the young person appreciate the arts of diverse cultures, (b) to encourage youth to have positive social relationships and maintain academic success, (c) assist with life challenges of a personal nature, (d) assist with the maintenance of health and physical fitness, (e) help provide youth with a sense of leadership and community, and (f) instill a love for the environment in which they reside in (Carruthers & Busser, 2000). The MPNNJ organization mission is to prevent youth from joining gangs and having unplanned teen pregnancies, and to deter youth from participating in other detrimental activities, such as delinquency and substance abuse (Anderson-Butcher et al., 2003). Although scientific evidence has shown that there is a relationship between a mentor-mentee and depression, this relationship is based mainly on short-term studies (Brown et al., 2009). One limitation of mentorship

programs is that researchers usually examine behavioral outcomes such as substance abuse, delinquency, and aggressive behaviors. The goal of this study was to provide empirical support for the outcomes of mentorship programs and mental health such as depression symptomatology.

**Faith-based mentorship programs.** Religious or faith-based organizations have a foundational concept that revolves around a collection of people's personal beliefs. The definition of religion is a complex term that is made up of an individual's values, identity, and customs (Rhodes & Chan 2008). Throughout this literature review, the term *faith-based mentorship programs* will be used. Faith-based mentorship programs make considerable contributions to youth in the communities in which they reside in. The social implications of a faith-based mentorship program can provide added positive ramifications for amicable relationships to occur (Erickson & Phillips, 2012). The helpful entity of a faith-based location makes it more probable that emotional bonds will form in a warm and friendly setting (Erickson & Phillips, 2012). A faith-based mentorship program is another type of program that could enhance the life of an at-risk youth.

A faith-based agency provides youth with adults who want to help others through their committed spiritual worldview (Rhodes & Chan, 2008). An example of a faith-based mentorship program is Project RAISE, which has a religious sponsor based in Maryland (Hamilton et al., 2006). The mentors involved in this program make a commitment to the program that lasts over 6 years (Hamilton et al., 2006). A faith-based group is a representation of an extended group of colleagues, associates, and comrades who mold and encourage the behavior, education, and spiritual outcomes of the youth



they encounter (Rhodes & Chan, 2008). Faith-based mentorship programs can enhance the social and spiritual wellbeing of adolescents.

### **History of Youth Development Organizations**

The development of YDOs has been beneficial in assisting with the cultivation of at-risk youth and the emotional, social, and psychological formation of their identities. The goal of most YDOs is to change the idea that troubled youth are worthless and should be forgotten (Jackson, 2014). The intent of YDOs is to promote healthy relationships with positive adults and young people to assist with building robust and lasting bonds that enhance youth development (Davidson, Evans, & Sicafuse, 2011). The formation of YDOs was to help foster youth and become a place where they can grow to develop their positive attributes with the assistance of a caring adult (Crocetti, Erentaitė, & Žukauskienė, 2014). Diestro (2012) found that youth can begin to form individual connections with adults through daily activities that enhance their core personal values, minimize adverse behaviors, and enhance positive behaviors, such as the ability to work with others.

The success of YDOs hinges on their ability to tap into the life of an at-risk youth and pair them with an adult who can help them rise above their current situation (Erbstein, 2013). YDOs are programs that assist with the needs of at-risk youth around the country to help them feel better about themselves and enhance their social relationships to achieve better personal positive outcomes. The personal enhancing aspects of YDOs, such as a specialization in enhancing the interpersonal and emotional life of youth, is what helps keep them from continuing to be bound to negative outcomes

for the future (Sieving et al., 2011). Youth development organizations were created to help find another way for at-risk youth to have concrete strategies to keep them from succumbing to negative outcomes such as crime and poverty that plague their current bleak environments. Adolescents sometimes do not have an idea as to what direction to go and often leave their parents and cling to peers (de Souza da Silveira, Maruschi, & Rezende Bazon, 2012). The creation of YDOs are for the betterment of young people to assist with their personal growth.

### **Significance and Types of Adult Attachments in the Life of Adolescents**

Mentors have the potential to be a positive adult attachment who can help youth in several aspects of life. Adolescence is a period in life where youth are trying to gain independence and struggle to established relationships with peers (Hurd & Sellers, 2013). The nonparental adult may appear less threatening in an adolescent's life while he or she is gaining a sense of self-identity (Hurd & Sellers, 2013). In addition, the relationship with a mentor may help alleviate feelings of worthlessness and minimize risky behaviors, such as drug use and aggressive dispositions (Coller & Kuo, 2014). Mentoring can guide an at-risk adolescent susceptible to adverse life outcomes (Lakind, Eddy, & Zell, 2014). A mentor is an older nonparental adult who supports, guides, and cares for a younger person (Pryce, 2012). Research has provided several approaches as to what qualities are needed within the mentor-mentee relationship to make mentorship programs successful. Closeness and frequent contact are required elements for a positive mentor-mentee relationship (Hurd & Sellers, 2013). Time spent with a mentee is crucial for the relationship to help the adolescent experience fewer problems with depression,

delinquent behavior, and drug use (Sterrett et al., 2011). In addition, reciprocity, authenticity, competence in communication, and an empathetic disposition are needed for the mentor-mentee relationship to be successful (Stewart & Openshaw, 2014). Interpersonal qualities from the mentor are needed to help create a bond in the mentor-mentee relationship.

Mentor-mentee relationships that do not have fundamental relationship characteristics are in danger of not leading to successful outcomes for youth (Stewart & Openshaw, 2014). When empathy, communication, and closeness are lacking, the relationship can disintegrate, leading to early termination of the mentor-mentee union (Stewart & Openshaw, 2014). Similarly, Grossman, Chan, Schwartz, and Rhodes (2012) added that the mentor could act as a buffer to show how to properly vocalize their mentees' concerns with others and help them comprehend and have control over their feelings. The phenomenon of mentorship is a complex entity that requires fundamental elements for the mentor-mentee relationship to foster positive outcomes for the psychological well-being of an at-risk adolescent. The mentor-mentee relationship has the potential to address mental health needs of the adolescent.

### **The Impact of Negative Adult Attachments on Youth Outcomes**

Adolescents need positive support from adults in their social environment to have healthy relationships with others. Negative adult attachments are detrimental to the mental and social well-being of youth. An adolescent's relationship with a parent may be the first indication of how he or she may relate with other adults or deal with conflict. Insecure or negative attachments with parents may cause children or youth to become

violent, depressed, and have issues with anxiety (Smokowski et al., 2016). Since the 1980s, professionals in both developmental and social psychology have recognized internalizing and externalizing behavior modes in teens (Pace & Zappulla, 2011).

An adolescent who has symptoms of depression may show internalizing behaviors such as anxiousness and social withdrawal and display externalizing issues such as disorders of conduct, being defiant, and drug abuse (Pace & Zappulla, 2011). Social control theorists believe that externalizing behaviors may result from weak social systems in which teens belong, whereas internalizing behaviors ensue from negative emotions that cause the child to be quickly stressed (Pace & Zappulla, 2011). Just as secure or positive attachments seem to shield the start of mental health disorders for adolescents, negative or insecure attachments can also be an indication of problem behaviors (Pace & Zappulla, 2011). Internalizing and externalizing symptoms that are a product of insecure adult attachments in the lives of youth can be a factor in maladaptive functioning in teens.

### **The Impact of Positive Adult Attachments on Youth Outcomes**

Although harmful attachments can cause damaging emotional and social effects for teenagers, positive attachments can lead to enhanced psychological and social outcomes for teens. The foundation of a secure and positive attachment for youth has elements of protection, warmth, and permission to explore his or her environment (Brenning, Soenens, Braet, & Bal, 2012). Styles of attachment can shape several characteristics of functioning, such as regulation of emotions and social data processes (Jones & Cassidy, 2014). Social support is a concept that is needed for adolescents to succeed on an emotional and psychosocial level. Chu, Saucier, and Hafner (2010) defined

social support as a combination of mental and concrete materials with the intent to assist a person in how to deal with pressure. McGrath, Brennan, Dolan, and Barnett (2014) provided several forms of social support, such as parental, friends, and nonparental caring adults. Caring adults can influence the psychological well-being of young people.

### **Mental Health Among Adolescents**

Adolescence is frequently a significant growth period in which a youth can have his or her first encounter with a mental health illness. An adolescent may or may not be able to vote, legally consume alcohol, or drive, but almost a quarter of the teen population has had a bout with a mental disorder (Keyes, 2006). There are various causes of mental health issues for adolescents, varying from genes, parents divorcing, drug use, or non-stable homes (Berman & Davis-Berman, 2013). Although mental health can be an issue for adolescents if not treated, there are protective factors that can help combat mental health disorders. Wright, Botticello, and Aneshensel (2006) found that social support is an asset to help combat mental health disorders in teenagers. The support of others helps minimize internal and external behaviors such as depression and aggressive behaviors (Wight et al., 2006). The promotion of social support as a protective factor against mental illness should be in the best interest of school leaders, health professionals, and primary caregivers (Wight et al., 2006). Social support is the provision of several forms, such as in recreational activities and interpersonal growth and promotion (Berman & Davis-Berman, 2013). Thus, mental health illness can be detrimental to the emotional well-being of youth if social support is not a protective factor.

### **Mental Health and At-risk Adolescents**

Due to the issues at-risk youth may face in their neighborhoods, there is a need for intervention programs to assist with helping them rise above their circumstances. Low-income urban adolescents are at a greater risk of being exposed to community violence. An African American adolescent often lives in environments with high rates of low-income families, unruly neighbors, and lawbreakers (Busby, Lambert, & Ialongo, 2013). Some crime-ridden urban communities could make youth vulnerable to mental health conditions that can become detrimental to their developmental growth. Tummala-Narra, Li, Liu, and Wang (2014) reported that being a witness of or having immediate contact with community violence may result in maladaptive mental health outcomes for at-risk youth. Associated mental health disorders can range from depression, drug use, suicide, and aggressive attitudes toward adults and peers (Tummala-Narra et al., 2014). There are serious issues that plague youth residing in low-income neighborhoods. Mentorship programs can be an outlet for at-risk youth so that they may thrive socially, emotionally, and psychologically with a confident adult.

### **Emerging Adults and Mental Health**

Being an emerging adult from a low-economic neighborhood can be difficult for someone with a mental health disorder. The traditional norms of becoming an adult, such as moving out of parents' house, getting a college degree, a job, and having a partner and babies, no longer can be used hold rigid rules (Settersten & Ray, 2010). The emerging adult stage of life has altered the course of tradition and prolonged the trend of starting families early (Settersten & Ray, 2010). Emerging adults often take more time to marry

and reach their academic goals as opposed to earlier in the 20th century (Gitelson & McDermott, 2006).

An emerging adult from a low-income community is more vulnerable to emotional distress due to stigma and negative cognitions about a psychiatric disorder (Marko, Linder, Tullar, Reynolds, & Estes, 2015). Chung and Docherty (2011) added that individuals from neighborhoods which have issues with vandals, trash on the sidewalks, and abandoned buildings add to the psychological well-being of the people residing in these areas. The lack of intervention services for emerging adults in low-income communities add to the already difficult problem of a mental health disorder (Evans & Cassells, 2014). The emerging adult population is one that could benefit from interventions that can assist with mental health disorders.

### **Factors of Depression**

This literature review aimed to display the significance of depression symptomatology throughout the lifespan. Although depression can become a mental health illness that can be detrimental in any part of a person's life, a focus was paid to the emerging adult population. The emerging adult population is significant because it represents a transitional developmental period in a young person's life that can be difficult, as an individual may be trying to find his or her self-identity, a career, and continued social support from family and friends. The emerging adult population is a target for various mental health disorders such as depression. The investigator in this study sought to show how a mentor-mentee relationship during the emerging adult's adolescent developmental period can have the potential to last through emerging adulthood. The

mentor-mentee relationship that develops through a mentorship program can be a protective factor against depression for an individual going through emerging adulthood.

Depression can become a chronic debilitating disorder for individuals who have physical and emotional symptoms of this condition. Depression is a multifaceted disorder that entails various reasons as to why a person may succumb to several dimensions of the disease (Bembnowska, & Joško-Ochojska, 2015). Depression includes causes that can arise from the social environment, genes, biology, and family influences (Bembnowska & Joško-Ochojska, 2015). This mental disorder can first appear in childhood or adolescence and last into adulthood, with various degrees of chronic manifestations (Richards, & Salamanca Sanabria, 2014). Depression is a disorder that has a host of factors that are each considered a risk for developing the mental illness.

Genetically, individuals who have immediate relatives with this mental health condition are at a greater danger of developing this disorder (Bembnowska & Joško-Ochojska, 2015). From a biological perspective, causes of depression may stem from serotonin levels in the brain. Low levels of serotonin can cause individuals to have suicidal cognitions, which is a symptom of depression. Social factors that can cause problems with depression include a disruption of family life, such as a divorce, attending a new school, the death of a loved one, and a dysfunctional value system (Bembnowska & Joško-Ochojska, 2015). Although there are many causes of depression, stress is by far the most common factor in which professionals generally agree represents a significant cause of this mental health disorder (Vrshek-Schallhorn et al., 2015). Stress can also be a factor of depression; without an intervention, this mental health disorder can become



problematic for individuals. There are various reasons as to why people have stress in their lives, as stress can come from work, sleep disorders such as insomnia, and addiction (Richards & Salamanca Sanabria, 2014). Depression is a debilitating condition that can cause mental health issues throughout the lifespan of an individual who experiences this disorder.

This literature review displayed the significance of depression throughout the lifespan of an individual. Although depression is a mental health disorder that can be detrimental in any part of a person's life, the emerging adult population was the focus of this study. The retrospective approach to the study examined current depression symptomatology and quality of life of individuals who enrolled in a mentorship program as an adolescent in high school. The emerging adult population is significant because it is a transitional developmental period in a young person's life that can be difficult. The emerging adult developmental period can be difficult because an individual may be trying to find his or her self-identity, a career, and continued social support from family and friends (Settersten & Ray, 2010). The emerging adult population is a target for various mental health disorders such as depression. The retrospective approach to the study was designed to show how a mentor-mentee relationship during the emerging adult's adolescent developmental period can have the potential to last through emerging adulthood. The mentor-mentee relationship developed through a mentorship program can be a protective factor against depression symptomatology and quality of life for an individual going through emerging adulthood.

## **Depression in Aging Adults**

Depression in aging adults is an issue that is becoming more prominent for this population as people are living longer. Aging adults are considered as those individuals from the age of 65 and older (Pasterfield et al., 2014). Depression is a common disorder that can affect many individuals. Almost 20% of aging adults, report symptoms of depression. If left with no plan of treatment, depression in this population can reduce active daily routines, have an added risk for suicide, and increase mortality rates in the aging group (Choi, Hasche, & Nguyen, 2015). Depression is often a costly issue for this population as healthcare costs continue to rise (Choi et al., 2015). Depression symptoms that are not addressed can have detrimental effects that can impact the economic and emotional aspects of the aging adult population.

Depression in the aging adult population can have adverse effects on the quality of life for this population. Symptoms of depression manifest differently with this population, as they experience more physical symptoms than the younger populations (Pasterfield et al., 2014). Older people complain of multiple issues which coexist with pain and decreased cognition functioning (Pasterfield et al., 2014). Moreover, the aging adult population is more susceptible to suicide than their younger counterparts if they have symptoms of depression (Choi et al., 2015). Depression in this population can be increasingly detrimental to the mortality of individuals as compared to emerging or middle-aged adults.

## **Depression in Middle Adulthood**

Depression in middle adulthood has its challenges for individuals between the ages of 50 and 64. Some researchers argue that this population of adults has lower rates of depression than the youth and aging adult populations (Brockmann, 2010). Tomitaka, Kawasaki, and Furukawa (2015) conducted a study and reported that middle-aged adults have a lower pattern of depressive symptoms, and the investigation curve model showed had the shape of the letter “U” to display how depressive symptoms vary among age gaps. The study showed that depressive symptoms can vary in terms of how they are expressed in age groups and that they can change in intensity depending on levels of life stress (Tomitaka et al., 2015). Brockmann (2010) agreed that the middle adulthood population is usually not used as a transition population for research due to minimal depressive symptoms that they display.

