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Assessing the Effects of Career Exploration Among African-American Urban Adolescents

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Walden University
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Abstract

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MA, Cleveland State University, 2007

BA, Cleveland State University, 2002

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Educational Psychology

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Abstract

Deficits in career decision making self-efficacy, career decidedness, and academic motivation have contributed to prolonged cycles of poverty, an increase in the number of years it takes to complete an undergraduate degree, and an upsurge in the amount of financial debt incurred. Recurrently, students are saddled with large amounts of debt for a degree that was never attained. One group heavily affected by this phenomenon is African American urban adolescents (AAUA). This quantitative study used a social cognitive career theory framework and a repeated-measures research design to examine whether a significant change in scores occurred from Time 1 to Time 2 on the Career Decision Self-Efficacy Scale—Short Form (CDSE-SF), Career Decision Scale (CDS), and Academic Motivation Scale—High School (AMS-HS). African American adolescents attending an urban high school in a midwestern state participated. Students were surveyed before and after completing the Strong Interest Inventory and participating in an educational session designed to aid them in making career and educational choices. Paired-samples *t* tests revealed no significant changes in scores on the CDSE-SF, CDS, or AMS-HS. However, findings from Pearson correlations suggest that career self-efficacy is largely correlated with both intrinsic and extrinsic motivation. This research contributes to social change by informing urban school districts and families of the need to deliver comprehensive career exploration programming for AAUA. This programming has the potential to aid students in making educational choices that align with their expected career paths, reduce their time to completion in postsecondary programs, and increase their potential for economic stability.

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Dedication

This work is dedicated to African American urban adolescents who have been steadfast in pursuing their educational and career goals and to those adolescent mothers who struggle with balancing parenthood and furthering their education. It is my hope that the results of this study will provide valuable information to aid African American urban adolescents with making educational and career decisions that positively impact career self-efficacy, socioeconomic status, and generational sustainability.

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There are people in your life who inspire you to follow your dreams and support your journey along the way. I am eternally grateful to my parents, who are my biggest cheerleaders. “Mr. H,” this is for you, as I know that you are smiling down upon me. I am thankful to have family and friends who have been along for this extended ride. To my husband, thanks for putting up with the long nights and the inattentive moments used to focus on completing this research. Thank you to my children for allowing me to be a part-time mom more than I would have liked. To my friends and family: your support and encouragement helped me get through the process. Thank you to everyone that helped me along this journey. I am most appreciative of my committee chair, Dr. JBH, whose dedication to helping me achieve my goal and guidance through this process were nothing short of amazing. Thank you from the bottom of my heart. Thank you to Dr. JM and Dr. SR for accepting the role of committee member and assisting me with this work.

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Chapter 1: Introduction to the Study

Introduction

Adolescent mothers are at a higher risk for dropping out of high school and facing a life of poverty compared to nonparenting adolescents. The risk is even greater for African American urban adolescent mothers (AAUAM; Domenico & Jones, 2007; Perper, Peterson, & Manlove, 2010; Shuger, 2012). Without a sound education, the chances of living in poverty are much greater (Bureau of Labor Statistics, 2015). Identifying a practical option that will aid adolescent mothers in escaping prolonged cycles of poverty and relieve the $9.4 billion that taxpayers spend in teen childbearing cost is imperative (National Campaign to Prevent Teen and Unplanned Pregnancy, 2015).

This chapter opens with an overview of current teen pregnancy rates in the United States and the adverse effects many teenage mothers face. Highlighted in the opening chapter are additional obstacles that many teen mothers encounter, not limited to a lack of both educational attainment and economic advantage. The next sections are centered on the impact of economic disadvantage among AAUAM, the purpose of the study, and identification of the research questions. Social cognitive career theory (SCCT) is introduced as the theoretical framework of the study. A rationale for the selection of the research design, key variables associated with the study, and procedures for data collection are presented. The chapter ends with a description of specific aspects of the research problem and the population being studied, along with an explanation as to why this research is necessary in today's evolving society. Although the original research plan was to conduct the study with AAUAM, due to unforeseen circumstances, the population

that was actually used was African American urban adolescents (AAUA). Much of the research reviewed below reflects struggles that are common to both AAUAM and African American adolescents in general.

Background of the Study

Roughly, 50% of teen mothers receive a high school diploma by the age of 22. However, teen mothers who do not attain a high school diploma live in poverty as a result (Perper et al., 2010). Support for this concept is presented by Perper et al. (2010), whose work revealed that only 73% of teenagers who were parents in 1992 attained a high school diploma by 2000, in comparison to 89% of nonparents. Furthermore, Shuger (2012) explained that in 2006, Civic Enterprises disclosed that 34% of teenage mothers attained neither a high school diploma nor a GED. Shuger also indicated that 38% of African American teen girls who dropped out of high school cited pregnancy or parenthood as a key reason. Among the 41% of adolescent mothers who earn a high school diploma, only 1.5% attain a college degree (Ducker, 2007; Maynard, 1996; Mollburn, 2010; Shuger, 2012). Economically disadvantaged teen mothers will likely experience hardships a decade and a half later (Smithbattle, 2007; Yakusheva, 2010).

Studies focused on adolescent mothers often describe the economic disadvantage encountered by this population and offer reasons such as living in impoverished environments, being raised in single-parent households, and attending schools deemed as underperforming as factors that contribute to teenage pregnancy (Oxford, Lee, & Lohr, 2010; Yakusheva, 2010). A school is considered underperforming if it fails to meet state and national standards. While these factors are well documented throughout the research,

other studies have identified a lack of belief in one's ability to achieve goals as an equally important contributor (Constantine, Wallace, & Kindaichi, 2005). Lack of belief in one's own abilities can stem from past personal experiences, perceptions of others, and environmental norms. This information suggests that issues other than governmental financial assistance should be addressed to increase social mobility for adolescent mothers.