The middle-adulthood population is generally considered as a stable group when it pertains to mental health issues. Middle adulthood population are often regarded as the “gold standard” for stability and maturity with fewer depressive symptoms (Brockmann, 2010). Studies have displayed that although middle-aged adults have lower patterns of depressive, they may still have depressive symptoms that interfere with their daily lives. Wickrama, Surjadi, Lorenz, Conger, and O'Neal (2012) argued that middle-aged symptoms of depression may lead to different consequences as to why a person may have depressive symptoms.

Middle-adulthoods go through a transitional stage in life where they are vulnerable to depressive symptoms. Middle-adulthoods often have life stressors that

increase with age, such as issues in how to save for retirement, a decline in physical health, and other financial burdens that may lead to internalizing symptoms of depression (Tomitaka et al., 2015). Similarly, middle adulthood individuals have life stressors, such as stagnant careers, separation or divorce, and the financial responsibilities of adolescent children who may or may not attend college (Brockmann, 2010). Although the middle adulthood population may not have the same stressors as the older and younger populations, they are not resistant to life stressors that can cause depression.

### **Depression in Emerging Adulthood**

Depression in emerging or young adulthood can be detrimental to the quality of life for this population of individuals. Throughout the rest of this literature review, I referred to young adults as *emerging adults*. Emerging adults are persons who are between the ages of 18 and 25 (Martínez-Hernández et al., 2016). Emerging adults who have a positive self-identity are least likely to have internalizing symptoms such as depression. Schwartz et al. (2011) reported that an essential part of a well-developed sense of self is needed to make the leap from adolescence to adulthood. A foundational sense of self-identity is in association with active relationships that are social and assists in making cohesive decisions about important life tasks.

Life tasks are essential components that are in association with being an adult, such as choosing a path for one's career, whether to find a life partner, or deciding to have children (Schwartz et al., 2011). Emerging adults who feel good about themselves are less likely to feel bad and engage in harmful behaviors. Emerging adults who have a positive self-identity are also less likely to engage in harmful internalizing and

externalizing behaviors, such as aggression, illegal drug use, and experiencing feelings of loneliness and isolation (Schwartz et al., 2011). On the other hand, emerging adults who feel bad about themselves or their environmental situations are more likely to engage in harmful behaviors, such as breaking the rules or self-medicating, and may allow life stressors to overwhelm them (Martínez-Hernández et al., 2016). Emerging adults who do not have a positive outlook of their future may succumb to harmful behaviors due to life stressors.

### **Depression in Adolescents**

Depression can be a debilitating condition for adults, and it can be equally devastating for adolescents. Depression is one of the leading causes of mental health disorders in the adolescent population (Kullik & Peterman, 2013). Depression in adolescence can be problematic and often occurs because of the biological, psychological, and social adaptations that this population experiences (Eisman, Stoddard, Heinze, Caldwell, & Zimmerman, 2015). The identification of risk factors that make adolescents vulnerable to this disorder is crucial due to the negative implications associated with depression. Youth who have exposure to violence, low socioeconomic status, and a lack of social support are at risk for depression (Eisman et al., 2015). Depression is a mental health disorder characterized by recurrent self-loathing thoughts, feelings of not being worthy, and remorse (Curry, 2014). Youth may also have feelings that cause them harm and cognitions of death (Curry, 2014). Adolescents who report symptoms of depression are at an increased risk of failing school, use of illegal substances, and social breakdown of relationships (Kofler et al., 2011). Similarly,

adolescents who report depression have other mental health issues such as anxiety and conduct disorder behaviors (Curry, 2014). Depression can become a problematic disorder for youth if the identification of risk factors is not addressed to assist the adolescent with feelings of hopelessness.

Depression is a mental health disorder that unfortunately can affect the psychological well-being of children and adolescents. Depression is the most pathological disorder among youth between 10 and 20 years of age (Ciubara et al., 2015a). Depression in teens is associated with underachieving in school, peer relations, and an increased risk of taking one's life (Low et al., 2012). Low et al. (2012) reported that daily life stressors such as a new extended family, divorce, a move from home, and a new school location are all triggers that can cause an episode of depressive. Depression in children and adolescents has symptoms similar to adults, with the exception of irritable moods which are not seen in the adult population (Ciubara et al., 2015a). Depression is a mental health disorder that should not be overlooked in adolescents, as it can lead to a chronic manifestation in later years.

Depression is a condition that should be recognized as early as one's teenage years to not lead to untreated symptoms later in life. Almost 30 years ago, depression was thought to be a disorder only for adults (Maughan, Collishaw, & Stringaris, 2013). However, researchers today understand the debilitating symptoms that can plague a young person with depressive symptoms that could result in negative outcomes for the individual if not detected early (Maughan et al., 2013). Empirical evidence has shown depression that occurs in adolescence can be degenerative and repetitive (Bembnowska &

Joško-Ochojska, 2015). Episodes of depression can go away within 1 year, but a young person may experience other episodes of depression more frequently (Maughan et al., 2013). An untreated episode of depression in adolescents can have adverse implications for the psychological development of these individuals.

Another risk factor for depression in adolescents is negative adult attachment styles. The notion of attachment styles refers to how people relate to each other via emotions (Delhaye et al., 2013). Another risk factor for depression in adolescents is negative adult attachment styles. The term *attachment* refers to a close bond that helps form a basis of love and affection between a primary caregiver and child (Delhaye, Kempenaers, Stroobants, Goossens, & Linkowski, 2013). Building off this definition, *attachment styles* refers to how people relate to each other via emotions (Delhaye et al., 2013) and is the foundation for social and emotional unions (Delhaye, 2013).

Adolescents need a positive attachment style with a primary caregiver to thrive socio-emotionally (Futch et al., 2016). There are two main types of attachment styles: secure and insecure attachments. Secure attachment styles allow for adolescents to have a better view of themselves, experience closeness with peers and intimate relationships, and develop positive ways of coping emotionally (Dawson, Allen, Marston, Hafen, & Schad, 2014). An adolescent who has secure adult attachments reports more parental support and fewer depressive symptoms (Kullik & Peterman, 2013). Social supports through secure attachments help teens thrive socially to enhance their mental health.

Contrary to secure attachments, insecure adult attachments have links to adverse outcomes for adolescents. Insecure attachments lead to youth feeling alone, withdrawing

socially, and engaging in delinquent behaviors such as violence and school truancy (Dawson et al., 2014). An insecure attachment style may lead to depression for teenagers (Kullik & Peterman, 2013). Adolescents who have insecure parental attachments have reported less parental support and more depressive symptoms (Kullik & Peterman, 2013). The mentor-mentee relationship in mentorship programs may reduce rates of depression in at-risk adolescents.

### **Depression and At-Risk Adolescents**

Populations that are vulnerable to symptoms of depression, as well as the factors that are primary stressors for depression, need to be addressed. The groups that are considered sensitive for this literature review are comprised of individuals born into low-income homes and ethnic minorities, such as African Americans and Hispanic Americans. Young people who face racial and economic disparity and are victims of violence are more likely than other groups to experience bouts of depression (Perrino et al., 2015). A youth from a low-income family is more vulnerable to experiencing a mental health illness such as depression (Perrino et al., 2015). Financial hardship is a prime reason why youth have minimal access to help address any issues related to depression (Perrino et al., 2015). Lambert, Bettencourt, Bradshaw, and Ialongo (2013) reported that exposure to violence is a key trigger for an at-risk youth becoming vulnerable and leading to symptoms of depression. Thus, depression is a mental health disease that has many triggers, of which depend on race, economic status, and ethnic background and that can be detrimental to mental health of vulnerable youth.



## **Depression and Comorbidity Conditions**

Depression is a serious mental health disorder that often is associated with other negative behaviors, exacerbating problems for the emerging adult population that has struggled with depression. Depression is comorbid with other issues, such as drug use and aggressive, violent actions (Low et al., 2012). Martínez-Hernández et al. (2016) found that emerging adults who cannot rely on others for help and support are at an increased risk of developing symptoms of depression. Individuals from the emerging adult population that suffer symptoms of depression also have battles with other adverse behaviors, such as aggression and drug use, that threaten the emotional well-being of the person.

**Emerging adults with depression and substance abuse.** Young or emerging adulthood can be a stressful time, and emerging adults may use destructive methods to help cope with symptoms of depression, such as the use of illegal substances. Once young people graduate from high school, they are often unable to comprehend the different challenges they may face, such as moving away from home, ending high school romances, and dealing with more personal choices than they had while living with parents (Hurd & Zimmerman, 2010). Similarly, Moitra, Christopher, Anderson, and Stein (2015) reported that emerging adults might use illegal substances to “fit in,” deal with conflicting feelings, or as a buffer to enhance their mood. Some individuals from the emerging adult population who have substance abuse issues are more likely to proclaim that their peers have a harder time with coping with life stressors and under-report their use of illicit substances (Tucker, Cheong, Chandler, Crawford, & Simpson, 2015). Some

individuals from the emerging adult population who have substance abuse issues require interventions to prevent them from having a battle which may affect their quality of life. Thus, one of the main reasons the emerging adulthood population uses drugs is to cope with emotional life stressors.

**Emerging adults with depression and grief.** Loss of a loved one can be a challenging time for anyone, and with emerging adults, it can disrupt their psychological development. The *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-5) recognizes that grief can become a debilitating stressor for some individuals. The DSM-5 has a designation for persistent complex grief disorder. Persistent complex grief disorder used to be termed “complicated grief” and was also known as prolonged grief disorder (APA, 2013). Stein et al. (2009) reported that emerging adults who focus on the adverse implications of losing a loved one could lead to trauma for these individuals. Similarly, Herberman Mash, Fullerton, and Ursano (2013) noted that the timing of this loss could influence how intensely the bereaved may respond. The death of a personal attachment for an emerging adult can be a significant loss in their life due to the instability that may surround their present life circumstances.

The loss of a significant person in the life of an emerging adult can cause an individual to experience bouts of loneliness that may be difficult to handle. The death of someone can cause an emerging adult to have issues with coping and respond negatively to the absence of not having the person around (Neimeyer, Baldwin, & Gillies, 2006). An emerging adult who grieves may have issues such as longing for the individual, isolation, feel lonely, and loss of desire to want to be active (Gillies & Neimeyer, 2006). Grief

causes young people to feel as though their world has changed for the worse and to lose a sense of hope about their life and future (Holland, Currier, & Neimeyer, 2006). The reaction to the loss of a loved one may cause an individual to engage in risky behaviors, such as excessive alcohol or drug use to cope with the loss of someone (Herberman Mash et al., 2013). The loss of a significant person in the life of an emerging adult can be detrimental to the physical and psychological health of the individual.

### **Depression and Life Balance**

A balanced lifestyle with work, home, and social activities is beneficial to have good mental health. Haar, Russo, Suñe, and Ollier-Malaterre (2014) defined *work-life balance* as a subjective concept for individuals who are satisfied with how their life is regarding their career, family life, and peer relationships. The concept of work-life balance is subjective, as it changes depending on a person's beliefs, priorities, and goals (Haar et al., 2014). A person who does not have a work-life balance may lead to job which affect other aspect of their lives, such as their mental health. Oshio, Inoue, and Tsutsumi (2017) noted that the job stress has an adverse or negative relationship with emotional distress regarding depression and other mental health disorders. Similarly, Marchand et al. (2016) found that demanding tasks, little to no control over policies and procedures, and no peer or upper management support all represented triggers of stress at work, which may in turn lead to negative mental health outcomes. Good mental health is dependent upon having a balance with all other areas in life.

**Emerging adults with depression and adult and parental support.** Social support is beneficial to emerging adults and is defined as the active interaction of

individuals in an environmental setting (Martínez-Hernández et al., 2016). Individuals who choose to interact socially will vary in terms of how much time they spend together (Martínez-Hernández et al., 2016). The goal is to establish a collaborative and open dialogue with each other (Martínez-Hernández et al., 2016). Social support among emerging adults is needed to help minimize symptoms of depression (Martínez-Hernández et al., 2016). The emerging adult population may feel as though they have not attained financial freedom due to instability that may surround their lives, such as job uncertainty and residence accommodations (Galambos, Barker, & Krahn, 2006). This population is regarded as more independent than their younger adolescent counterparts, yet they still are in transition (Pettit, Roberts, Lewinsohn, Seeley, & Yaroslavsky, 2011). The emerging adult population may also experience mental health issues that cause them to have difficulties in adjusting to their life circumstances due to a lack of resources such as support (Carbonell, Reinherz, & Beardslee, 2005). Social support is an essential element to help the emerging adult population deal with mental health issues that they may have in their lives (Wright, King, & Rosenberg, 2014).

Inguglia, Ingoglia, Liga, Lo Coco, and Lo Cricchio (2015) reported that emerging adults who have adult support are more likely to adjust to their life circumstances with minimal mental health issues due to the connection they feel to others. Similarly, Asberg, Bowers, Renk, and McKenney (2008) reported that social support is beneficial to an individual's psychological well-being. Social support from parents in an emerging adult's life is a primary resource for mental health adjustment (Reed, Ferraro, Lucier-Greer, & Barber, 2015). Similarly, Katz, Conway, Hammen, Brennan, and Najmanm (2011)

reported that emerging adults who do not have adequate social support are at greater risk for depression and emotional deficiencies.

Social support is also beneficial for emerging adults as they often must wait to start their lives outside of their parents' homes. Emerging adults often take longer to start their careers, families and obtain long-term jobs (Becker-Blease & Kerig, 2016).

Emerging adults who do not live on their own because of the lack of financial independence may rely on their parents for social support (Becker-Blease & Kerig, 2016). Therefore, emerging adulthood is considered as a transition time for young people to gain their independence. Relying on their parents for social support is crucial for them to make a successful transition to adulthood.

**Emerging adults with depression and job satisfaction.** Work has an impact on whether emerging adults experience symptoms of depression. Meier, Semmer, and Gross (2014) found that stress from work had a positive relationship with depression. Emerging adults who have issues coping with life stressors, the greater the symptoms of depression can be for the individual. Emerging adults who do not have gainful employment are more likely to experience issues with psychological adjustment (Galambos et al., 2006). They often go through transitions from different jobs early in their careers (Domene & Arim, 2016). Emerging adulthood is a period of transitional changes for individuals who may or may not be financially or emotionally stable.

Emerging adults have better job satisfaction when they feel they are an asset to their place of employment. Job satisfaction is greater when finances and content of work are positive (Konstam & Lehmann, 2011). When a population such as emerging adults'

experiences job satisfaction, they are more likely to have better outcomes, such as improved mental health, lower rates of being absent from the job, and better performance at work (Besen, Matz-Costa, Brown, Smyer, & Pitt-Catsouphes, 2013). Similarly, Hardin and Donaldson (2014) reported that emerging adults who experience job satisfaction have better relationships with others. Innstrand, Langballe, Espnes, Aasland, and Falkum (2010) noted that many individuals attribute their self-worth to what they do for a living. Overall, job satisfaction is a significant factor which can lead to an episode of depression for emerging adults.

### **Mentorship Programs and the Rate of Depression in At-Risk Adolescents**

Mentorship programs allow a young person to have an opportunity to develop social skills and invest emotionally in the future. Mentorship programs with caring volunteer adults may help adolescents find caring role models. The caring adult has the potential to assist the adolescent overcome hopelessness regarding their current dire environmental circumstances (Bruce & Bridgeland & Bridgeland, 2014). A young person is usually paired with an adult who had the same life circumstances growing up, but who has made a success of their lives (Johnson, Jensen, Sera, & Cimborra, 2018). The relationship between the mentor-mentee provides motivation for a young person to believe they can be successful. An adolescent may begin to have hope or improve their life circumstances by making more informed decisions and not succumbing to a life of poverty and limited educational resources (Johnson et al., 2018). Similarly, Alderfer (2014) and Young-Jones (2012) reported that when a young person has a mentor in his or

her life, this individual starts to feel better about him or herself. The mentor in the life of an at-risk youth can enhance his or her emotional well-being.

An at-risk youth who has a mentor can gain self-esteem and pride and a desire to live under better conditions. When adolescents begin to make better social connections, they start to feel less isolated, and because of new positive feelings, may all of which lead to fewer symptoms of depression (Wasburn, Fry, & Sanders, 2014). Although mentorship programs have proven to be an effective intervention to help with truancy, adolescent delinquency, and conflicting emotions, there is no direct or conclusive evidence that mentorship programs can reduce rates of depression in an at-risk youth for long-term (Brown et al., 2009). Mentorship programs have proven to help at-risk youth with short-term social and academic problems, but there is a lack of evidence demonstrating that mentorship programs can minimize more adverse psychological issues such as depression symptomatology.