Previous research by Hellenga, Aber, and Rhodes (2002) identified the incongruence of vocational aspirations and vocations as a realistic concern faced by AAUAM. *Vocational aspirations* are defined as desired career goals that an individual would like to attain in ideal conditions. *Vocational expectations* are an individual's assessment of real factors such as environment, academic ability, or responsibilities that may affect his or her ability to attain aspirations (Hellenga et al., 2002).

Hellenga et al. (2002) maintained that an individual's vocational aspirations and vocational expectations can serve as either motivators or hindrances to economic stability. Research conducted by Hellenga et al. revealed that African Americans were more likely to have lower educational aspirations and lower educational expectations than their European American counterparts. Furthermore, in an examination of the gap between vocational aspirations and vocational expectations among AAUAM, Hellenga et al. confirmed that these young mothers have a difficult time seeing themselves in career fields that extend beyond insurance sales and transportation drivers. Although 45% of respondents aspired to become some sort of medical professional, among whom 13% aspired to become doctors in the medical field, only 6% expected to fulfill those dreams.

Although unemployment, working in food service, or serving as childcare providers were not aspirations of these respondents, many expected to be employed in these positions by age 30 if they were working full time.

These minimal expectations are driven, in part, by limited knowledge of career options, lack of belief in one's potential to achieve vocational goals, and additional parenting responsibilities. All of these issues have been cited as reasons for the incongruence between vocational expectations and vocational aspirations among AAUAM (Hellenga et al., 2002). Given these findings, it seems likely that adolescent mothers need programming that will aid them in gaining confidence in their ability to choose a career that is compatible with their interests and to carry out required tasks in that career. Taylor and Betz (1983) referred to the belief in one's own ability to choose a career and possess the confidence to perform the required tasks associated with that career as *career decision making self-efficacy* (CDMSE).

Making educational and career decisions can be difficult for a nonparenting teenager, but extended time to explore a variety of career choices and lack of need for immediate financial relief sometimes ease the burden. On the other hand, for AAUAM, choosing an educational path and making a career choice can be extremely daunting tasks. Environmental issues and low socioeconomic status may be perceived as barriers to attaining the education needed to choose a career that requires education beyond a high school diploma, because the requirement to provide necessities for themselves and their children exists. Therefore, parenting teenagers may be faced with choosing employment that will allow them to provide basic support for themselves and their children, regardless

of its potential to become a sustainable career. This course may add stress to an already difficult situation, in that this type of employment may be unsteady and require flexible hours that make working and parenting problematic. These factors, coupled with little or no exposure to programming that facilitates career exploration, augment adolescent mothers' inability to make life altering decisions pertaining to postsecondary education, training, or career choice. Therefore, AAUAM need exposure to resources that will (a) aid in building confidence in their aspirations and increase their expectations, (b) provide information regarding careers that are of interest to them and provide financial stability, and (c) allow them to map out an academic plan that will serve as a guide to identify the goals that are necessary to enter their chosen career. Increased career exploration can assist AAUAM with becoming independent of government aid and enhance the potential for economic advantage. Consequently, more programming that focuses on career exploration and development is necessary in urban high schools.

Results from this research were meant to be used as a guide for educational institutions seeking to combat the 60% high school dropout rate among teenage mothers. Other goals of the research included diminishing the high level of poverty that exists among teenage mothers and empowering them to make sound educational and career choices that may allow them to avoid long durations of dependency on government assistance. On average, taxpayers spend roughly $9.1 billion annually to support teenage mothers and their children, as indicated by The National Campaign to Prevent Teenage Pregnancy (2011). One way to empower AAUAM is by providing them with information regarding careers. Equipping teen mothers with knowledge regarding an

array of careers, educational requirements, and their natural likes and dislikes allows them to make informed decisions and will benefit teenage mothers on an individual level and society as a whole (Bersch, 2008).

Problem Statement

Although the rate of teen births has been declining since its 5% rise between 2005 and 2007, reaching an all -time low in 2013, the United States still has the highest rate of teen pregnancy of all industrialized nations (Martin, Hamilton, & Ventura, 2015; National Campaign to Prevent Teen and Unplanned Pregnancy, 2011; Perper et al., 2010). While this decline in teen pregnancy rates is noticeable, there is still concern for those teenage females who become mothers. More than 50% of female adolescents who give birth before age 18 drop out of high school and never attain the academic status needed to avoid poverty for themselves and their children (Perper et al., 2010). A lack of educational attainment is not the only concern that adolescent mothers face. A large proportion of teens who give birth between the ages of 15 and 19 years old are unmarried. According to the National Campaign to Prevent Teen and Unplanned Pregnancy (2011), 88% of teens who gave birth in 2010 were single parents. Single parenthood increases the possibility that the mother will incur the bulk of the responsibility for the child and face increased financial constraints.

Aside from the fact that financial constraints might exist because AAUAM often carry the financial load of caring for a child, many live in underfunded communities. Young women from impoverished environments are at a greater economic disadvantage than their economically advantaged counterparts. This provides some explanation as to

why AAUAM are less likely to complete high school in comparison to their European counterparts and adolescent females who have delayed parenting. A lack of education or training increases dependence on government assistance and creates or prolongs a cycle of poverty that has a direct negative effect on the adolescent mother and her child(ren) while having an indirect negative effect on society. This phenomenon is highlighted in other research findings that identify educational qualifications, the amount of time spent in employment, and relationship status as predictors of independence from government assistance for adolescent mothers (Schoon & Polek, 2011; Yakusheva, 2011). Subsequently, because AAUAM often have fewer opportunities to gain employment in professional occupations, there has been growing concern regarding the number of AAUAM who fail to attain a high school diploma. Failure to complete a high school education hinders the pursuit of postsecondary education or training and limits opportunities to make career choices that will provide financial stability (Domenico & Jones, 2007; SmithBattle, 2006). Although many governmental programs such as the Women, Infants and Children Program and Medicaid have provided adolescent mothers assistance with obtaining nutritional food and medical benefits as well as alleviating other financial strains, these programs are not designed to become long-term solutions in the prevention of poverty.

Unfortunately, urban adolescent mothers contend with additional barriers that extend beyond those associated with educational deprivation and poverty, such as racism, difficult home and community environments, underdeveloped operational thinking (thought processes that may be both inconsistent and illogical), depression, and substance

abuse, in addition to a lack of parental education (Savio Beers & Hollo, 2009). Consequently, it is necessary to identify factors that will aid in the progression toward educational attainment and financial stability to prepare for obtaining the $204,060 that is necessary to support a child from birth to18 years old, excluding the cost of a college education (Bersch, 2008; Greenstone, 2012).

One approach is to explore CDMSE and academic motivation (AM) as variables that aid an individual's ability to make informed decisions regarding educational and career choices, as well as career indecision (CI) as a construct that impedes an individual's ability to make those choices. CDMSE is the belief in one's ability to choose a career and carryout the specific tasks required of a career that is compatible with the individual's personality and abilities (Taylor & Betz, 1983). CI is the inability to specify or make an educational or occupational choice (Kelly, 2002). AM is the driving factor that influences a person to attend school and obtain a degree (Clark, Middleton, Nguyen, & Zwick, 2014). Career exploration in schools may be a viable option to provide long-term increases in CDMSE and AM while decreasing CI.

Visher, Bandhari, and Medrich (2004) indicated that students who participate in career exploration are more likely to finish high school and pursue higher education, thus diminishing their chances of living in poverty. Vocational identity and the number of career exploration activities students engage in are related to CDMSE. Gushue, Scanlan, & Pantzer (2006) confirmed this concept in their work with African American adolescents. However, the amount of research conducted examining African American high school students and CDMSE is nominal, and even less research has been aimed at

exploring this phenomenon with AAUAM. Although some related research has presented information regarding African American adolescents, in most cases, this research has focused on participation in a program whose primary objective was not career exploration but contained some component of career search. Research from this study adds to the body of information regarding CDMSE, CI, and AM among African-American high school students by examining these phenomena among AAUAM. For AAUAM and their children, enhancing belief in their ability to make a sound career choice, carryout the tasks of that career, and remain motivated to complete high school is crucial to address the barrier of prolonged poverty.

Purpose of the Study

This quantitative study used a repeated-measures research design to explore the effect of an educational session on a single sample of participant scores. The instruments used in the study measured CDMSE, CI, and AM at two different points in time. Scores were examined before students completed the Strong Interest Inventory (SII) and an educational session, as well as after this process. The study was identified as quasi-experimental because of the interest in the effect of career exploration on one or more responses—in this case, the dependent variables, CDMSE, CI, and AM. Furthermore, at least one variable, time, was manipulated, making it the independent variable. A convenience sample was used instead of random assignment (Aussems, Boomsma, & Snijders, 2011; Ellis, 1999).

Research Questions and Hypotheses

The following research questions and hypotheses were used as the basis for this study. They were adapted in Chapters 4 and 5 to apply to AAUA in general rather than AAUAM specifically to reflect necessary procedural changes in the study, due to logistical obstacles that arose.

Research Questions

1. Is there a significant change in AAUAM scores on the Career Decision Self-Efficacy Scale—Short Form (CDSE-SF) following an educational session designed to aid students in making career and educational choices?
2. Is there a significant change in AAUAM scores on the Career Decision Scale (CDS) among AAUAM following an educational session designed to aid students in making career and educational choices?
3. Is there a significant change in AAUAM scores on the Academic Motivation Scale—High School (AMS-HS) following an educational session designed to aid students in making career and educational choices?

Hypotheses

Hypothesis 1: Participation in an educational session designed to aid students in making educational and career choices will yield a significant change in scores on the Career Decision Self-Efficacy Scale—Short Form (CDSE-SF) among AAUAM following the educational session.

$H1_o$: There is no significant difference in scores on the CDSE-SF for AAUAM prior to participation in an educational session versus after participation in an educational session.

$H_{1\alpha}$: There is a significant difference in scores on the CDSE-SF for AAUAM prior to participation in an educational session versus after participation in an educational session.

Hypothesis 2: Participation in an educational session designed to aid students in making educational and career choices will result in a significant change in scores on the Career Decision Scale (CDS) among AAUAM following participation in an educational session.

$H2_o$: There is no significant difference in scores for AAUAM on the CDS prior to participation in an educational session versus after participation in an educational session.

$H2\alpha$: There is a significant difference in scores for AAUAM on the CDS prior to participation in an educational session versus after participation in an educational session.

Hypothesis 3: Participation in an educational session designed to aid students in making educational and career choices will result in a significant change in scores on the Academic Motivation Scale—High School (AMS-HS) for AAUAM following participation in an educational session.

$H3_o$: There is no significant difference in scores for AAUAM on the AMS prior to participation in an educational session versus after participation in an educational session.

$H3_\alpha$: There is a significant difference in scores for AAUAM on the AMS prior to participation in an educational session versus after participation in an educational session.

Theoretical Framework

The more power that individuals feel they have toward an intended purpose, the more confidence they will have in their ability to make decisions or effectively complete a task associated with that purpose. This research focused on equipping AAUAM with information that would allow them to make sound educational and career choices while considering other factors such as educational deficits, poverty, and environmental issues. Therefore, social cognitive career theory (SCCT), an extension of Bandura's (1977) self-efficacy theory, was the framework used for this study.

SCCT focuses on three major paradigms: self-efficacy, outcome expectations, and goal setting (Albert & Luzzo, 1999). Self-efficacy is defined as belief in one's ability to organize and execute actions that aid in accomplishing a specific goal (Hackett, 2013). Outcome expectations and the goals one sets are based, in part, on what are perceived as barriers or supports. Within SCCT, there is a focus on the individual's ability to handle obstacles or barriers that might prevent him or her from accomplishing career goals (Capuzzi & Stauffer, 2006). Maturation of career and academic interests as well as the development of career choices and how they are executed can be evaluated using SCCT.

According to Ahuja (2006), students who experienced exposure to a variety of vocational interests had a strong sense of self-efficacy, had high outcome expectations, set goals for the future, anticipated and negotiated barriers to success, and acquired a stronger sense of vocational identity. When evaluating CDMSE, CI, and AM among African American urban adolescent mothers, use of SCCT is appropriate. This concept is explained further in Chapter 2.