### **Quality of Life**

Some individuals may not want to or cannot describe their mental health status but can describe their feelings about their current life circumstances. Quality of life is a self-proclaimed and broadly-defined concept that describes how a person may subjectively feel about their life on a physical, emotional, and social level (Oleś, 2014). Similarly, Gaspar et al. (2009) described quality of life as being a perception in which an individual embodies the current interpretation of their life. Quality of life can be a measure of beliefs from cultures, attainment of objectives or goals, and mental and physical health status. Quality of life can also be a measure of interpersonal relationships

and the ability to live independent of others concerning economic conditions (Oleś, 2014). Quality of life is a concept that can encompass the psychological, social, spiritual, and physical well-being of an individual.

***Quality of life and mental health.*** Good mental health is synonymous with quality of life. Emerging adults with mental health conditions in the Western part of the world have stressors pertaining to mental health that can lower their quality of life (Bovier, Chamot, & Perneger, 2004). Factors that can affect a person's mental health may be negative life stressors such as fewer family or social network connections, as well as physical ailments may contribute to mental health conditions (Chervonsky & Hunt, 2018). An individual, specifically an emerging adult with mental health issues, may experience a lower quality of life than his or her counterparts who are not able to manage stress in his or her life.

***Quality of life and comorbid conditions.*** There are several factors that can hinder the quality of life for an individual. Schulze, Maercker, and Horn (2014) noted that having various chronic physical ailments, disabilities, or mental illness, as well as an increased use of healthcare resources, contribute to a lower quality of life for an individual. Moreover, Sarkin et al. (2013) posited that mental health is a major factor in a person's comprehensive health and represents a significant component with respect to quality of life, as it affects long-term outcomes and how individual functions physically. Quality of life is a valuable component of an individual's work-life balance, and if compromised due to other life stressors, it can be detrimental to one's overall mental health.



***Quality of life and substance abuse.*** The impact of substance abuse can be detrimental to the emerging adult population. When substance abuse becomes an addiction, it can not only hinder the quality of life for the emerging adult but also others around the individual. Addiction has a classification of being a long-standing psychiatric condition (Sussman & Arnett 2014). Addiction is a condition that consists of symptoms which include sporadic episodes of relapsing that can transpire when adverse events occur in the life of an individual, such as the loss of a job or a past traumatic event (Sussman & Arnett, 2014). As noted in Sinadinovic, Wennberg, Johansson, and Berman (2014) extensive amounts of alcohol and unlawful drug use can lead to a debilitating quality of life that ultimately proves to be fatal for the person if treatment options are not available. For an emerging adult with substance abuse, their quality of life can slowly deteriorate if interventions are not in place to change the course of the destructive behaviors.

***Quality of life and grief.*** The unfortunate part of life is the loss of a loved one. The grieving process can vary, and for some people can last longer than others and result in life changes that negatively affect the behaviors and relationships one may have with others (Piper et al., 2011). Several factors can exacerbate the grief process for emerging adults, such as minimal or no family members, spirituality, culture, and unemployment (Piper et al., 2011).

Several other factors that can perpetuate the grieving process are children, no financial stability, and loss of other loved ones (Piper et al., 2011). The grieving process for an emerging adult may cause an individual to feel alone, scared, and dismayed about

the fact that someone he or she cared for is no longer with them (Lobb et al., 2010). The prolonged emotions that go along with grief can have adverse outcomes for the quality of life of the individual (Lobb et al., 2010). The quality of life of an emerging adult can be compromised during the grieving process if life stressors play a dominant role in his or her life.

***Quality of life and life balance.*** Good mental health and quality of life are contingent upon balance with several aspects of life. The perceived concept that a person's life has meaning and that life matters enhances one's belief that they have a quality of life (Johnson, & Jiang, 2017). If demands from life such as work conflict intrude on that boundary, the stressors may impose on the quality of life of the individual. The emotional conflict between work and life occurs when stressors from work intervene with personal commitments at home (Michel, Bosch, & Rexroth, 2014). Good mental health is dependent upon having a balance with all other areas in life.

***Quality of life and adult and parental support.*** The significance of adult or parental support is crucial to the well-being of individuals. Support from family members, which includes parents, can influence the emotional outcomes of people (Donnelly & Kozier 2018). Parental support can play a significant role in the quality of life of an emerging adult. Individuals who belong to the emerging adult population may experience evolving relationships with their parents that allow them to be more independent, yet still need the assured relationship with his or her parents (Inge, 2009). Emerging adults who have a safe emotional base with their peers, family, or significant other can manage stress better and have a reasonable quality of life (Tartaglia, 2013).

Quality of life plays a central role for emerging adults who have the support of others as they contend with demanding situations.

***Quality of life and job satisfaction.*** An emerging adult's ability to be a productive citizen is an important aspect of having an acceptable quality of life. A person who has work conflicts or is unemployed may experience other life issues, such as stressors from family issues, relationships, or career success that do not seem as beneficial to the quality of his or her life (Dahm, Glomb, Manchester, & Leroy, 2015). Keyes (2006) found that individuals who navigate work and life stressors well are generally able to sleep better, have better personal relationships, and enjoy a better overall quality of life. An emerging adult's ability to have an overall better quality of life may start with experiencing job satisfaction.

### **Summary**

There are several factors needed for an adolescent to develop into a healthy young adult. There are many biological, psychological, and social changes that an adolescent goes through which may hinder their psychological development. At-risk adolescents from low-income neighborhoods are at a greater risk of developing a mental health disorder due to their environmental circumstances, such as a high rate of violence and substance abuse among individuals in their local communities. Depression is a mental health disorder that is commonly seen in adolescents (Shapero, McClung, Bangasser, Abramson, & Alloy, 2017). A positive adult attachment may assist in improving the emotional well-being of an adolescent so that he or she can grow into a healthy adult. An adolescent who does not have a healthy adult attachment may have a greater chance of

experiencing symptoms of depression that can last throughout emerging adulthood and their lifespan. In order to address the issue of depression and the lack of positive adults in the life of an at-risk youth, scholars have looked into the importance of mentorship programs (Hankin et al., 2015). There are several types of mentorship programs, such as community-, faith-, and school-based programs that have different goals and objectives.

The focus of this literature review was on the PYD approach to mentorship for at-risk youth. The program reviewed was the mentorship program of Northern New Jersey. The PYD perspective is that in order to become healthy emerging adults, adolescents need to have positive adults in their lives, healthy experiences, and constant contact. Mentorship programs have limitations in that they vary in structure and organization (Rhodes & Low, 2008). The focus of this literature review was on the retrospective recollection of emerging adults who have been in a mentorship program as an adolescent while in high school and examined their depression symptomatology and quality of life. The emerging adult population was the focus of this chapter, as this is the period after adolescence and represents a population which may face issues related to social support, financial stability, and romantic hardships. According to Settersten and Ray (2010) the emerging adult population may experience life stressors since it can be a time of financial dependence and social instability and may cause a person to not be able to cope in adulthood. This study may be useful in examine the significance of at-risk youth entering a mentorship program and mental health aspects of having a positive adult figure in their life.

Chapter Three describes the design of the research and a rationale as to why I chose this research design. This chapter provides a description and justification of data, research questions, sample population, sampling procedures, instruments and operationalization constructs, independent and dependent variables, data collection, data analysis, describe threats to validity. The concluding section of the next chapter explains the ethical procedures.

## Chapter 3: Research Method

### **Introduction**

The purpose of this quantitative study was to compare depression symptomatology and quality of life rates among emerging adults who enrolled and emerging adults who did not enroll in a mentorship program as an adolescent while in high school. First, this chapter includes an overview of the study's design, which includes a rationale as to why the research design was selected. Following the research design and rationale is a description of the program setting and sample, participants, instrumentation, and data collection and analysis procedures. I conclude the chapter by discussing threats to validity and ethical procedures.

### **Research Design and Rationale**

I selected the quantitative research method because it enabled me to best answer the research questions. In quantitative research, an investigator aims to test theories by looking at relationships between different variables (Bernerth et al., 2018). The design was a causal-comparison nonexperimental design, also known as an ex post facto nonexperimental research design. An ex post facto research design is used when there is no manipulation or maneuvering of the independent variable to make associations between variables (Schenker & Rumrill, 2004). Ex post facto research is Latin for "after the fact," because both the effect and the supposed cause happened already, therefore necessitating a retrospective study (Gay, Mills, & Airasian, 2012). Ex post facto research designs usually include groups that already exist or are created to examine variations among participants through results or dependent variables (Schenker & Rumrill, 2004).

The main aspects of ex post facto research designs are that the variables are categorical and there is no manipulation or control over the independent variable (Schenker & Rumrill, 2004). The independent variable in an ex post facto design is usually an ethnicity, academic level, or financial level (Schenker & Rumrill, 2004). An ex post facto design is generally performed when the investigator observes naturally occurring situations instead of undertaking an intervention (Montero & León, 2007). The ex post facto research design is a valuable method to use in research.

The two most common descriptive designs are case control or comparative designs (Sousa et al., 2007). A comparative (also known as ex post facto or causal-comparative) is a design in which a researcher wants to investigate a relationship between the independent and dependent variables from an event or action that already occurred (Sousa et al., 2007). Investigators generally use specific methods to explore differences observed in the comparison groups, such as analyses of variances, *t*-tests, or multivariate analyses of variance (Rumrill, 2004). Analysis of covariance (ANCOVA) is a statistical test used to decide if there are significant variances or differences between the groups under comparison for both comparative and experimental studies (Gay et al., 2012). For this study, I performed an ANCOVA on data collected from online surveys that were administered to participants.

## **Methodology**

### **Sample Size**

The sample for this study consisted of 128 emerging adults. I used G\*Power software to obtain the sample size. As stated in Chapter 2, the emerging group population

consisted of individuals between the ages of 18 to 30. Because this was a retrospective examination study, 64 emerging adults would have been enrolled in a mentorship program in Northern New Jersey, as an adolescent in high school, while the remaining 64 emerging adults would have not been enrolled in the MPNNJ program, or any other mentorship program, as an adolescent in high school. The participants were from various ethnic backgrounds and nationalities and had different values related to religion (see Table 1 in Chapter 4).

The 64 emerging adults from the control group (Group B) representing the MPNNJ group were alumni at one of the local chapters in Northern New Jersey. The location of the urban area shares similarities with other urban areas across the country. Most urban communities in the United States are synonymous environments that may expose adolescents to violence in their neighborhoods (Carey & Richards, 2014). These urban communities may predispose adolescents to economic, social, and mental health issues (Carey & Richards, 2014). All participants received a link to the survey and questionnaire through Survey Monkey. I used Survey Monkey to store the data to be used in this dissertation.

### **Sampling and Sampling Procedures**

I performed nonprobability sampling procedures in this dissertation study. Purposive sampling or nonprobability sampling is a deliberate effort on the part of I to use nonrandom methods to find participants to partake in a research project (Tongco, 2007). Potential participants completed a two-question eligibility screen before each group completed the survey to find out whether they met the criteria to be included in the



study. The first question asked if each potential participant were at least 18 years old. The second question asked potential participants if they had ever participated in a mentorship program. Once the eligible participants answered each of the eligibility questions, they were separated into two groups; emerging adults who had entered in the mentorship program comprised the control group (Group B), while the experimental group (Group A) consisted of emerging adults who did not enter a mentorship program as an adolescent in high school.

I took the following steps to calculate the sample size needed for the study, using G\*Power software version 3.1.9.2 (Faul, Erdfelder, Lang, & Buchner, 2007). To obtain a sufficient sample, I specified an alpha of .05 and a medium effect size (Cohen, 1988). Following the protocol of Faul and researchers to achieve a power of .80, I gathered a minimum of 128 participant responses from the same participants at each point in time (Faul et al., 2007). The power level is used in the research community to obtain a sample size that will provide the best probability of influencing a population, whether small, medium, or large (Combs, 2010). Based on the G\*Power 3.1.9.2 software, within the output the total sample size necessary was determined to be 128.

### **Participants for Recruitment, Participation, and Data Collection**

Each group of study participants was recruited on a volunteer basis from the following places or sources: (a) Group B was recruited via the chief executive officer of the organization, who sent out an e-mail to alumni members via the private MPNNJ alumni email account server, while (b) Group A was recruited via LinkedIn, Facebook, as well as through flyers I posted at local community colleges in Union county. I posted

flyers at Union County College, Shoprite of Union, and Kean University (see recruitment e-mail, follow-up e-mail, and recruitment flyer in Appendices, A, B, and D, respectively).

Participants in the control group (Group B), representing alumni from the MPNNJ. Once participants clicked the survey link, they could review an explanation of the study. I collected demographic information from the participants, including gender, ethnicity, high school and graduate education, and time in the mentorship program. Written consent was not required from the primary contact individual of the mentor organization per my IRB approval; however, participants provided their implied consent upon completing the survey and the consent form was electronically posted as an add-on before participants engaged in the survey.

In the experimental group (Group A), participants consisted of emerging adults who did not enroll in the MPNNJ mentorship program or any mentorship program as an adolescent in high school and were from the same community as the emerging adults in the control group. I reached out to the Group A through social media (LinkedIn and Facebook) and by posting flyers in local stores. I posted an electronic informed consent form. Participant eligibility requirement for Group A entailed an electronically posted informed consent form.

The incentive for all participants from both groups to complete the study was a five-dollar Amazon gift card. Once both groups met the eligibility criteria, there were several assessment tools available inside the Survey Monkey online survey. I used Survey Monkey to generate a link that allowed access to the surveys and was sent to the potential respondents. The contact from the MPNNJ was responsible for contacting their

members via email, and the director of the mentorship program was responsible for sending the email to all alumni members. There is a draft in Appendix A of the recruitment email that I obtained from the IRB approval application. The survey remained open for a minimum of 14 days and a maximum of 7 weeks so that I could obtain the needed number of participants in each group, with reminder emails sent out at weekly intervals to ensure participants completed surveys as needed.

The first page of the survey included a consent form which provided a description of the participants' confidentiality regarding the study, the respondents' rights relating to participation, and the purpose of the study. To minimize social desirability, I detailed the theme of the study to participants (i.e., the purpose of the study is to understand general beliefs about mentorship programs) as well as the specific research questions and hypotheses. After completing the study, a message appeared with text thanking all respondents for their participation in the study. If respondents had any questions, an email address was provided after the completion of the study to give respondents the opportunity to contact I.

I downloaded the accessed data to a safe and secure file, and information was deidentified and stored on an external drive that only I had access to. The data would be safe and would be removed from the external drive after approximately 5 years. According to Baker (2012) there should be specific guidelines used when preserving data in research collection to maintain the anonymous persona of study participants and lower the risk of a breach in confidentiality (Baker, 2012). The raw data would remain available to qualified and relevant professionals upon request.

### **Instrumentation and Operationalization of Constructs**

There was one independent variable which consisted of two levels to account for the outcome of a mentorship program. The first level pertained to the control group (Group B), while the second level consisted of the experimental group (Group A). The first dependent variable was depression symptomatology, and the second dependent variable was quality of life. Two covariates were examined: (a) job satisfaction and (b) substance use. Since there can be outside factors which could cause the participants in this study to self-report reasons of depression symptomatology, covariates were used for the study. The use of covariates in nonexperimental designs to assist with the adjustment of outcomes is significant in making an accurate account regarding the effectiveness of a treatment or program outcome (Culpepper & Aguinis, 2011). The covariates examined are theoretically relevant as described in Chapter Two. Depending on the preliminary results, the significant results of the analyses were described in the results section, Chapter Four of the study. I obtained necessary permissions to use the QoL measure in the Walden psychology tests measures database. In addition, permission to use the Simplified Beck Depression Inventory Scale 19 is available in the Walden psychology tests measures database. I secured permission to use all other instruments for the covariates via Walden's PsycTESTS database please see Appendices (G, I, J, and K).

I used the following instruments to measure the domains of depression symptomatology and quality of life: (a) Job Satisfaction Scale (JSS; Ellwardt et al., 2012), (b) QoL Scale (QoL; Gil et al., 2011), (c) Simplified Beck Depression Inventory-

S19 (BDI-S19; Sauer et al., 2013), and (d) Substance Use Measures (SUM; Knyazev et al., 2004). Permission for the use of these instruments is provided in Appendix J.