Nature of the Study

This quantitative study evaluated the effect of an educational session that used the SII on CDMSE, CI, and AM among AAUA. The original proposal design involved AAUAM who attended three urban high schools in a midwestern state. However, due to changes in procedure and many consultations with Walden's Institutional Review Board, the study was conducted in one urban high school in a midwestern state, using a convenience sample of students from that school. Students were pregnant, parenting, and nonparenting African American adolescents 15-19 years old.

Scores from the CDSE-SF, CDS, and AMS-HS were compared before and after exposure to the educational session. A quasi-experimental design was the most realistic and practical for this study because participants engaged in the treatment in a natural environment, the research involved pretest and posttest assessments, and the study was void of a control group (Aussems et al., 2011; Heffner, 2004).

The independent variable in this study was the time between measurements of the dependent variables. The three dependent variables in the study were CDMSE, CI, and

AM. A more extensive description of the study, its implementation, and analysis is presented in Chapter 3.

Definitions

Academic motivation (AM): The driving factor that influences a person to attend school and obtain a degree (Clark et al., 2014).

Career decision making self-efficacy (CDMSE): The belief in one's ability to choose a career that is compatible with one's personality and abilities (Taylor & Betz, 1983).

Career indecision (CI): The inability to specify or make an educational or occupational choice (Kelly, 2002)

Social cognitive career theory (SCCT): A comprehensive framework for the examination of self-efficacy, outcome expectations, and goals and their interactions with demographic variables, contextual factors, and life experiences (Hackett, 2013).

Strong Interest Inventory (SII): An assessment instrument that compares the interests of individuals taking the assessment with those of people who are working in occupations relevant to today's workforce. The SII has been in use since 1927.

Assumptions

Assumptions are often the components that drive studies and provide the basis for what researchers are looking to discover or explore. In this study, several assumptions were present. It was assumed that the students would have the capability of making informed decisions regarding career choice after acquiring knowledge from their exploration and participation in the educational session. Students were expected to

provide truthful responses to questions on the demographic survey, CDSE-SF, CDS, and AMS-HS. It was also assumed that because all students received the treatment, everyone would benefit. These assumptions were necessary underlying components that aided in the provision of accurate results. Furthermore, it was assumed that the standard deviation for the unknown population was the same as it was for the population before the treatment.

Scope and Delimitations

Specific aspects of a research problem must be identified, along with strategies used to address various issues before moving forward with a research study. Therefore, issues of validity were addressed, and it was recognized that threats to internal validity existed: maturation, compensatory rivalry, and diffusion treatment. To minimize these threats, some precautionary measures were taken.

Maturation refers to the concept that a difference in results of a pretest and posttest may simply be due to the participant maturing over time (Creswell, 2009; Marsden & Torgerson, 2012). Maturation was addressed by the amount of time between pretests and posttests; the research process from start to finish did not provide ample time for a significant amount of maturation. Furthermore, the age of the students participating in the study fell within a 4-year span, suggesting that they were likely maturing at about the same rate (Aussems et al., 2011; Creswell, 2009).

Compensatory resentment or rivalry and diffusion treatment were minimized with the absence of a separate control group. Because the group receiving the treatment acted as its own control, no resentment or rivalry existed. Without the existence of two groups,

the threat of communication between groups was void, addressing diffusion treatment (Creswell, 2009). The CDSE-SF, CDS, and AMS-HS were used as both pretest and posttest assessments to preserve the validity of the instruments (Creswell, 2009).

Results were only generalized to AAUA; future anticipated research will be extended to the general population of African American adolescents. Research conducted using other populations might include the examination of perceived barriers but might not include poverty, difficult home and school environments, or lack of education, factors that are more prevalent among urban adolescents. Future replication of the study will determine if the same results arise (Creswell, 2009).

Limitations

Certain limitations existed in this research study. Random selection provides equal distribution of characteristics among an experimental group and is a preferred selection method (Aussems et al., 2011; Creswell, 2009). However, this study did not allow for random selection because each participant was a volunteer. Results of the study may indicate that students initially possessed a high level of CDMSE because they volunteered to participate in the study. Nevertheless, self-selection in previous studies was not found to be an obstacle for making proper casual inferences (Aussems et al., 2011). The participants in this study were students who attended an urban high school and met the requirements for participation; therefore, it might be difficult to generalize the results to all African American adolescents. Furthermore, because the sample size was small, generalizing the results to all urban African American adolescents may also be problematic when making inferences (Aussems et al., 2011).

In a pretest/posttest design, some of the limitations are test effect, maturation, and history (Marsden & Torgerson, 2012). According to Marsden and Torgerson (2012), test effect can occur when participants memorize questions; therefore, the use of two different instruments measuring the same variable is suggested. In addition, ensuring that participants receive the opposite instrument from what they received at pretest is recommended. Due to cost constraints, the same instruments were used at pretest and posttest. Another suggestion when using a pretest/posttest designs is the use of four groups to yield the most accurate research findings, consisting of participants who complete assessment instruments (a) at both pretest and posttest with no intervention, (b) at both pretest and posttest with an intervention, (c) at posttest with no intervention, and (d) at posttest with an intervention. Because of the limited sample size, it is difficult to divide participants into four groups and analyze results generalizable to the larger population (Marsden & Torgerson, 2012).

Maturation, previously discussed as a threat to validity, can also be a potential limitation and was addressed in the same manner (Creswell, 2009; Marsden & Torgerson, 2012). History is also a concern of pretest and posttest single-group designs; a control group or comparison is often the remedy (Marsden & Torgerson, 2012). This research used additional statistical analyses to validate posttest scores.

Significance

This study is intended to add to the limited amount of information available regarding AAUA and career exploration. The primary focus of the study was evaluating the effect of an educational session designed to aid students in making career and

educational choices on scores on assessments that measure CDMSE, CI, and AM. Findings from this study could be used to encourage school districts and administrators to consider career exploration as a worthwhile addition to the school curriculum, to aid AAUA in making sound educational and career choices that will help them attain their educational and career goals. Through such efforts, AAUA might have not only enough information to be confident in their ability to make educational choices and choose a career based on their interests, but also the ability to choose a career that will provide them with economic stability. Economic stability among this population of young people will aid society as these students become part of the educated workforce and contributors to the country's economic stability while reducing spending on social programs (Parr & Bonita, 2015)

Summary

Low occupational expectations as well as a lack of education increase the chances that AAUA, both parenting and nonparenting, will have to contend with a life of poverty. The original study that I proposed was meant to offer a viable solution to ending the hardships that AAUAM face when trying to attain a high level of self-efficacy related to career choices, in the hope that they would be able to choose careers that are sustainable and prevent long durations of dependence on government assistance. However, the population identified in the initial proposal could not be used for this study due to unforeseen circumstances. After several consultations with Walden's Institutional Review Board, it was agreed that working with AAUA, parenting and nonparenting, as well as non-gender-specific adolescents would be appropriate for the research study. The

objective of the study was to provide the same support, with hopes of the same outcome, outlined for AAUAM to the overarching population of AAUA.

Career exploration is one suggested vehicle to increase levels of CDMSE and AM while decreasing levels of CI, thus combating factors that contribute to economic disadvantage. The current study used assessment instruments that measured CDMSE, CI, and AM before and after an educational session that focused on career exploration. Conducting this study was an effort to aid AAUA in feeling efficacious as they make educational and career choices. Choosing careers that they are interested in allows youth to move forward and provides financial stability that impacts them personally, in addition to having positive impacts on society. In Chapter 2, I expound upon the information presented in this chapter and provide an overview of previous works in this area.

Chapter 2: Literature Review

Introduction

Educational attainment and career choice have been two of the most prominent determining factors separating those who live in poverty from those who live "comfortable" lives with the ability to adequately support a family. According to the Bureau of Labor Statistics (2016), the median yearly income for individuals with less than a high school diploma is $26,208; an associates' degree affords a median yearly income of $42,588, and the median yearly income for those who hold a bachelor's degree is $60,112. However, in many U.S. urban school districts, graduation rates hover around 50% (Turner & Ziebell, 2011). Therefore, schools must offer career exploration in their curriculum to aid students in becoming efficacious when making educational and career choices, to provide information that will aid students in making a personal connection between high school graduation and the world of work, and to assist students in choosing careers that will provide job satisfaction and financial stability in the future.

Choices regarding educational major and career are significant life decisions that can be difficult for individuals who are adequately prepared and come from stable environments. These decisions are even more complex for individuals who contend with obstacles such as poverty; difficult home, school, and community environments; and underfunded schools. Many urban youth feel that academic success and entering a professional career after college are unattainable goals; this perception is exacerbated by the difficulties they experience, such as minimal exposure to career exploration and lack of rigorous coursework to prepare them for success at a postsecondary institution (Beggs,

Bantham, & Taylor, 2008; Gushue et al, 2006; Kenny, Blustein, & Chaves, 2003; Turner & Ziebell, 2011).

A focus group led by the Higher Education Compact provided further support for this assertion. In 2017, roughly 100 students from 16 high schools in an urban district in a midwestern state discussed the following question: What prevents alumni from this district from enrolling in college? Students identified several reasons their peers did not attend college. These reasons, in rank order, were as follows: (a) lack of exposure to college life, college coursework, and career opportunities/career paths; (b) concerns related to college cost; (c) feeling or being academically underprepared; (d) personal stress and family issues such as unemployment, the need to provide for family members financially, and teen pregnancy; (e) lack of support and motivation from peers, family, or teachers; (f) fear of failing or of being the first to go to college; and (g) lack of confidence in their ability to succeed in college, and the belief that college is not "right" for them (Higher Education Compact, 2017).

Turner and Ziebell (2011) posed a different question in their research with 97 middle-school urban adolescents. Their question was the following: "What career beliefs do inner city adolescents have?" Previous results indicated that adverse issues faced by urban youth prevent them from making the connection between hard work and success and leave these youth feeling incapable of controlling their destinies (Turner & Ziebell, 2011). Many adolescents who participated in the study felt that success was not related to effort and that being flexible was not important. However, they did value achievement and felt that it was important to like what one does to be satisfied with one's job.

Therefore, it is imperative that students learn how to navigate the career search process and develop a plan that allows them to feel in control of their career path (Turner & Ziebell, 2011).

This chapter starts with an outline of strategies used to search the literature, followed by a discussion of the origin, major tenets, and contributing elements of SCCT. The impact that a lack of education has on long-term financial stability is discussed. Researchers have identified self-efficacy as an integral part of the educational and career choice process; therefore, an overview of self-efficacy is provided. The next section describes career exploration and identifies various types of career related activities that make the search impactful. Special attention is given to the SII because it was the assessment chosen for this study. The dependent variables (CDMSE, CI, and AM), along with their interaction with one another, are presented. The chapter closes with a brief explanation of the rationale for changes that were made to the original research proposal.

Literature Search Strategy

In the initial literature search for information regarding AAUAM, phrases such as *self-efficacy*, *career decision making self-efficacy*, *career indecision*, and *academic motivation* required inquiries to Google Scholar as well as multiple databases. These databases included Academic Search Complete, Vocational and Career Collections, ERIC, Education Research, Sociological Collection, PsycINFO, Urban Studies, Topic Search, Women's Studies, Professional Development Collection, and Psychology and Behavioral Sciences Collection. Narrowing the search was achieved by using the initial terms in conjunction with the following terms: *adolescent mothers*, *teenage mothers*,

African American adolescents, *African American adolescent mothers*, *self-efficacy*, *graduation rates*, *social cognitive career theory*, *criminal activity*, and *depression*, as well as combinations of the previously mentioned terms. Current statistics and information are crucial to any research project to justify aspects of a proposed study. In this case, most research was gathered from journals or statistics published from 2008 to 2015. However, theoretical information dates back as far as 1992. Information was primarily obtained from peer-reviewed journals, as well as Internet sites such as those of Consulting Psychologists Press (CPP.com), Psychological Assessment Resources (PAR.com), and Mind Garden (Mindgarden.com. Dissertations and theses databases and YouTube videos were also sources of relevant information.