**Job Satisfaction Scale.** The JSS measured job satisfaction as a covariate. Ellwardt et al. (2012) developed the JSS, using a sample of 36 employees who work for a nonprofit child protective service organization. The creators of the survey checked for unidimensional by performing an exploratory factor and found that all items loaded on the factor (Ellwardt et al., 2012). This survey uses a 4-item scale to determine gratification with tasks at work; questions on the scale include the following: “How satisfied are you with: ‘your tasks,’ ‘your salary,’ ‘the collaboration with your colleagues,’ and ‘your workload?’” Response categories ranged from 7 (very satisfied) to 1 (very dissatisfied). There was no reverse scoring for this scale, with scores from the assessment ranging from 4 to 28 (higher scores were an indication of a greater job satisfaction). The internal consistency of the scale using Cronbach’s  $\alpha$  was .81.

**Quality of Life Scale.** The QoL measured the quality of life variable. Gill et al. (2015) developed the scale using a sample of 364 university college students and people from the community, checking for unidimensional by performing an exploratory factor. This is a 32-item assessment measuring personal attitudes about aspects of quality of life. Some examples are as follows: “How would you rate the quality of your personal relationships,” “How would you rate the quality of your ability to think,” “How would you rate the quality of your life in general,” and “How would you rate the quality of your level of physical activity.” Response categories ranged from 5 (excellent) to 1 (poor). There was no reverse scoring for this scale, with scores from the assessment ranging from

32 to 160 (higher scores are an indication of a greater quality of life measure). The reliability of this scale using Cronbach's  $\alpha$  was .85.

**Simplified Beck Depression Inventory.** The BDI-S19 was originally designed to measure depression in participants (Sauer et al., 2013). The creators developed the scale using a sample of 5,022 adult participants from over 100 regions in Germany, checking for unidimensional by performing an exploratory factor (Sauer et al., 2013). The developers performed a Rasch analysis of the BDI-S19 to show that the scale is a convenient low-cost alternative to the BDI-II scale. The BDI-S19 is a useful and specific assessment to determine if a person has symptoms of depression as well as the severity of these symptoms (Sauer et al., 2013). The BDI-S19 scale consists of 19 items; for example, "I feel sad," "I feel discouraged about the future," "I cry," and "I feel like a failure." Response categories range from 6 (always) to 1 (never). There was no reverse scoring for this scale, with scores from the assessment ranging from 19 to 114 (higher scores are an indication of a higher measure of depression). The reliability of this scale using Cronbach's  $\alpha$  was .84.

**Substance Abuse Scale.** SUMS was designed to measure substance use among young people. Knyazev et al. (2004) made use of previous studies and experts in the field of sociology as a guide when creating SUMS, using a sample of 4,051 young people aged 14 to 25 in 84 different school regions in Russia. The developers of the survey checked for unidimensional by performing descriptive statistics such as a regression methods and analyses of variance (Knyazev et al., 2004). This is a 9-item assessment measuring how much a young person has used tobacco, alcohol, and drugs. Some examples are as

follows: “Have you smoked,” “What was your age when you smoked cigarettes for the first time,” “Have you used alcohol,” and “Have you ever tried drugs.” Response categories differ based on the type of question asked. For example, the second question asks what was the respondent’s age when he or she used substances for the first time (“have not tried” = 0, “older than 14” = 1, and “younger than 14” = 2). There was no reverse scoring for this scale, with scores from the assessment ranging from 0 to 18 (lower scores are an indication of the participant never admitting to substance use). The reliability of this scale using Cronbach’s  $\alpha$  was .84.

### **Data Analysis Plan**

The research questions and hypotheses were, as follows:

Research Question 1: Is there a significant difference in depression symptomatology between emerging adults who enrolled in a mentorship program as an adolescent in high school and emerging adults who did not enroll in a mentorship program as an adolescent in high school, while controlling for job satisfaction and substance abuse?

$H_01$ : There is no significant difference in depression symptomatology between emerging adults who enrolled in a mentorship program as an adolescent in high school and emerging adults who did not enroll in a mentorship program as an adolescent in high school, while controlling for job satisfaction and substance abuse.

$H_{a1}$ : There is a significant difference in depression symptomatology between emerging adults who enrolled in a mentorship program as an adolescent in high school,

and emerging adults who did not enroll in a mentorship program as an adolescent in high school, while controlling for job satisfaction and substance abuse.

Research Question 2: Is there a significant difference in quality of life between emerging adults who enrolled in a mentorship program as an adolescent in high school and emerging adults who did not enroll in a mentorship program as an adolescent in high school, while controlling for job satisfaction and substance abuse?

$H_02$ : There is no significant difference in quality of life between emerging adults who enrolled in a mentorship program as an adolescent in high school and emerging adults who did not enroll in a mentorship program as an adolescent in high school, while controlling for job satisfaction and substance abuse.

$H_a2$ : There is a significant difference in quality of life between emerging adults who enrolled in a mentorship program as an adolescent in high school and emerging adults who did not enroll in a mentorship program as an adolescent in high school, while controlling for job satisfaction and substance abuse.

I used ANCOVA to analyze the data for all research questions. ANCOVA is similar to an Analysis of Variance (ANOVA), with the addition of covariates. There are two primary benefits to using ANCOVA: (a) an increase in power (Barrett, 2011), and (b) the elimination of a contributing element which may interfere with the dependent variable of the study (Schneider, Avivi-Reich, & Mozuraitis, 2015). The main assumptions of ANCOVA are as follows: (a) homogeneity of regression, (b) linear relationships, (c) homogeneity of variances, and (d) a normal distribution of the dependent variable (Reed & Kromrey, 2001).



### **Threats to Validity**

There were both threats and limitations to this study. The first threat to this study was nonresponse bias in which a participant does not finish or incompleted the survey. Nonresponse bias could have influenced the outcome of a study. Elimination or reduction of nonresponsive bias was minimized by following up with participants with an email reminding them to finish or complete the survey. Participants who completed the survey were informed to disregard the email. This type of internal validity threat is called mortality due to participants removing themselves from the study for various unknown reasons (McDermott, 2011).

A second threat to this study was the use of several self-report measures. An advantage to using a self-report measure is that it is a common form of assessment that researchers use because they are cost-effective, and easier to access to other forms of reporting (Haberecht, Schnuerer, Gaertner, John, & Freyer-Adam, 2015). A disadvantage of using a self-report measure is that due to the lack of access, a researcher may not have used a survey that was the most beneficial for the study (Haberecht, Schnuerer, Gaertner, John, & Freyer-Adam, 2015). The third threat to this study pertained to validity in that participants may have wanted to provide socially desirable answers on the survey. Participants from Group A and Group B may not have responded honestly to the questionnaires because they may have thought that their answers would be made known to others. The participants from each group may also have responded in a socially acceptable manner because they did not want to appear as having an issue or exaggerate answers to 'help' the research. To alleviate socially desirable answers, the participants

were informed that their responses would be confidential, and that they could have dropped out at any time during the survey if one did not feel comfortable with the survey questions.

The final threat that discussed in this dissertation is I used convenience sampling to obtain the participants for the study. A convenience sample was used because it is not always practical to recruit and measure an entire population (Elfil & Negida, 2017). The advantages to using the convenience sample is that it is one of the most common forms of sampling strategy in the social sciences (Setia, 2016). The convenience sample size saves I money, time, and some people to partake in the study (Elfil & Negida, 2017). Although there are several advantages to performing a convenience sampling technique there is one significant limitation. The limitation of convenience sampling is the lack of randomness of the sample and exclusion of people who do not meet the needs of the study (Emerson, 2015; Hultsch, MacDonald, Hunter, Maitland, & Dixon, 2002). The final limitation that was discussed for the study was that there was no background of mental health, use of mental health services, or use of medication history of the participants who participated in the study.

### **Ethical Procedures**

I submitted ethical procedures regarding this study to, and subsequently gained the approval from, Walden University's Ethics Committee. Once Walden University provided IRB approval, I followed all policies regarding conducting student research accordingly. Also, any changes to the procedure would have been made after notifying IRB to gain approval. I provided the consent form to participants emphasizing that their

participation is strictly voluntary and were free to discontinue participation at any time. I also emphasized in the consent form to participants that confidentiality and anonymity would always be maintained. Once I obtained all necessary approvals, additional participants for this study were recruited using LinkedIn and Facebook, allowing for local searches specific to individuals with certain backgrounds and mentorship program enrollment status.

Participants were informed that although there would be no anticipation of harm to their emotional well-being, due to some of the subject material, psychological resources were listed for them to seek out on their own should they deem it necessary. They were also informed of the benefits of the study, which was to add to the research on mentorship programs, depression symptomatology, and quality of life.

### **Summary**

This chapter discussed the essential components of this study's research methods. The purpose of this quantitative study was to compare depression symptomatology and quality of life rates among emerging adults who enrolled and emerging adults who did not enroll in a mentorship program as an adolescent while in high school. Furthermore, I used ANCOVA to help determine if a mentorship program influences depression symptomatology and quality of life. The next chapter articulates the results of the data collection.

## Chapter 4: Results

### **Introduction**

Mentorship programs include youth development curricula that support the leadership and personal involvement of adolescents. According to Sulimani-Aidan, Melkman, and Hellman (2018), these programs are based on the premise that if a positive person makes an impact on an adolescent's social, emotional, and educational well-being, this individual will enhance the adolescent's positive identity. Sulimani-Aidan et al. went on to note that research is needed to explore the long-term effects of the relationship between the mentor and mentee in a mentorship program. The purpose of this study was to determine whether there was a difference in depression and quality of life among emerging adults who enrolled in a mentorship program as an adolescent while in high school versus emerging adults who did not enroll in a mentorship program as an adolescent while in high school. This chapter begins with a description of the participant characteristics, followed by a detailed analysis of the results. The chapter concludes with a brief summary of the chapter findings.

### **Data Collection**

I collected data through an online web survey using Survey Monkey. The individuals included two groups totaling 128 participants from Union County, New Jersey. The recruitment of the first group (Group B) was done through the mentorship program of Northern New Jersey (MPNNJ), whose chief executive officer sent out an e-mail to alumni members. The recruitment of the second group (Group A) was via LinkedIn, Facebook, and flyers posted in Union County organizations including Shoprite

and Union County College. The time frame for data collection was 7 weeks. There were no discrepancies in data collection from the research plan presented in Chapter 3.

### **Demographics of Sample**

I administered the survey to participants in each group between March and May 2018. There were no adverse events or circumstances requiring a report to the IRB. The total number of participants from the MPNNJ group (Group B) was 64, and the total from the non-MPNNJ group (Group A) was also 64. The final sample of 128 participants consisted of mostly women ( $n = 95, 74.2\%$ ), while Hispanic participants represented the most prominent ethnicity/race ( $n = 47, 36.7\%$ ). The most representative age range was 28 to 30 ( $n = 59, 46.1\%$ ). More participants reported that their highest level of education was a bachelor's degree ( $n = 53, 33.6\%$ ) than those who reported having had some high school or less ( $n = 18, 14.1\%$ ). Information about the 128 participants and the demographic data included in this study are reflected in Table 1.

Table 1

*Demographic Characteristics*

Characteristic	<i>N</i>	%
<b>Gender</b>		
Male	33	25.8
Female	95	74.2
Total	128	100
<b>Age</b>		
18-21	21	16.8
22-25	13	10.4
26-28	32	25.0
28-30	59	46.1
Missing	3	2.3
<b>Ethnicity/Race</b>		
White/Caucasian	34	26.6
Black/African American	34	26.6
Hispanic/Latino	47	36.7
American Indian/Native American	3	2.3
Asian	3	2.3
Prefer not to say	5	3.9
Missing	2	1.6
<b>Education</b>		
High school or less	18	14.1
Some college	43	41.4
Bachelor's degree	53	33.6
Master's degree or higher	14	10.9
<b>Time enrolled in MPNNJ</b>		
Never been enrolled in MPNNJ (non-MPNNJ)	64	50
0-3 months (MPNNJ)	32	24.2
3-6 months (MPNNJ)	0	n/a
6-12 months (MPNNJ)	6	4.7
18 months or more (MPNNJ)	28	21.9

### Means and Standard Deviations of Dependent Variables

Descriptive results for the dependent variables of depression and quality of life of the 128 participants with unadjusted means and standard deviations (data without the factors of job satisfaction and substance use) in each group is shown below in Table 2.

Table 2

#### *Means and Standard Deviations of Dependent Variables*

	Depression			Quality of life		
	<i>Mean</i>	<i>SD</i>	<i>n</i>	<i>Mean</i>	<i>SD</i>	<i>n</i>
Mentorship program						
NON-MPNNJ (Group A)	52.88	18.64	64	105.17	19.07	64
MPNNJ (Group B)	38.70	17.24	64	121.58	24.16	64
Total	45.79	19.25	128	113.38	23.19	128

Descriptive results of each dependent variable of depression and quality of life (data with the covariates of job satisfaction and substance use factored in) including adjusted means and standard deviations for each group can be seen in Table 3.

Table 3

*Adjusted Means and Standard Deviations of Covariates*

<u>Covariates</u>		<u>Depression</u>			<u>Quality of life</u>		
Mentorship program		Adj. Mean	SD	<i>n</i>	Adj. Mean	SD	<i>n</i>
Job satisfaction	NON- MPNNJ (Group A)	51.21	2.19	64	107.55	2.26	64
	MPNNJ (Group B)	40.56	2.16	64	117.54	2.26	64
Substance use	NON- MPNNJ (Group A)	51.92	2.15	64	106.34	2.60	64
	MPNNJ (Group B)	36.66	2.15	64	120.41	2.60	64

**Results**

In this section, I detail the primary analysis for each research question and its corresponding hypotheses. The assumptions of ANCOVA for each research question and description of results are also presented in this section.

**Research Question 1**

Is there a significant difference in depression symptomatology between emerging adults who enrolled in a mentorship program as an adolescent in high school, and emerging adults who did not enroll in a mentorship program as an adolescent in high school, while controlling for job satisfaction and substance abuse?

$H_{01}$ : There is no significant difference in depression symptomatology between emerging adults who enrolled in a mentorship program as an adolescent in high school,



and emerging adults who did not enroll in a mentorship program as an adolescent in high school, while controlling for job satisfaction and substance abuse.

*H<sub>a1</sub>*: There is a significant difference in depression symptomatology between emerging adults who enrolled in a mentorship program as an adolescent in high school, and emerging adults who did not enroll in a mentorship program as an adolescent in high school, while controlling for job satisfaction and substance abuse.

Analysis assumptions. There are several assumptions for ANCOVA which include homogeneity of variances, regression, normality, and linearity. In addition to the stated assumptions, it was assumed that the covariates for RQ1, job satisfaction and substance use, were related to depression symptomatology, but unrelated to mentorship program (MPNNJ vs. non- MPNNJ). Moreover, it was assumed that the same covariates for RQ2, job satisfaction and substance use, were related to quality of life rates, but unrelated to mentorship program (MPNNJ vs. non-MPNNJ). All hypotheses were tested using typical procedures as recommended by Tabachnick and Fidell (2013). The testing of all ANCOVA assumptions can be found in Appendix O.

**Analysis for Research Question 1.** To examine RQ1, I conducted an ANCOVA to assess whether there were differences in depression symptomatology among emerging adults from the MPNNJ and non-MPNNJ, after controlling for job satisfaction and substance use. Prior to analysis, the assumption of normality was assessed with a Shapiro Wilke's test. Levene's test was used to assess the assumption of normality of variances. The results of the Levene's test was significant, which indicated the assumption was not met (Tabachnick & Fidell, 2013). Rheinheimer and Penfield (2001) reported that the

ANCOVA test is powerful enough to over-ride violations of the normality assumption under conditions in which there are large sample sizes. Similarly, Tabachnick and Fidell (2013) noted that the  $F$  test is potent to issues with normality when  $n > 40$ . Based on the noted information from past research, and the large sample size, the test for normality was met. The assumption of equality of variance was also assessed with the Levene's test. Please see Appendix O for Assumption of ANCOVA results.