Theoretical Foundation

Social learning theory was developed by Albert Bandura and was initially aligned with B. F. Skinner's behaviorist theory. However, as Bandura continued his research, it became apparent that environmental factors and cognition greatly impact how an individual acts or reacts. Bandura proclaimed that the environment, individuals, and behavior influence each other. As a result, observational learning and modeling became primary concepts of what Bandura called *social cognitive theory* (Grusec, 1992).

Observational learning takes place when individuals learn simply by observing other people. *Modeling*, the fastest and most efficient method to influence new behavior, takes place in different forms: *live modeling* and *symbolic modeling*. Live modeling consists of an actual person demonstrating a particular behavior, whereas symbolic

modeling takes place when a person or character portrayed on television, videos, computer programs, and/or books demonstrates a behavior (Grusec, 1992).

Using the basis of social learning theory, in 1994, Lent, Brown, and Hackett introduced a theory that focused on career development known as social cognitive career theory (SCCT). The theory is a framework that considers contextual variables and is used to describe how people's environment exposes them to career-related activities and influences their career development self-efficacy, outcome expectations, and personal goals. SCCT considers proximal factors such as perceptions of support and barriers that influence self-efficacy beliefs, thus impacting career development (Wright & Perrione-McGovern, 2014; Zikic & Saks, 2014).

Lent et al. (1994) described SCCT as a theoretical framework that considers the distal influences of an individual, such as race/ethnicity along with environmental factors including socioeconomic status and educational resources, and how these factors drive decisions pertaining to interests, goals, and actions, and in turn influence self-efficacy and outcome expectations. SCCT uses these concepts and examines how this information serves as a feedback loop that also incorporates personal experiences to influence career choice, performance, and career interest (Lapan, 2003; Lindley, 2005). Three primary components derived from learning experiences exist in SCCT: a) self-efficacy, b) outcome expectations, and c) goals. *Self-efficacy* refers to beliefs about one's ability to succeed; *outcome expectations* are beliefs about outcomes related to specific behavior; and *personal goals* are defined as the determination to engage in certain activities to achieve an outcome (Bandura, 1994: Hackett, 2013). Based on these components,

several assumptions derive from SCCT: (a) self-efficacy and outcome expectations are assumed to have a direct effect on occupational choice; (b) perceived barriers, supports, and other contextual factors play a major part in developing career aspirations; and (c) learning experiences are associated with career choice (Capuzzi & Stauffer, 2006; Lindley, 2005).

The direct relationships between self-efficacy, outcome expectations, choice goals, contextual influences, person inputs, and choice actions were assessed in a study conducted by Rogers and Creed (2011). This longitudinal study, involving 631 high school students in Grades 10-12, also analyzed the relationships between changes in these variables and changes in choice actions over time. Instruments used in the research included the Career Development Inventory, CDSE-SF, and Career Influence Inventory to measure outcome expectations, and a 60-item Neo Five-Factor Inventory. Results of this study supported the hypothesis that self-efficacy and career goals are associated with career planning. However, results did not support the hypothesis that there is a direct relationship between outcome expectations and choice actions. Part of devising an effective career plan is researching different occupations and understanding the education or training necessary to meet an identified career goal.

Research using SCCT as a framework has examined the role that self-efficacy and outcome expectations play in shaping interests and promoting career choice. One proposition of SCCT is that self-efficacy, outcome expectations, goals, and contextual influences are associated with choice actions of career planning and exploration (Rogers & Creed, 2011). Considering these concepts, previous research with African Americans

examined cultural and contextual factors such as gender, race, poverty, perceived occupational barriers, and lack of education. As a result of this research, these factors have been identified as strong influences on career behaviors and outcomes for African American adolescents (Constantine, Kindaichi, & Milville, 2005, 2007; Hellenga et al., 2002; Mau, 2004). Researchers have also identified career self-efficacy as a key component of an individual's career development, and additional research studying career development using SCCT has found that career-relevant activities predict job search self-efficacy and provide job clarity. Consequently, the combination of career-related activities, job search self-efficacy, and job search clarity predicts job search intensity (Choi et al., 2012; Gushue et al., 2006; Zikic & Saks, 2009). Because SCCT considers self-efficacy, outcome expectations, and goals to be primary components of the theory, it was a practical framework for the current study, which focused on AAUA and contextual factors such as race, job and training opportunities, socioeconomic status, and the education system.

Literature Related to Key Variables

Using SCCT in a study of African American adolescents, Constantine, Wallace, and Kindachi (2005) concluded that career barriers and parental support accounted for variance in career certainty and CI. Furthermore, perceived career barriers were significantly positively predictive of African American adolescents' CI but were not significantly related to career certainty. Constantine et al. (2005) proposed that certain contextual variables are important factors to consider in the career-decision-making process among African American adolescents, thus indirectly supporting the hypothesis

that career self-efficacy gained through career exploration will positively influence academic achievement and career decision. When considering barriers to reaching high levels of CDMSE, one obstacle that many AAUA face is an inability to participate in career exploration activities that will allow them to make the connection between high school graduation and the world of work.

In many urban high schools, funding for career exploration takes a "backseat" to purchasing books, having an adequate number of course offerings, implementing attendance campaigns for students, preparing for state testing, and contending with violence inside the school as well as in the surrounding community. Just as school administrators are saddled with these obstacles, so are many AAUA students. For many, the focus is on their family's living arrangements, safety going to and from school, and making enough money to help with household expenses. Unfortunately, in some cases, graduation is a "bonus." These contextual factors impact academic performance and limit career choices for many AAUA.