The results of the ANCOVA for Program was statistically significant,  $F(1, 124) = 10.86, p = .001$ , partial eta-squared  $\eta^2 = .081$ , accounting for 8.1% of group differences between MPNNJ (Group B) and non-MPNNJ (Group A) in depression scores. MPNNJ group B (covariate adjusted  $M = 43.08$ ) had significantly lower depression scores than non-MPNNJ group A (covariate adjusted  $M = 52.24$ ). The result of the ANCOVA was significant for job satisfaction,  $F(1, 127) = 7.04, p = .009$ , partial eta-squared  $\eta^2 = 0.05$ , and represents a small effect size accounting for 5-percent of the variability in the scores, suggesting that job satisfaction is related to depression symptomatology. The results for substance use were as follows:  $F(1, 127) = 5.26, p = .024$ , partial eta-squared  $\eta^2 = 0.04$ , and represents a small effect size accounting for 4-percent of the variability in the scores, suggesting that substance use is related to depression symptomatology. Even though the Levene's test of variance between groups for the ANCOVA showed a significant difference, the  $F$  test is robust to this assumption, as stated earlier as,  $F(1, 126) = 9.77, p = <.001$ . Both covariates were statistically significantly related to depression. From the parameter estimates job satisfaction and depression were negatively related, and substance use and depression were positively related. Tables 4 shows the full results of

the analyses. I rejected the null hypothesis, in favor of the alternative for Research Question 1. Results of the ANCOVA are presented in Table 4.

Table 4

*ANCOVA: Hypothesis 1 Results for Quality of Life, Depression, and Substance Use*

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	$\eta_p^2$
Job Satisfaction	1610.17	1	1610.17	7.04	.01	.05
Substance Use	1203.58	1	1203.58	5.26	.02	.04
Program	2483.89	1	2783.89	10.86	.00	.81

## **Research Question 2**

Is there a significant difference in quality of life between emerging adults who enrolled in a mentorship program as an adolescent in high school, and emerging adults who did not enroll in a mentorship program as an adolescent in high school, while controlling for job satisfaction and substance abuse?

$H_02$ : There is no significant difference in quality of life between emerging adults who enrolled in a mentorship program as an adolescent in high school, and emerging adults who did not enroll in a mentorship program as an adolescent in high school, while controlling for job satisfaction and substance abuse.

$H_{a2}$ : There is a significant difference in quality of life between emerging adults who enrolled in a mentorship program as an adolescent in high school, and emerging adults who did not enroll in a mentorship program as an adolescent in high school, while controlling for job satisfaction and substance abuse.

**Analysis for Research Question 2.** To examine RQ2, I conducted an ANCOVA to assess whether there were differences in quality of life rates from emerging adults from the MPNNJ and non-MPNNJ groups, after controlling for job satisfaction and substance use. Prior to analysis, the assumption of normality was assessed with a Shapiro Wilke's test. Levene's test was used to assess the assumption of normality of variances. The results of the Levene's test was significant, indicating that the assumption was not met. In many cases, the ANCOVA is considered a robust statistic in which assumptions can be violated with relatively minor effects (Tabachnick & Fidell, 2013). The assumption of equality of variance was also assessed with the Levene's test. The results of the Levene's test was not significant, indicating the assumption was met. The results from the test were as follows:  $F(1, 126) = 0.93, p = .336$ . The results of the ANCOVA was significant for Program,  $F(1, 124) = 7.35, p = .008$ , partial eta-squared  $\eta_p^2 = .06$ , suggesting there was a difference in quality of life while controlling for job satisfaction and substance abuse, and represents a medium effect size accounting for approximately 6% of the variability in quality of life scores. Based on the output MPNNJ Group B (covariate adjusted  $M = 116.55$ ) had a statistically significantly higher quality of life score than MPNNJ group A (covariate adjusted  $M = 108.20$ ),  $F(1, 124) = 7.35, p = .008$ , partial eta-squared  $\eta_p^2 = .06$ , a medium size effect accounting for 6% of the variance in quality of life scores.

The results of the ANCOVA for both covariates were statistically significantly related to quality of life: job satisfaction,  $F(1, 124) = 45.35, p < .001$ , partial eta-squared  $\eta_p^2 = .27$ , a very large effect accounting for 27% of the variance in quality of life; and substance use,  $F(1, 124) = 4.86, p = .03$ , partial eta-squared  $\eta_p^2 = .04$ , a small-to-medium

effect accounting for 4.0% of the variance in quality of life. From the parameter estimates job satisfaction and quality of life were positively related, and substance use and quality of life were negatively related. I rejected the null hypothesis, in favor of the alternative for Research Question 2. Results of the ANCOVA are presented in Table 5.

Table 5

*ANCOVA: Hypothesis 2 Results for Quality of Life, Depression, and Job Satisfaction*

Source	SS	Df	MS	F	p	$\eta_p^2$
Job Satisfaction	12762.861	1	12762.86	45.35	.000	.27
Substance Use	1367.561	1	1367.56	4.86	.03	.04
Program	2069.83	1	2069.83	7.35	.01	.06

### Summary

In the current study, there was a comparison of current depression and quality of life rates of MPNNJ and non-MPNNJ emerging adults who were or were not enrolled in the mentorship program as an adolescent in high school. The results of the analysis pertaining to Research Question 1 were significant: there is a significant decrease in depression symptomatology for MPNNJ (Group B) than non-MPNNJ (Group A) emerging adults while controlling for job satisfaction and substance abuse.

The results of the analysis pertaining to Research Question 2 were significant: there is a significant increase in the quality of life rates for MPNNJ (Group B) than non-MPNNJ (Group A) emerging adults while controlling for job satisfaction and substance abuse.

Data was analyzed using an ANCOVA to determine the effects of mentorship program of MPNNJ of Northern New Jersey, while controlling for job satisfaction and

substance use. It was concluded that there was a significant difference between the non-MPNNJ and the MPNNJ group, therefore, I rejected the null hypotheses, in favor of the alternatives for each research question. The interpretation of the findings, limitations of the study, recommendations, and implications will be discussed in Chapter Five.

## Chapter 5: Discussion, Conclusions, and Recommendations

### **Introduction**

The primary purpose of this nonexperimental ex post facto study was to compare depression symptomatology and quality of life among emerging adults who enrolled in a mentorship program as an adolescent while in high school and those who did not enroll in such a program. Using an ANCOVA as part of my statistical design, I sought to compare depression symptomatology and quality of life rates of emerging adults who were or were not enrolled in a mentorship program after adjusting for the covariates of job satisfaction and substance use. Chapter 5 summarizes the entire dissertation and discusses its outcomes relative to current and future research. The results of the study are discussed in relations to the research questions and hypotheses. Finally, I offer recommendations to expand the depth of the current study or to generalize the results of future research before making final conclusions about the study.

### **Interpretation of the Findings**

I designed the study to address the gap in the literature regarding the long-term effects of mentorship programs. There was a significant statistical result in study participants reporting depression symptomatology as they recalled their enrollment in a mentorship program. There was also a significant statistical result in reporting better quality of life rates for participants in the study. In other words, this study's results did replicate the positive effects of mentorship programs that have been observed in previous studies (Rhodes & Lowe, 2008).

There may be several reasons as to why participants from each group differed in reporting depression symptomatology and quality of life rates. One factor may be because of the core policies of the youth development program. The mentorship program of Northern New Jersey's (MPNNJ) principles may have a lasting impact on the lives of the youth the organization encounters. The MPNNJ promotes the social well-being of youth with programs that have been found to prevent substance use, help adolescents with career choices, and assist with educational needs (Greene, 2015). The MPNNJ also has programs that empower youth to reach their highest potential in life to enhance their chances of becoming respectable members of their communities.

The second reason the MPNNJ group in the study may have reported lower depression symptomatology and higher quality of life may be because of the training the adults who were mentors received prior to engaging with the adolescents. Training and providing resources such as contracts and welcome packages can increase the effectiveness of the type of training program (Cole, 2018). Mentors who understand and relate to the vision of the mentor's organization can have better interactions with the youth they mentor. Mentors who are trained to understand the values, culture, and infrastructure of the mentorship program are better able to relate with their mentees as they are trained to understand how to develop relationship strategies such as empathetic listening and healthy emotional bonding (Higley, Walker, Bishop, & Fritz, 2016). Mentors who are trained by the organization in which they are mentoring may have better positive outcomes with their mentees.



The third reason emerging adults from the MPNNJ group may have reported lower depression symptomatology and higher quality of life rates may be because the mentor-mentee relationship may have had a lasting positive effect on mentees. As discussed in Chapter 2, the longer mentors and mentees may have to develop their emotional connection, there may be an increase of better psychological and social outcomes for mentees (Sulimani-Aidan et al., 2018). The mentor-mentee relationship may contribute to long-term positive social interactions for enrollees in mentorship programs (Rhodes & Lowe, 2008). Another reason why the MPNNJ and the non-MPNNJ groups appeared to differ in depression symptomatology and quality of life rates may be due to the MPNNJ having an alumni association. The alumni association may have played a significant part in keeping former members connected to their mentors and the organization itself. The alumni association allows former members to communicate with each other, volunteer in activities, and make donations (Lowe, 2012). The added investment into the organization and current members may have been one factor why former members reported lower depression symptomatology and higher quality of life rates.

### **Interpretation of Findings in Relation to the Theoretical Framework**

As first discussed in Chapter 1, I based the study on Beck's (1976) theory of cognition. The theory posits that for depression to affect adolescents, there must be genetic and environmental factors in place. High environmental risk factors affect adolescents differently and can vary by situations. Raposa et al. (2016) provided some examples of environmental risks such as interpersonal family issues and low

socioeconomic status. Calvete, Orue, and Hankin (2013) summarized Beck's theory by stating that it encompasses cognitive schemas that may lead one to have a distorted worldview about his or her environment and social interactions with people and self. The negative thoughts or schemas are widely based on constant negative feelings about oneself that ruminate with the individual to enforce negative thought patterns (Calvete et al., 2013). Beck's theory of cognition, therefore, is a relevant theory to use in addressing how adolescents form negative thoughts.

Beck's (1976) theory is a construct that can conclude how adolescents may view a favorable or adverse bond with a mentor. As an example, an adolescent with depression symptomatology may have feelings of self-doubt and unworthiness and may continuously feel as though he or she has no hope. The negative cognitions and environmental risk factors may have led the mentee to have a distorted view of the relationship and hinder the connection with their mentor. Eby, Butts, Durley, and Ragins (2010) found that mentees who acquire maladaptive environmental factors that hinder mentor-mentee relationship engagement display adverse reactions to their mentors. The mentee may manipulate the relationship, display poor work ethic, and minimize the quality of the relationship (Eby et al., 2010). Similarly, mentees who may have high environmental risk factors can minimize their negative cognitions through the assistance of the mentor-mentee relationship, which can ensure better emotional outcomes. Goldner and Scharf (2014) noted that an authentic caring mentor-mentee relationship could assist with enhancing a young person's maladaptive cognitions about their current relationships with themselves and others which can ultimately increase their overall well-being and social

interactions with others. High environmental risk factors and negative cognitions, therefore, may play a significant role in the development and nurturing of the mentor-mentee relationship which leads to the success of mentorship programs.

### **Interpretation of Findings in Relation to Depression Symptomatology**

The study's findings were consistent with much of the literature about the positive developmental changes that occur among adolescents who are enrolled in mentorship programs. The primary goals of youth development programs are to deter youth from engaging in maladaptive behaviors and hopefully assist with improving mental health outcomes after the program ends, though any positive results that may occur can be short-lived depending on the program (Olson & Goddard, 2015). Over the years a vast amount of research has provided information about positive youth development organizations. At the beginning of the existence of positive development programs, the primary goals were to help reduce adverse behavioral outcomes such as substance use, delinquency, and academic failure (Raposa et al., 2016). During the 1990s, the focus evolved to include mental health issues, and, instead of aiming to deter negative behaviors, the focus of programs shifted to preventing adverse mental health issues by promoting positive outcomes (Olson & Goddard, 2015). This shift marked the beginnings of the positive youth development movement.

In changing their focus to mental health issues, researchers undertook studies of what factors hindered adolescents from maintaining or achieving psychological wellbeing. Researchers found that depression was a leading cause of internalizing behaviors in adolescents (Leyton-Armakan et al., 2012). Factors that led to adolescents

displaying depressive symptoms include problems with their social environments such as family, peers, and school colleagues (Leyton-Armakan et al., 2012). Although mentorship programs assist adolescents with adverse behavioral or mental health issues, the results can vary throughout different programs and mentor-mentee relationships, thus providing different statistical evidence across programs (Olson & Goddard, 2015). Furthermore, the benefits of mentorship programs for adolescents' depressive symptomatology can change depending on the program's goals' and the mentor-mentee relationship. The program goals and the quality of the mentor-mentee relationship of the mentorship program of Northern New Jersey mentorship program may have contributed to the reason why emerging adults from the MPNNJ group in the study reported lower depression symptomatology and higher quality of life rates.

### **Interpretation of Findings in Relation to Quality of Life**

The results of the findings supported much of the literature about the positive developmental changes that occur with adolescents' enrollment in mentorship programs in terms of depression symptomatology and quality of life. Many of the studies from past literature about the quality of life or life satisfaction posit that it is synonymous with higher quality of physical, social, and emotional wellbeing (Freire, & Ferreira, 2018). As noted in Brady, Dolan, and Canavan (2017) quality of life is enhanced when you share in special interests with others with mutual respect that adds to increased psychological health. However, Higley et al. (2016) found that poor emotional or psychological health can deprive quality of life and lead to deficiencies in behavioral and mental health

functioning. Quality of life is a predictor of overall wellbeing that can be detrimental to mental health if basic life needs are not met.

### **Interpretation of Findings in Relation to Job Satisfaction**

The results of the findings supported much of the literature about the significance of job satisfaction regarding depression symptomatology and quality of life. Job satisfaction was significantly related to depression symptomatology in the results Chapter 4 of this dissertation. Individuals who report low job satisfaction are more susceptible to low mental health outcomes or greater depression symptoms and higher physical ailments such as heart disease and diabetic health issues (Burns, Butterworth, & Anstey, (2016). Thuynsma, and de Beer (2017) noted that life satisfaction is a concept in which a person is content with his or her aspects of life which pertains to career, household, and time of leisure. Job satisfaction is beneficial to maintaining optimal mental health and quality of life.

### **Interpretation of Findings in Relation to Substance Use**

The results of the findings are consistent with much of the research about substance use concerning depression symptomatology and quality of life. Individuals who report higher incidences of substance use tend to have poor mental health outcomes, costly treatment interventions, and high mortality rates (Han, Olfson, & Mojtabai, 2017). Similarly, Juel, Kristiansen, Madsen, Munk-Jørgensen, and Hjorth, (2017) reported that individuals who have mental health issues and abuse substances are more likely to have lower quality of life rates. Substance use is a factor that may be detrimental to the mental health and quality of life of an individual.

### **Limitations of the Study**

One of the limitations of this study is the nonprobability sampling method. In random sampling a researcher is free from bias, but in purposive sampling, this is not the case as participants can be chosen from recommendations or out of convenience (Wu, Huang, & Lee, 2014). Also, with purposive or non-probability sampling, a researcher cannot generalize to the broader population about the analytic outcomes (Wu et al., 2014). Another limitation of this study was the survey collection process. Although there were some forms of electronic communication such as email and social media websites such as LinkedIn was utilized, the use of other forms of social media websites such as Facebook and Snapchat may have been helpful. Jin (2011) noted that young adults have a tremendous reliance on social media sites and the use of emails is not the most common mode of communication used by that group. Broadening the social media aspect of data collection may have reduced the time spent collecting the data from Survey Monkey.

The final limitation for this study pertained to the participant reading the initial and subsequent follow-up emails. Although the emails were sent, it was unfortunate that some potential participants chose not to take part in reading the email. I emailed invitations for participants to engage in the survey, but participants may have deleted the email because the person did not recognize the source. Dillman (2017) found that people often scan or discard emails before reading them due to the threat of it being unsolicited junk mail or spam. A researcher runs the risk of losing participants due to lack of motivation or fear of receiving another unwanted email solicitation.

## Recommendations

Multiple recommendations for further research are apparent based on the findings from this study. The first recommendation is for future investigators to consider the use of other covariates such as social support or parental support as other factors that may influence individuals expressing depression symptomatology or quality of life rates. Previous researchers have posited that social or familial support can positively impact mental health outcomes (Nosheen, Riaz, Malik, Yasmin, & Malik, 2017). Individuals who have a working relationship with practitioners and social support tend to have better connections with their counselor and obtain an increase in positive therapy outcomes (Coyne, Constantino, Ravitz, & McBride, 2018). Similarly, Lindfors, Ojanen, Jääskeläinen, and Knekt (2014) noted that social support is beneficial to help clients shield their reactions to stressors and minimize a cycle of maladaptive psychological behaviors. Social support outside of therapeutic treatment with enhancing the clients' relationship with their therapist.

The second recommendation is the continued use of mentorship programs in community, school, and faith-based settings to reach at-risk youth. Sulimani-Aidan et al. (2018) found that mentorship programs play a significant role in developing the positive attributes of troubled youth. Contact with the mentee should extend beyond the formal relationship to ensure that the benefits from the quality relationship can continue long after the program ends. It is the goal of mentorship programs that the formal relationship grows into a more natural bond that extends throughout the life of the individual (Spencer

et al., 2017). The mentor-mentee relationship may be long-term if both parties involved stay connected after the disbandment of the program.

The third recommendation is that mentorship programs should retain the contact information of former members to form an alumni association to help foster continued positive change. An organization that has a plan to obtain the contact information of alumni is more likely to stay abreast of data about the alumni (Lowe, 2012). A significant role of an alumni association is to maintain contact with mentors and mentees by updating personal information to assist with recruitment and retention.

The fourth and final recommendation is for future researchers to continue to track the long-term effects of mentorship programs on youths' psychological well-being throughout their lives. Tracking outcomes in any capacity have been significantly documented as a valued means of gathering information about the program and its success (Anderson et al., 2018). Mentorship programs that track long-term results provide valuable empirical evidence that can be readily available upon request for future researchers.

### **Implications**

Two significant implications for social change exist based on the results from this study. The first implication is that the findings of the current study may add to the body of knowledge about the long-term positive effects of mentorship programs regarding depression symptomatology and quality of life (DeWit, DuBois, Erdem, Larose, & Lipman, 2016a). As an example, if local communities have empirical data to support the



progress that can be made in the lives of youth, more youth development programs may strive for long-term positive outcomes.

The second implication is that practitioners may help their clients by offering more options to incorporate with their treatments such as inquiring about a significant person in a client's life who can be of support. Social support is often considered an added buffer to maladaptive mental health behaviors and emotional coping skills (Nosheen et al., 2017). The significance of social support should not be taken for granted in mental health issues with young individuals.

### **Conclusion**

The purpose of this quantitative study was to compare depression symptomatology and quality of life rates among emerging adults who enrolled and emerging adults who did not enroll in a mentorship program as an adolescent while in high school. The research community should continue to study mentorship programs, particularly regarding the significance of the mentor-mentee relationship to obtain positive outcomes of the long term. The balance of retaining mentors and establishing a positive long-term relationship with mentees is complex. The value of this study was to examine the significance of mentorship programs in the lives of adolescents. This study demonstrated that any positive outcomes mentorship programs instill in adolescents can last after the program ends.

The results of this study may contribute to an ongoing dialogue about the impact of mentorship programs. Mentorship programs are valuable organizations in communities that have people who invest their talents into at-risk adolescents. The significance of this

study may show the importance of the mentor-mentee relationship and how it could be encouraged to grow and sustained in the life of the adolescent. This study has the potential to recognize mentoring as a long-term commitment and not a short-term engagement. The positive outcomes of a mentor-mentee relationship that is developed through mentorship programs have promising future implications for adolescents. The bond that is created through the mentor-mentee relationship may help with the educational, emotional and social well-being of the young person for years after the program ends. The social change ramifications for this study may provide a blueprint for future researchers to continue to examine mentorship programs and long-term positive outcomes. The analyses of the data did show significant findings and the information is valuable.

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## Appendix A: MPNNJ Recruitment E-mail

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Hello, my name is Tiesha Scott. I am a graduate student at Walden University in the clinical psychology program, candidate for PhD. I am conducting research on mentorship program enrollment, depression symptomatology, and quality of life in the Union county area, and I am inviting individuals between the ages 18-30 to participate because you are an alumnus of the Mentorship Program of Northern New Jersey (MPNNJ).

Participation in this research includes taking some surveys about your recollection of being enrolled in a mentorship program as an adolescent while in high school and your current depression symptomatology and quality of life, which I expect to take up to 25 minutes of your time to complete. I understand this is a significant amount of time and I thank you in advance. It is the hope of this researcher that the data gained through this study will help to further the ongoing professional development of mentors and add significant information to the psychology field regarding depression. If you know of any other alumni of the MPNNJ who may be interested in participating in this survey, please feel free to forward this message. You will be asked to complete four internet-based surveys. Please take the time to complete a survey by clicking on the following link: <https://www.surveymonkey.com>.

You will be compensated for your time by receiving a 5\$ Amazon gift card upon completion of the surveys.

## Appendix B: MPNNJ Follow Up E-mail

Hello, my name is Tiesha Scott, and I am a pre-doctoral student in Clinical Psychology at Walden University. I am hoping to conduct research exploring the experiences of emerging adults who entered a mentorship program while as an adolescent in high school. If you have already received this email and contributed, I thank you in advance. If you are an alumnus who entered a mentorship program please consider adding your experience to this research. Two objectives of the survey include: (a) contributing to the continued professional development of mentors, and (b) providing additional insights in the importance of mentorship programs and their impact on depression symptomatology and quality of life. If you are such an individual, please take the time to complete a survey by clicking on the following link:

<https://www.surveymonkey.com> I understand your time is extremely valuable and I hope you will take the time to contribute to this research. More information regarding the research can be found at the link mentioned above. It is the hope of this researcher that the information gained through this study will help to further the ongoing of mentors and add significant information to the psychology field regarding depression. I would expect the survey to take about 25 minutes, which I understand is a significant amount of time and I thank you in advance. If you know of any other alumni who may be interested in participating in this survey please feel free to forward this message.

Contact Information: If you have any questions about this study, you can contact the person(s) below:

**Content:** The surveys will ask you to provide socio-demographic information such as age, sex, ethnicity, etc. as well as answer questions related to your present depression symptomatology and quality of life, as an emerging adult who did not enter a mentorship program as an adolescent in high school.

**Time:** I expect it will take between 20 to 30 minutes for the average reader to complete the survey.

**Benefits:** You will be compensated for your time by receiving a 5\$ Amazon gift card upon completion of the surveys.

**Potential Negative Effects:** You may experience mild discomfort answering questions related to depression symptomatology. Since you will be able to complete the survey anywhere you have internet access you may take the survey in the privacy of your home. You may call the

National Suicide Prevention Lifeline

1-800-273-TALK (8255)

[www.suicidepreventionlifeline.org](http://www.suicidepreventionlifeline.org)

## Appendix C: Non-MPNNJ Participant Flyer

**VOLUNTEERS NEEDED FOR RESEARCH:  
SURVEY ON  
MENTORSHIP PROGRAMS, DEPRESSION  
SYMPTOMATOLOGY, AND QUALITY OF LIFE**

I am a student at Walden University looking for volunteers between the ages of 18-30 to complete 5 surveys about mentorship program enrollment, depression symptomatology, and quality of life. As a participant in this study, you will be asked to: recall your history as an adolescent while in high school and your current depression symptomatology and quality of life and answer some questions about them. The study will take you about 25 minutes to complete all 5 surveys online. In appreciation of your time, you will receive a \$5 Amazon gift card.

If you are interested please inquire here at this link  
<https://www.surveymonkey.com/r/RS7K3ML>

Thank You!

## Appendix D: Non-MPNNJ Follow-Up Recruitment E-mail

Hello, my name is Tiesha Scott, and I am a pre-doctoral student in Clinical Psychology at Walden University. I am hoping to conduct research exploring the experiences of emerging adults who entered a mentorship program while as an adolescent in high school. If you have already received this email and contributed, I thank you in advance. If you are an alumnus who entered a mentorship program please consider adding your experience to this research. Two objectives of the survey include: (a) contributing to the continued professional development of mentors, and (b) providing additional insights in the importance of mentorship programs and their impact on depression symptomatology and quality of life. If you are such an individual, please take the time to complete a survey by clicking on the following link:

<https://www.surveymonkey.com/r/RS7K3ML>. I understand your time is extremely valuable and I hope you will take the time to contribute to this research. More information regarding the research can be found at the link mentioned above. It is the hope of this researcher that the information gained through this study will help to further the ongoing of mentors and add significant information to the psychology field regarding depression. I would expect the survey to take about 15 minutes, which I understand is a significant amount of time and I thank you in advance. If you know of any other alumni who may be interested in participating in this survey please feel free to forward this message.



Potential Negative Effects: You may experience mild discomfort answering questions related to depression symptomatology. Since you will be able to complete the survey anywhere you have internet access you may take the survey in the privacy of your home. You may call the

National Suicide Prevention Lifeline

1-800-273-TALK (8255)

[www.suicidepreventionlifeline.org](http://www.suicidepreventionlifeline.org)

Consent form addition:

This study will be reviewed and approved by Walden University's Institutional Review Board (IRB). The IRB determined that this study meets the ethical obligations required by federal law and University policies. If you have any questions or concerns regarding this study please contact the Walden University Research Participant Advocate at [irb@waldenu.edu](mailto:irb@waldenu.edu). I hope that you choose to participate in this study

|

## Appendix E: LinkedIn Invitation to Participate

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LinkedIn Invitation to Participate Mentorship Program Research:

Participation Requested: Hello, my name is Tiesha Scott, and I am a pre-doctoral student in clinical psychology at Walden University. I am hoping to conduct research exploring the experiences of emerging adults who entered a mentorship program while as an adolescent in high school and emerging adults who did not enter a mentorship program as an adolescent while in high school. If you are an emerging adult between the ages of 18-30, who did not enter a mentorship program as an adolescent while in high school, please take the time to complete the four surveys by clicking on the following link <https://www.surveymonkey.com/r/RS7K3ML> to complete the surveys. More information regarding the research can be found at the linked mentioned above. It is the hope of this researcher that the information gained through this study will help to further the importance of mentors and add significant information to the psychology field regarding depression. I would expect the survey to take about 25 minutes, which I un

Content: The surveys will ask you to provide socio-demographic information such as age, sex, ethnicity, etc. as well as answer questions related to your present depression symptomatology and quality of life, as an emerging adult who did not enter a mentorship program as an adolescent in high school.

Time: I expect it will take between 12 to 15 minutes for the average reader to complete the surveys.

Benefits: You will be compensated for your time by receiving a 5\$ Amazon gift card upon completion of the surveys.

Potential Negative Effects: You may experience mild discomfort answering questions related to depression symptomatology. Since you will be able to complete the survey anywhere you have internet access you may take the survey in the privacy of your home. You may call the

National Suicide Prevention Lifeline

1-800-273-TALK (8255)

[www.suicidepreventionlifeline.org](http://www.suicidepreventionlifeline.org)


Consent form addition:

This study will be reviewed and approved by Walden University's Institutional Review Board (IRB). The IRB determined that this study meets the ethical obligations required by federal law and University policies. If you have any questions or concerns regarding this study please contact the Walden University Research Participant Advocate at [irb@waldenu.edu](mailto:irb@waldenu.edu). I hope that you choose to participate in this study I understand that this is a significant amount of time and I thank you in advance.

Sincerely,

Tiesha Scott Walden University Clinical Psychology

## Appendix F: Demographic Survey for All Participants

- 5) What was your total income last year?
- \$0-25,999
  - \$26,000- 51,999
  - \$52,000-74,999
  - More than \$75,000
  - Do not know/ decline to say
-  6) What is your educational status?
- High school or less
  - Some college
  - Bachelor's degree
  - Master's degree or higher
- 7) What languages are spoken in your home? (Mark all that apply)
- English
  - Spanish
  - Other (Explain):
- 8) How long have you been enrolled in the Boys and Girls Club of America mentorship program as an adolescent while in high school?
- 0-3 months
  - 4-6 months
  - 6-12 months
  - 12-18 months
  - 18 months or more
- 9) What method would you prefer should researcher need to contact you?
- Email (please provide)
  - Phone call (Please provide number)
  - Text (please provide number)
  - Mail (Explain)
  - Other (Explain)

## Appendix G: Job Satisfaction Scale Survey

**Permissions:**

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## Appendix H: Quality of Life Scale

How would you rate the **quality** of your...

	Poor	Below Average	Average	Above Average	Excellent
18. Spiritual growth	1	2	3	4	5
19. Sense of NOT feeling sad, blue, or depressed	1	2	3	4	5
20. Ability to solve problems	1	2	3	4	5
21. Emotional relationships with others	1	2	3	4	5
22. Spiritual beliefs	1	2	3	4	5
23. Sense of NOT feeling worried, tense or anxious	1	2	3	4	5
24. Body shape	1	2	3	4	5
25. Spiritual life	1	2	3	4	5
26. Memory	1	2	3	4	5
27. Bodily appearance	1	2	3	4	5
28. Social relationships	1	2	3	4	5
29. Faith	1	2	3	4	5
30. Ability to continue learning	1	2	3	4	5
31. Level of Physical activity	1	2	3	4	5
32. Ability to get around	1	2	3	4	5

**Reference:** Gill, D.L., Chang, Y-K., Murphy, K.M., Speed, K.M., Hammond, C.C., Rodriguez, E.A., Lyu, M., & Shang, Y-T. (2011). Quality of life assessment in physical activity and health promotion. *Applied Research in Quality of Life*, 6, 181-200. (DOI 10.1007/s11482-010-9126-2).

**QoL Survey Scales and Related Items:**

*Social* (5 items): Q2 + Q13 + Q17 + Q21 + Q28

*Spiritual* (5 items): Q14 + Q18 + Q22 + Q25 + Q29

*Emotional* (5 items): Q3 + Q4 + Q10 + Q19 + Q23

*Cognitive* (5 items): Q5 + Q8 + Q20 + Q26 + Q30

*Physical* (5 items): Q1 + Q6 + Q24 + Q27 + Q31

*ADL/functional* (3 items): Q11 + Q15 + Q32

*Integrated* (4 items): Q7 + Q9 + Q12 + Q16

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## Appendix I: Permissions to Use Quality of Life Scale

Inbox



2 attachments (303 KB) Download all Save all to OneDrive - Laureate Education

Tiesha - YOU certainly have my permission to use the QoL survey. The survey and information on scoring is in the article. I'll attach that here and the survey s we've used it..

...



Tiesha Scott

Thu 7/13, 1:29 PM



Hi Diane L. Gill, I am reaching out to you as to I would like your permission to use your **Quality** of Life Survey- Version 2 for my research study.

My name is Tiesha Scott and I am a Clinical Psychology Candidate for Phd at Walden University. I am at the proposal stage of my dissertation studies and I was performing some research and I found your survey in the school's psychtest database. Your measure would be great for me to use as I am examining if there is a significant difference in depression symptomatology and **quality** of life between emerging adults who enrolled in a mentorship program as an adolescent while in high school versus emerging adults who did not enroll in a mentorship program as an adolescent while in high school. I read your article and I found that the reliability of your instrument would be a great value to my study.

Please contact me directly via this email and I hope to hear back from you soon in regards to the use of your survey.

Please let me know if anything else is needed from me on my end. Thank You.



## Appendix J: Simplified Beck Inventory Scale 19

Beck Depression Inventory-S19  
BDI-S, BDI-S19

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Items

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1. I feel sad
2. I feel discouraged about the future
3. I feel like a failure
4. I have a hard time enjoying things
5. I feel guilty
6. I feel punished
7. I am disappointed in myself
8. I blame myself for my faults and weaknesses
9. I think about killing myself
10. I cry
11. I feel annoyed and irritated
12. I have no interest in people
13. I put off making decisions
14. I worry about my looks
15. I have to push myself to do things
16. I don't sleep well
17. I feel tired
18. I have no appetite
19. I am worried about my health

---

Note. Items are ad hoc translations from the original German. Items are on a 6-point scale, ranging from 1 (never) to 6 (always).

PsycTESTS™ is a database of the American Psychological Association

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## Appendix K: Substance Use Measure



doi: 10.1037/t12312-000

## Substance Use Measures

## Items

**Cigarettes**

Have you smoked?

("yes" = 2, "have tried and given up" and "no, but would like to try" = 1, and "no and do not want to" = 0).

What was your age when you smoked cigarettes for the first time?

("have not tried" = 0, "older than 14" = 1, and "younger than 14" = 2).

How frequently do you currently smoke cigarettes?

("do not use" and missing value = 0, "1–2 times a month or less" = 1, and "1–2 times a week or more" = 2).

**Alcohol**

Have you used alcohol?

("yes" = 2, "have tried and given up" and "no, but would like to try" = 1, and "no and do not want to" = 0).