In an analysis of graduation rates in the 50 largest urban cities in the United States, the average graduation rate was 52.9% (Freeman & Simonsen, 2015). Beyond facing financial strains associated with dropping out of high school, AAUA contend with other issues that affect the level of success they experience in adulthood. Increased high school dropout rates not only impact national graduation rates; those who do not graduate fall into what Wagner (2013) called the *underclass*. Those who fall into the underclass typically work part time and depend on some sort of public assistance for long durations due to a lack of education and job skills, potentially contributing to strains on the

economy (Wagner, 2013). Individuals who drop out of high school are often affected on a more personal level as well. According to Sweeten and Bushway (2009), high school dropouts are well represented in the U.S. penal system; 68% of state prison inmates, 50% of federal inmates, and 60% of jail inmates did not earn a high school diploma. These statistics indicate that individuals who do not attain a high school diploma have a higher propensity to commit acts that lead to incarceration and pose additional barriers to making educational and career choices. Although the preceding discussion has identified the impact of not finishing high school on individuals' ability to choose a sustainable career that could possibly move them out of poverty, it is also necessary to consider what obstacles may be present for AAUA who do graduate.

Sciarra (2011) indicated that students' postsecondary expectations may not be realistic. The results of a longitudinal study conducted with 5,353 students found that 12% identifying as African American revealed that future academic expectations for themselves later in their high school careers (12^{th} grade) were more reliable than earlier ones. However, of those students who expected to attain a bachelor's degree via a 2-year institution, 20% of African Americans did not meet that standard and left their postsecondary institution within a year and a half (Sciarra, 2011). The questions then become the following: (a) What factors prevented these students from completing their post-secondary education? (b) What can school districts and counselors do to assist? Regarding the first question, a couple of explanations could be appropriate: lack of academic preparedness, financial issues, lack of college and career preparedness, or lack of belief in ability to achieve one's goals. The last item in this list is referred to as *self-*

efficacy—belief in one's own capability to succeed. Possessing self-efficacy influences the events that affect individuals' lives and can enhance personal accomplishments and personal well- being in several ways (Bandura, 1994). The second question relates to the role of schools and counselors. Sciarra (2011) suggested that school counselors focus on implementing programming to aid in building students' ability to make sound educational and career choices. This can be accomplished by informing students about the realities of education beyond high school, talking with students about completing tasks that will put them in a position to achieve their academic expectations, and exposing them to an array of opportunities, along with providing career search opportunities that allow for self-exploration (Sciarra, 2011).

Holland and DeLuca (2016) expounded on Sciarra's (2011) assertion that the gap between AAUA aspirations for postsecondary success and their attainment is too large and must be addressed. Unfortunately, the percentage of AAUA who complete the requirements for a bachelor's degree within 6 years of graduating from high school is a dismal 40%. According to Holland and DeLuca, AAUA have misaligned aspirations and expectations, leading to increased dropout rates from 4-year institutions. Because of financial constraints, many enter for-profit postsecondary certification programs that promise a short-turnaround alternative to entering the workforce. Regrettably, many students do not complete these programs and are saddled with large amounts of debt. As a result, increased restraints are placed on an already bleak financial situation. Lack of academic preparation and minimal exposure to career and postsecondary information in high school are cited as major contributors to the struggle for success that AAUA may

experience at the postsecondary level (Holland & Deluca, 2016, Sciarra, 2011). This cycle leaves students in the same position in which they began their postsecondary journey. In order for students to become successful at the postsecondary level, whether they attend a 4-year institution, 2-year institution, or trade school or enter the workforce directly, they must possess a sense of efficacy regarding their ability to make educational and career choices that reflect their personal interests.

Self-Efficacy

Fundamentals of Self-Efficacy

Albert Bandura began to study self-efficacy in the 1970s and took a special interest in its role regarding effective change. Bandura discovered that an individual's perception of his/her belief in the ability to perform specific tasks, at a level that they perceive to be acceptable, determines how easy changes in behavior occur and are sustained. The stronger the belief in one's own ability to perform, the more accomplishment is achieved, and a sense of heightened personal capability is established (Bandura, 1994; Grusec, 1992; Hackett, 1996).

According to Bandura (1994) individuals gain a sense of self-efficacy in many ways: *mastering experiences, vicarious experiences, social persuasion*, and *affective reactions* are the most common. Mastery of experiences is the greatest influence on self-efficacy; repeated success in performing a task builds confidence in the capability to perform that task thus increasing the level of self-efficacy. A child who has mastered dribbling a basketball becomes confident in his/her ability to perform this task, which increases the probability that they will pursue the sport and engage in other acts such as

shooting the ball in the hoop. The more successful the child becomes at performing these tasks the more likely it is that the child will have an increased affinity for the sport. However, if the child begins to experience some difficulty in performing these tasks their sense of self-efficacy may begin to diminish as well as their desire to perform the task (Bandura, 1994).

Vicarious experiences are gained through others, often an individual finds another person who they can identify as someone that they share multiple things in common with, making that person's experience representative of their own. One urban high school brings back alumni who are currently enrolled in college to share their experiences with the current senior class. Many students gain confidence in their abilities to be successful in college because they see students that come from similar backgrounds successful at navigating the college going process (M.L. Flowers, personal communication, December 22, 2015).

Social persuasion, another method of gaining self-efficacy, refers to verbal affirmations received from others. The more individuals are told that they have mastered a certain activity the more confident they become in their capability to complete the task (Bandura, 1994). However, if they are unable to complete this task at a level that is deemed successful, social persuasion may be ineffective. For example, if a student is continually told that he/she is capable of scoring better than 75% of the population on a standardized test and only performs at a level that is merely better than 45% of the population, the student may become discouraged and reluctant to attempt the task again.

Affective reaction is the least effective method of gaining self-efficacy. This method relies on emotional states to determine levels of self-efficacy. If an individual wants to pursue an exercise regimen and becomes fatigued in the first couple of minutes, the belief in their capability to complete the regimen may be diminished. On the other hand, if the regimen is completed the confidence level may increase. Therefore, the perception of success plays an integral role in determining the level of self- efficacy which influences the process involved in making decisions (Lane & Lane, 2004).