What was your age when you used alcohol for the first time?

("have not tried" = 0, "older than 14" = 1, and "younger than 14" = 2).

How frequently do you currently use alcohol?

("do not use" and missing value = 0, "1–2 times a month or less" = 1, and "1–2 times a week or more" = 2).

**Drugs**

Have you ever tried drugs?

("yes" = 2, "have tried and given up" and "no, but would like to try" = 1, and "no and do not want to" = 0).

What was your age when you used drugs for the first time?

("have not tried" = 0, "older than 14" = 1, and "younger than 14" = 2).

How frequently do you currently use drugs?

("do not use" and missing value = 0, "1–2 times a month or less" = 1, and "1–2 times a week or more" = 2).

*Note.* The third item, on the frequency of current use, asked about five types of alcoholic beverage (beer, vodka, wine, home-brew and others). An additional item asked respondents what drugs they had tried, if any.

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## Appendix L: Screening Questions

Please answer the following questions before proceeding to the survey: 1) Please specify your age. Please enter a whole number. If the participant indicates they are less than 18 years old the survey will close. The following message will appear, "Thank you for your interest in this survey. You indicated you were not 18 years or older and, therefore, may not participate in this survey.

2) Did you or have you ever been enrolled in a mentorship program as an adolescent while in high school? (a) Yes, (b) No. The survey will close once 64 participants answer (a) Yes. Once the maximum number of (a) Yes responses occurred and the participants completed the assessment, the survey will close. The following message will appear, "Thank you for your interest in this survey. The maximum number of participants indicated he or she did enroll in a mentorship program as an adolescent while in high school.

The survey will close once 64 participants answer (b) No. Once the maximum number of (b) No responses occurred and the participants completed the assessment, the survey will close. The following message will appear, "Thank you for your interest in this survey. The maximum number of participants indicated he or she did not enroll in a mentorship program as an adolescent while in high school.

## Appendix M: E-mail Request to Distribute Flyers

To whom it may concern:

I am presently in the process of conducting a comparative study on “Mentorship programs, Depression Symptomatology, and Quality of life” as my thesis project.

Knowing your utmost interest in the community and the importance of education, I would like to request permission that I be allowed to distribute flyers to your facility to recruit participants for my study.

Please contact me directly with via email or phone. I can provide an example of the recruitment letter upon request.

Thank you very much in anticipation of your favorable action and support.

Sincerely yours,

Tiesha Scott

Walden University

## Appendix N: ANCOVA Assumption Findings

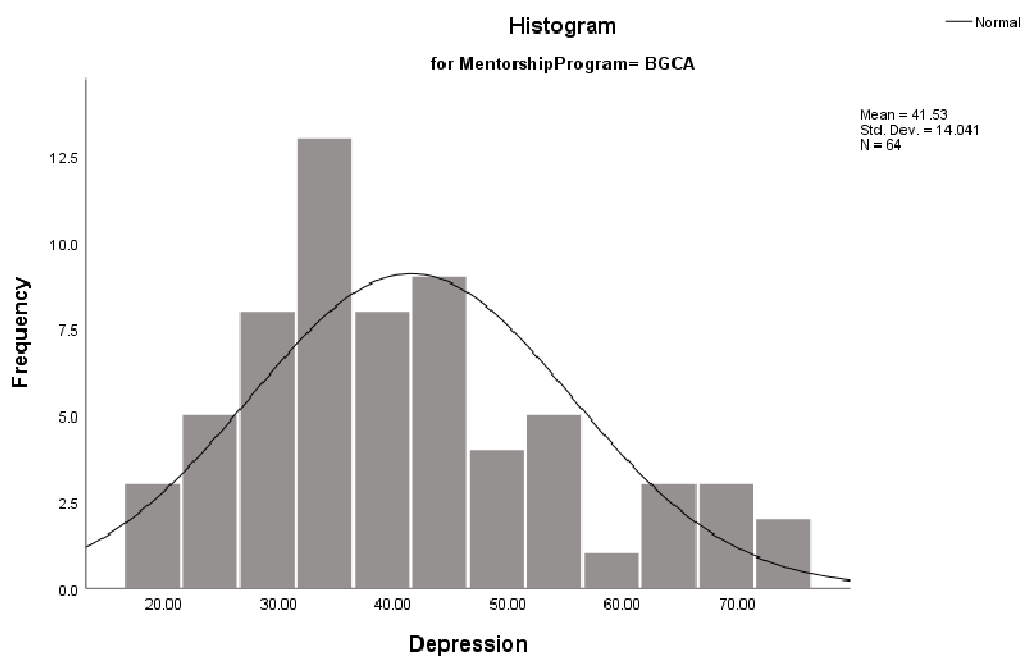


Figure N1. Normal distribution ANCOVA Assumption #1 MPNNJ.

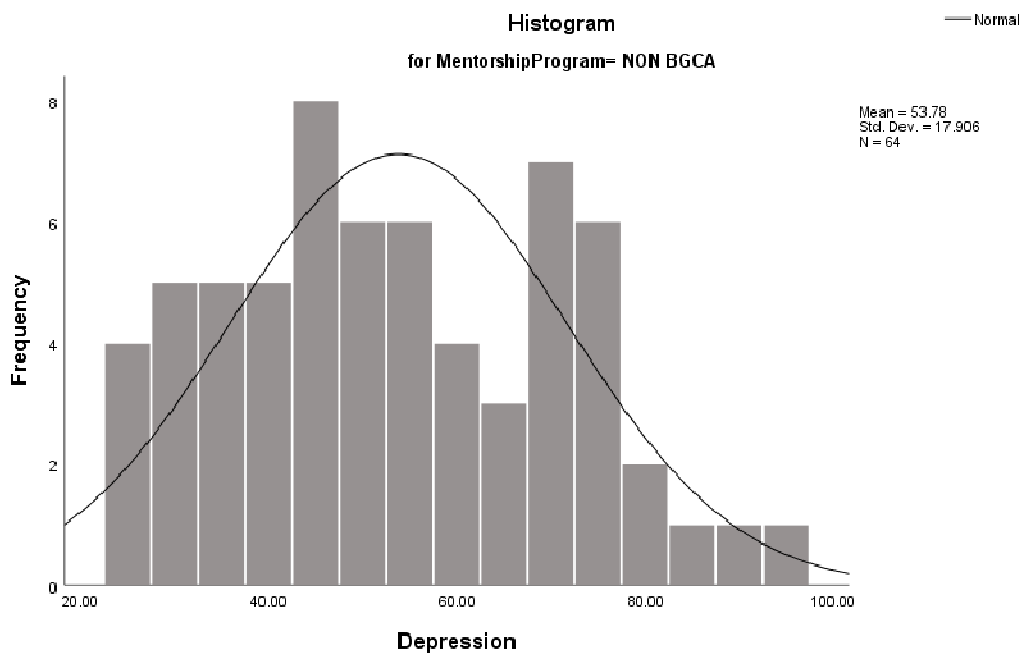


Figure N2. Normal distribution ANCOVA Assumption #1 NON-MPNNJ.

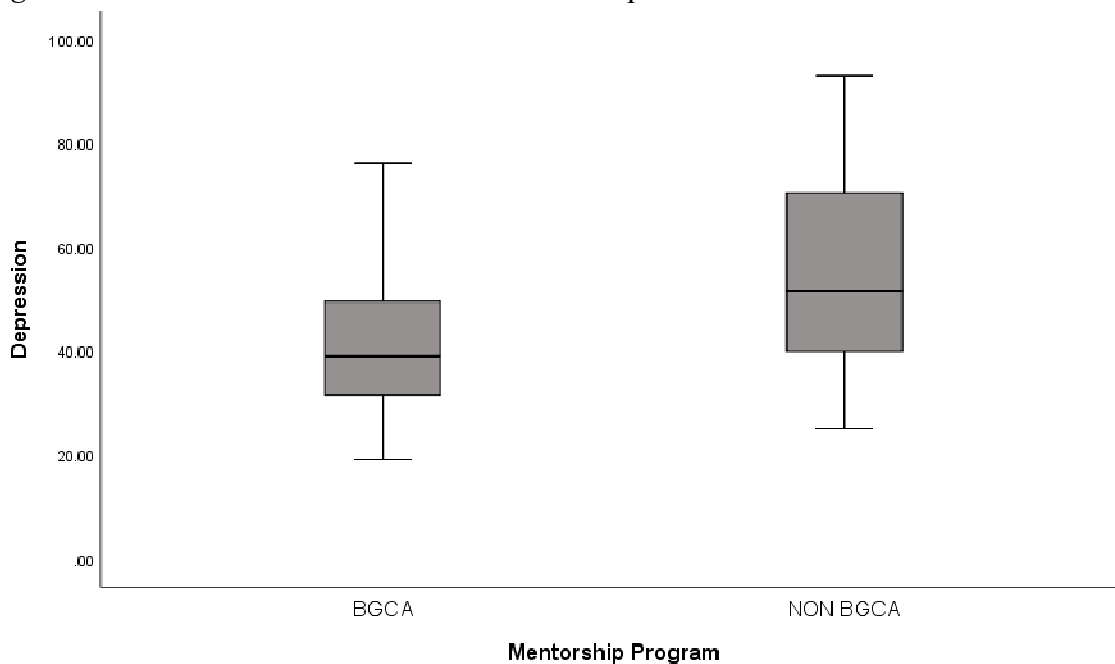


Figure N3. Graph of ANCOVA Assumption #2 Outliers for Depression Symptomatology and Mentorship Program.

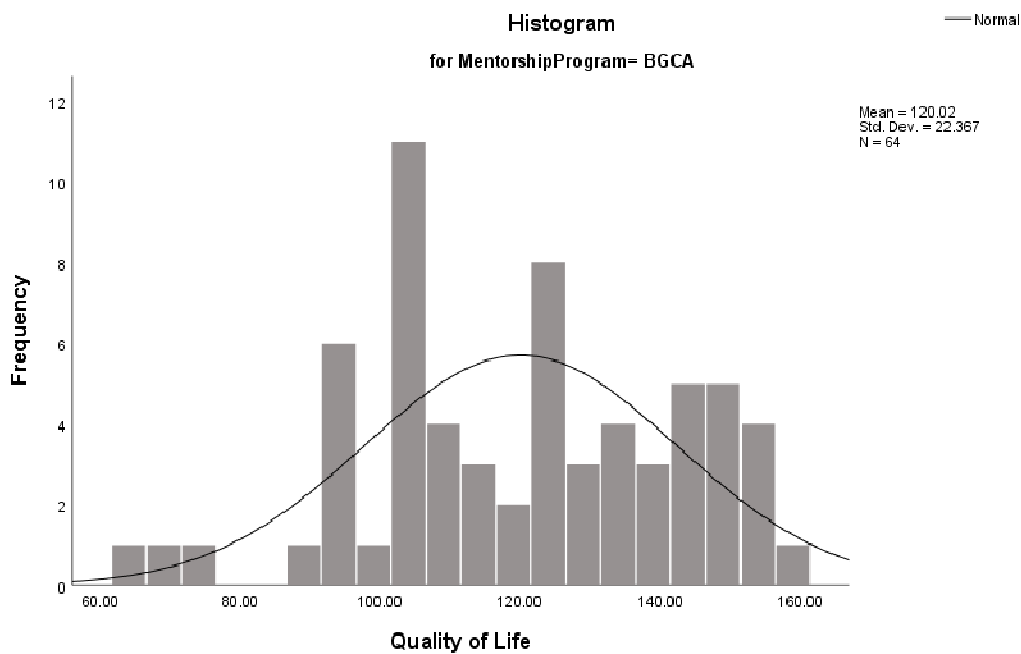


Figure N 4. Normal distribution of ANCOVA Assumption #1 MPNNJ

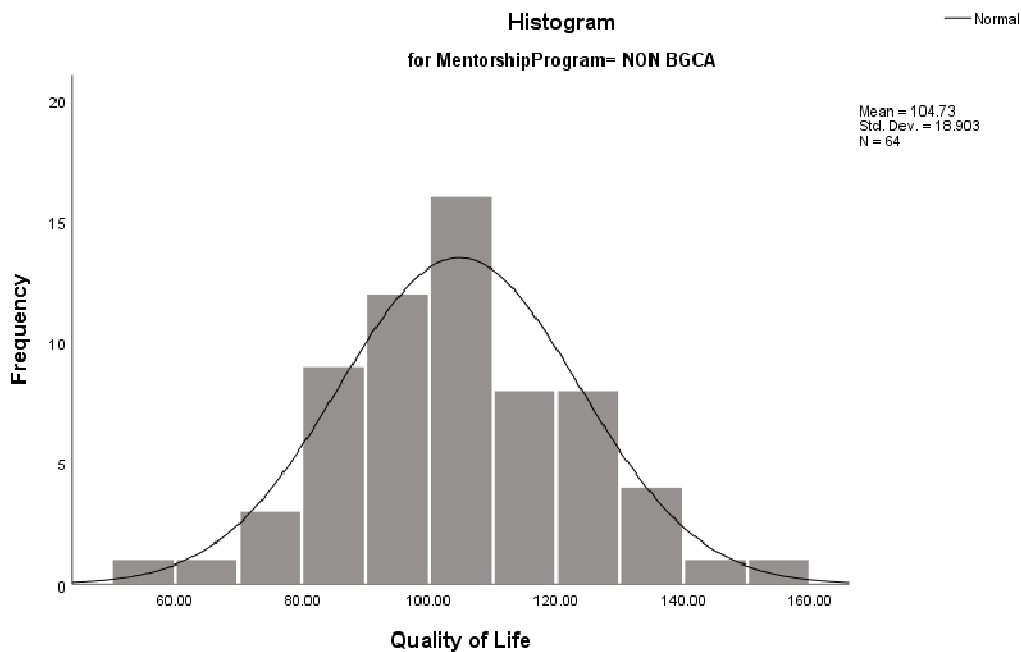


Figure N5. Normal distribution of ANCOVA Assumption #1 NON-MPNNJ.



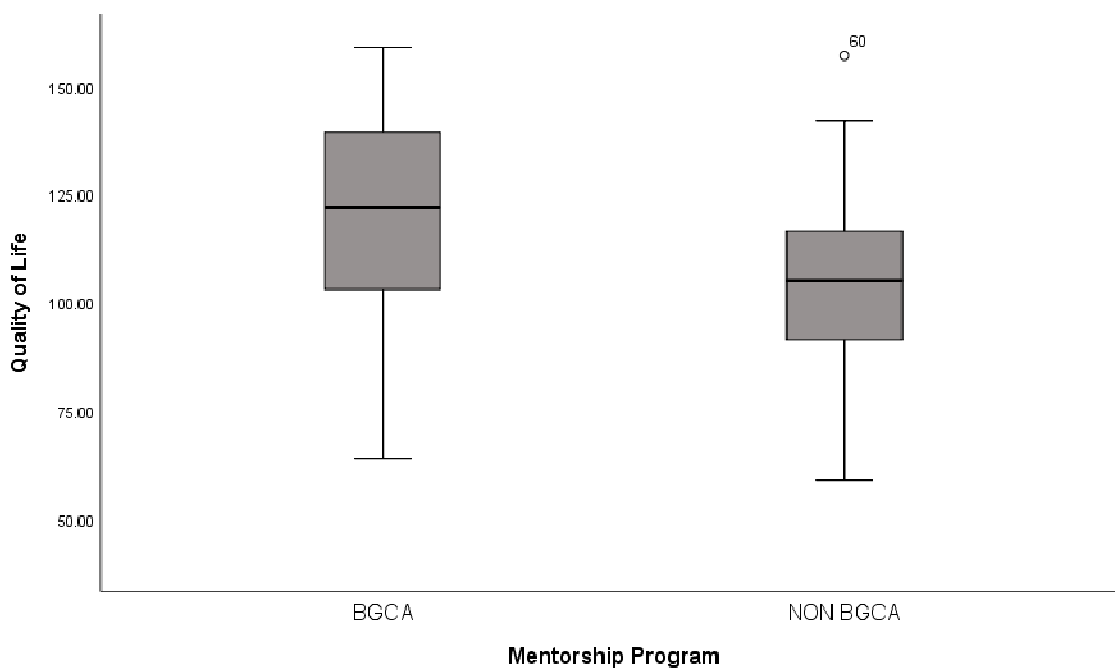
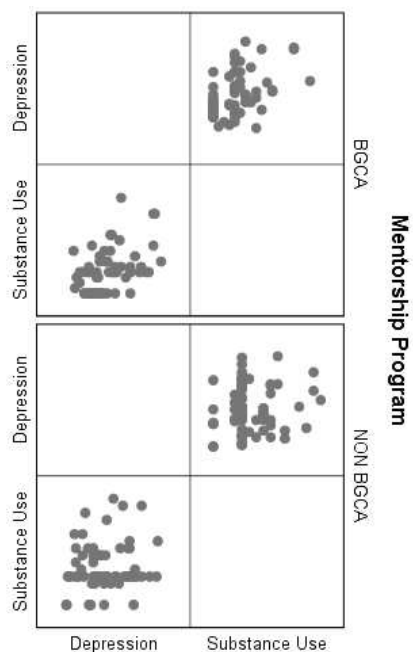
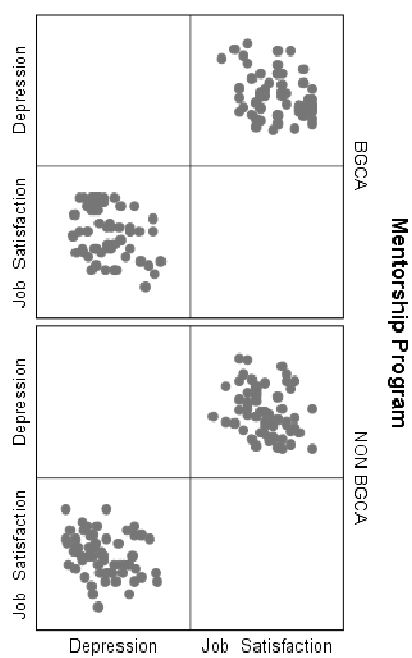


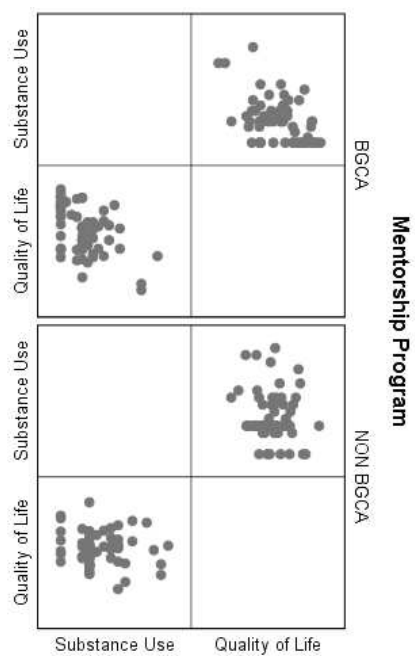
Figure N6. Graph of outliers for QoL and Mentorship Program.



*Figure N7.* Scatterplot of substance use and depression symptomatology among group NON-MPNNJ and MPNNJ groups.



*Figure N8.* Scatterplot of job satisfaction and depression symptomatology among NON-MPNNJ and MPNNJ groups.



*Figure N9.* Scatterplot of substance use and quality of life among group NON-MPNNJ and MPNNJ groups.

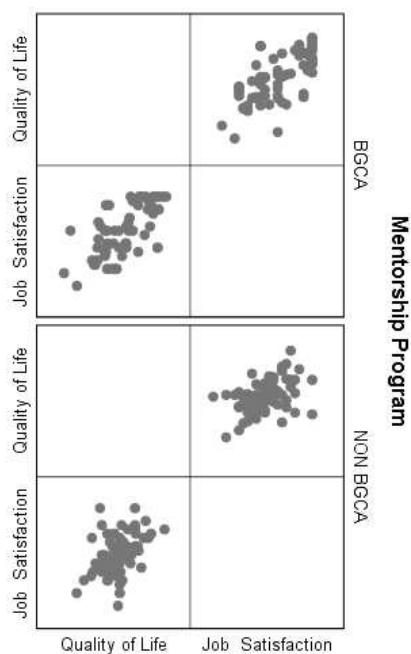


Figure N10. Scatterplot of job satisfaction and quality of life among group NON-MPNNJ and MPNNJ groups.

Figure N11. SPSS output of job satisfaction and quality of life among group NON-MPNNJ and MPNNJ groups.

Tests of Normality							
	Mentorship Program	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Depression	1.00	.100	64	.182	.955	64	.020
	2.00	.155	64	.001	.900	64	.000

a. Lilliefors Significance Correction

**Levene's Test of Equality of Error Variances<sup>a</sup>**

Dependent Variable: Depression

F	df1	df2	Sig.
1.801	1	126	.182

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + JobSatisfaction + Pro1

#### Tests of Between-Subjects Effects

Dependent Variable: Depression

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	12073.794 <sup>a</sup>	2	6036.897	21.582	.000	.257
Intercept	46470.687	1	46470.687	166.130	.000	.571
JobSatisfaction	5646.849	1	5646.849	20.187	.000	.139
Pro1	3361.887	1	3361.887	12.019	.001	.088
Error	34965.510	125	279.724			
Total	315409.000	128				
Corrected Total	47039.305	127				

a. R Squared = .257 (Adjusted R Squared = .245)

#### Levene's Test of Equality of Error Variances<sup>a</sup>

Dependent Variable: Depression

F	df1	df2	Sig.
3.211	1	126	.076

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + SubstanceUse + Pro1

#### Tests of Between-Subjects Effects

Dependent Variable: Depression

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	10590.233 <sup>a</sup>	2	5295.117	18.159	.000	.225
Intercept	72463.067	1	72463.067	248.508	.000	.665
SubstanceUse	4163.288	1	4163.288	14.278	.000	.103
Pro1	4686.303	1	4686.303	16.071	.000	.114
Error	36449.071	125	291.593			
Total	315409.000	128				

Corrected Total	47039.305	127				
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a. R Squared = .225 (Adjusted R Squared = .213)

#### Tests of Normality

		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Quality of Life	NON-MPNNJ	.061	64	.200*	.994	64	.989
	MPNNJ	.125	64	.015	.951	64	.013

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

#### Levene's Test of Equality of Error Variances<sup>a</sup>

Dependent Variable: Quality of Life

F	df1	df2	Sig.
.005	1	126	.945

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + JobSatisfaction + Pro1

#### Tests of Between-Subjects Effects

Dependent Variable: Quality of Life

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	28757.512 <sup>a</sup>	2	14378.756	45.447	.000	.421
Intercept	47775.118	1	47775.118	151.002	.000	.547
JobSatisfaction	20144.231	1	20144.231	63.669	.000	.337

Pro1	2798.548	1	2798.548	8.845	.004	.066
Error	39548.488	125	316.388			
Total	1713604.000	128				
Corrected Total	68306.000	127				

a. R Squared = .421 (Adjusted R Squared = .412)

#### Levene's Test of Equality of Error Variances<sup>a</sup>

Dependent Variable: Quality of Life

F	df1	df2	Sig.
2.336	1	126	.129

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Pro1 + SubstanceUse + Pro1 \* SubstanceUse

#### Tests of Between-Subjects Effects

Dependent Variable: Quality of Life

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	16648.696 <sup>a</sup>	3	5549.565	13.321	.000	.244
Intercept	682441.718	1	682441.718	1638.157	.000	.930
Pro1	6642.113	1	6642.113	15.944	.000	.114
SubstanceUse	5224.564	1	5224.564	12.541	.001	.092
Pro1 * SubstanceUse	1787.576	1	1787.576	4.291	.040	.033
Error	51657.304	124	416.591			
Total	1713604.000	128				
Corrected Total	68306.000	127				

a. R Squared = .244 (Adjusted R Squared = .225)

Depression, JSS, and SUB statistics:  
Assumptions 4 and 5

Assumption 4 Hom of regression:

#### Descriptive Statistics

Dependent Variable: Depression

MPNNJ	Mean	Std. Deviation	N
1.00	41.5313	14.04072	64
2.00	53.7813	17.90581	64

Total	47.6563	17.16545	128
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### Levene's Test of Equality of Error

#### Variiances<sup>a</sup>

Dependent Variable: Depression

F	df1	df2	Sig.
9.770	1	126	.002

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Program + JobSatisfaction + SubstanceUse + Program \* JobSatisfaction \* SubstanceUse

### Tests of Between-Subjects Effects

Dependent Variable: Depression

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	9441.875 <sup>a</sup>	5	1888.375	8.234	.000	.252
Intercept	10941.974	1	10941.974	47.712	.000	.281
Program	2043.343	1	2043.343	8.910	.003	.068
JobSatisfaction	648.995	1	648.995	2.830	.095	.023
SubstanceUse	95.050	1	95.050	.414	.521	.003
Program * JobSatisfaction * SubstanceUse	404.111	2	202.056	.881	.417	.014
Error	27979.000	122	229.336			
Total	328124.000	128				
Corrected Total	37420.875	127				

a. R Squared = .252 (Adjusted R Squared = .222)

### Estimates

Dependent Variable: Depression

MPNNJ	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1.00	43.320 <sup>a</sup>	2.019	39.322	47.318
2.00	52.248 <sup>a</sup>	1.980	48.329	56.167



a. Covariates appearing in the model are evaluated at the following values: Job Satisfaction = 18.5703, Substance Use = 4.7422.

Factorial assumption 5

### Estimates

Dependent Variable: Depression

MPNNJ	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1.00	43.077 <sup>a</sup>	1.929	39.259	46.894
2.00	52.236 <sup>a</sup>	1.929	48.418	56.053

a. Covariates appearing in the model are evaluated at the following values: Job Satisfaction = 18.5703, Substance Use = 4.7422.

### Descriptive Statistics

Dependent Variable: Depression

MPNNJ	Mean	Std. Deviation	N
1.00	41.5313	14.04072	64
2.00	53.7813	17.90581	64
Total	47.6563	17.16545	128

### Levene's Test of Equality of Error Variances<sup>a</sup>

Dependent Variable: Depression

F	df1	df2	Sig.
9.769	1	126	.002

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + JobSatisfaction + SubstanceUse + Program

### Tests of Between-Subjects Effects

Dependent Variable: Depression

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	9037.764 <sup>a</sup>	3	3012.588	13.161	.000	.242	39.484	1.000
Intercept	20849.568	1	20849.568	91.087	.000	.423	91.087	1.000
JobSatisfaction	1610.173	1	1610.173	7.035	.009	.054	7.035	.749
SubstanceUse	1203.580	1	1203.580	5.258	.024	.041	5.258	.624

Program	2484.894	1	2484.894	10.856	.001	.081	10.856	.905
Error	28383.111	124	228.896					
Total	328124.000	128						
Corrected Total	37420.875	127						

a. R Squared = .242 (Adjusted R Squared = .223)

b. Computed using alpha = .05

### Parameter Estimates

Dependent Variable: Depression

Parameter	B	Std. Error	t	Sig.	95% Confidence Interval		Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
					Lower Bound	Upper Bound			
Intercept	61.155	5.856	10.444	.000	49.565	72.745	.468	10.444	1.000
JobSatisfaction	-.702	.265	-2.652	.009	-1.226	-.178	.054	2.652	.749
SubstanceUse	.869	.379	2.293	.024	.119	1.618	.041	2.293	.624
[Program=1.00]	-9.159	2.780	-3.295	.001	-14.661	-3.657	.081	3.295	.905
[Program=2.00]	0 <sup>a</sup>	.	.	.	.	.	.	.	.

a. This parameter is set to zero because it is redundant.

b. Computed using alpha = .05

Bonferroni

### Pairwise Comparisons

Dependent Variable: Depression

(I)	(J) MPNNJ	Mean Difference (I-J)	Std. Error	Sig. <sup>b</sup>	95% Confidence Interval for Difference <sup>b</sup>	
					Lower Bound	Upper Bound
1.00	2.00	-9.159*	2.780	.001	-14.661	-3.657
2.00	1.00	9.159*	2.780	.001	3.657	14.661

Based on estimated marginal means

\*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Quality of life:

Qol, JSS, SUB

Assumption 4 Hom of Regression

### Descriptive Statistics

Dependent Variable: Quality of Life

MPNNJ	Mean	Std. Deviation	N
1.00	120.0156	22.36671	64

2.00	104.7344	18.90263	64
Total	112.3750	22.00573	128

### Levene's Test of Equality of Error Variances<sup>a</sup>

Dependent Variable: Quality of Life

F	df1	df2	Sig.
.627	1	126	.430

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Program + JobSatisfaction + SubstanceUse + Program \* JobSatisfaction \* SubstanceUse

### Tests of Between-Subjects Effects

Dependent Variable: Quality of Life

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	28117.195 <sup>a</sup>	5	5623.439	20.551	.000	.457
Intercept	19464.395	1	19464.395	71.134	.000	.368
Program	2740.354	1	2740.354	10.015	.002	.076
JobSatisfaction	6748.654	1	6748.654	24.663	.000	.168
SubstanceUse	2.917	1	2.917	.011	.918	.000
Program * JobSatisfaction * SubstanceUse	1515.882	2	757.941	2.770	.067	.043
Error	33382.805	122	273.630			
Total	1677902.000	128				
Corrected Total	61500.000	127				

a. R Squared = .457 (Adjusted R Squared = .435)

### Estimates

Dependent Variable: Quality of Life

MPNN	Mean	Std. Error	95% Confidence Interval
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J			Lower Bound	Upper Bound
1.00	115.651 <sup>a</sup>	2.206	111.284	120.017
2.00	107.818 <sup>a</sup>	2.162	103.537	112.098

a. Covariates appearing in the model are evaluated at the following values: Job Satisfaction = 18.5703, Substance Use = 4.7422.

Assumption 5 Hom of Variance:

### Descriptive Statistics

Dependent Variable: Quality of Life

MPNN J	Mean	Std. Deviation	N
1.00	120.0156	22.36671	64
2.00	104.7344	18.90263	64
Total	112.3750	22.00573	128

### Levene's Test of Equality of Error Variances<sup>a</sup>

Dependent Variable: Quality of Life

F	df1	df2	Sig.
.934	1	126	.336

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + JobSatisfaction + SubstanceUse + Program

### Tests of Between-Subjects Effects

Dependent Variable: Quality of Life

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	26601.313 <sup>a</sup>	3	8867.104	31.506	.000	.433
Intercept	41749.164	1	41749.164	148.341	.000	.545
JobSatisfaction	12762.861	1	12762.861	45.348	.000	.268
SubstanceUse	1367.561	1	1367.561	4.859	.029	.038
Program	2069.824	1	2069.824	7.354	.008	.056
Error	34898.687	124	281.441			
Total	1677902.000	128				

Corrected Total	61500.000	127				
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a. R Squared = .433 (Adjusted R Squared = .419)

### Estimates

Dependent Variable: Quality of Life

MPNN J	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1.00	116.554 <sup>a</sup>	2.139	112.321	120.788
2.00	108.196 <sup>a</sup>	2.139	103.962	112.429

a. Covariates appearing in the model are evaluated at the following values: Job Satisfaction = 18.5703, Substance Use = 4.7422.

### Pairwise Comparisons

Dependent Variable: Quality of Life

(I) MPNNJ	(J) MPNNJ	Mean Difference (I- J)	Std. Error	Sig. <sup>b</sup>	95% Confidence Interval for Difference <sup>b</sup>	
					Lower Bound	Upper Bound
1.00	2.00	8.359 <sup>*</sup>	3.082	.008	2.258	14.460
2.00	1.00	-8.359 <sup>*</sup>	3.082	.008	-14.460	-2.258

Based on estimated marginal means

\*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

### Parameter Estimates

Dependent Variable: Quality of Life

Parameter	B	Std. Error	t	Sig.	95% Confidence Interval		Partial Eta Square	Noncent. Paramete r	Observe d Power <sup>b</sup>
					Lower Bound	Upper Bound			
Intercept	95.329	9.256	10.300	.0005	77.005	113.654	.467	10.300	1.000
JobSatisfaction	1.793	.340	5.273	.000	1.120	2.466	.187	5.273	.999
SubstanceUse	-1.010	.434	-2.325	.022	-1.870	-.150	.043	2.325	.635
[ProgramLevel=1.00 ]	-12.837	5.278	-2.432	.016	-23.286	-2.389	.047	2.432	.675
[ProgramLevel=2.00 ]	-8.989	9.281	-.969	.335	-27.363	9.384	.008	.969	.161

a. This parameter is set to zero because it is redundant.

b. Computed using alpha = .05