Processes of Self-Efficacy

Many actions are initiated by thinking about the scenarios that may arise because of the action. Individuals with a heightened sense of self-efficacy visualize the positive aspects of the scenario. Those individuals who deal with high levels of self-doubt visualize all the negative aspects therefore, teaching individuals to become resilient against adversity in their thought processes may enable one to sustain a positive path to reaching his/her goals. This is known as the *cognitive process* (Bandura, 1994). AAUAM who are forced to concentrate on their current environment, attend underachieving schools, face discrimination due to gender, and contend with financial constraints may be more apt to make impulsive decisions regarding career choices to obtain immediate relief rather than a long-term solution.

According to Bandura (1994) motivation to complete a task can derive from the initial cognitive process and the goals that are set as a result. Self-efficacy contributes to motivation through determining the goals people set for themselves, how much effort is

invested in accomplishing those goals, how one fares against adversity, and the ability to recover and move forward after setbacks or failure.

Affective processes are linked to a sense of self-efficacy and determine how individuals exercise control over the level of stress they experience in threatening or difficult situations (Bandura, 1994). Those who believe that they can successfully respond to threats experience decreased levels of anxiety while those who have little faith in their capability to manage threats experience high levels of anxiety. In many instances, high levels of anxiety lead to depression and a perceived inability to complete the tasks necessary to achieve the goals set forth. Selection processes occur because of cognitive processes, motivation, and affective processes that are associated with self-efficacy. Choices made in the selection process, based on the beliefs in one's own efficacy, can positively or negatively affect competencies, interests, and personal development. Choosing an appropriate career has much to do with different types of exposure to diverse occupations, personal interest, and confidence in one's ability to complete the tasks associated with that occupation. Ochs and Rosseler (2004) indicated that extensive career exploration is a necessary requirement for reaching *career maturity*; a level in which one can be comfortable with and confident in his/her career choice. Because career exploration is an integral part of the career and education decision making process; it served as a vital element in the current research study.

Career Exploration

The intent of this research was to investigate career exploration as a viable means for developing CDMSE, CI, and AM among AAUAM. According to Visher, Bandhari

and Medrich (2004) participation in career exploration programs such as job shadows and internships increase the likelihood that students will take college entrance exams. Furthermore, students who participate in all types of career exploration are more likely to graduate from high school.

In one example, 3,600 middle school students had the opportunity to engage in a career exploration program that was integrated in the school curriculum. Orthner, Akos, Jones-Sanpei (2010) determined that those students were more engaged in school than those who had not been exposed to career exploration.

According to Visher, Bandhari and Medrich (2004), career exploration programs designed to be implemented into school curriculum can exist in several forms:

- Career majors allow students to take a sequence of courses in a broad career area.
- Cooperative education provides students with the opportunity to alternate between vocational and academic courses in a related field.
- Internship programs can be paid or unpaid and expose students to a specific industry or occupation for a short period of time.
- Job shadow pairs students up with employees for a day or more, giving students the opportunity to see the daily tasks that are required for a position.
- Mentoring is a pairing between students and employees that provide students with specific skills to perform a specific job.

- School-sponsored enterprise programs enhance the enterprising skills of students and the opportunity to produce goods or offer services to be purchased or used by others.
- Technical preparation programs incorporate a planned program of study with a defined career focus that links secondary and postsecondary education.

Another viable method of career exploration is the use of interest inventories; these tools have been effective in making significant gains in career decision making-self efficacy (Isik, 2014). However, little research examining the effectiveness of interest inventories on the variables of CI and CDMSE exist except for Luzzo and Day (1999) as indicated by Isik (2014). One key component of working with interest inventories is that participants should be a part of the interpretation process to receive the full benefit.

The current study utilized the SII, a tool that aids participants in discovering their likes and dislikes as they relate to occupational tasks. In addition, participants were provided with information relevant to their personality types and work styles. Based on occupations that have been traditionally identified as having compatible elements of particular personality types and work styles, a list of top occupations was generated for the participant. Donnay, Morris, Schaubhut, and Thompson (2005) provide specific information as to how the SII gathers the information provided to participants in five different areas:

- Scores on six General Occupational themes that reflect the participant's overall orientation to work

- Scores on the Basic Interest Scales address consistencies in interests or disinterests in 30 different areas
- Scores on 122 Occupational scales represent different occupations and compare similar interests between participants and individuals that already work in those occupations
- Scores on five personal style scales measure learning and work styles, assume leadership, take risks, and work within teams
- The administrative indexes help to identify inconsistent or unusual profiles

CDMSE, CI, and AM are all variables that aid in making sound education choices and career decisions. Research on these variables have yielded interesting results: vocational identity and self-esteem showed the largest significance regarding CDMSE while gender and race were insignificant (Choi et al, 2012). Previous research has shown mixed results when evaluating the relationship between CDMSE and demographic variables such as gender, race and age (Choi et al, 2012). Heightened perceptions of career barriers increased the level of CI while increased parental support was a positive predictor of career certainty (Constantine, et al., 2005). Findings from another study indicated that diminishing an individual's hopelessness might be a viable solution for increasing perceptions of self-efficacy (Duggleby et al., 2008). Furthermore, a strong link between self-efficacy and interest outcome expectations demonstrated a direct effect on career choices. Self-efficacy and career goals were also associated with career planning and students who were confident with career decision making were more likely to engage in career planning. However, the study did not support the premise that a direct

relationship between outcome expectations and choice actions exist (Choi, 2012; Constantine et al., 2005; Duggleby et al., 2008; Rogers, 2008; Schaffner, 1999).

Career Decision Making Self-Efficacy

Bullock-Yowell and Andrews (2011) define career decision- making self-efficacy as an individual's belief in his or her ability to perform tasks related to the career decision making process. Career choice and career development are examples of how self-efficacy beliefs can affect the path chosen in life. Higher levels of self-efficacy foster considerations of a wide range of career paths and interests (Bandura, 1994).

Previous research has been conducted around CDMSE, however, college students and nonminority students have been the primary focus of the studies conducted regarding career exploration (Patrick, Care, & Ainley, 2011; Rogers & Creed, 2011). Research regarding career exploration for high school students of color and educational outcomes is limited. Findings have indicated that self-efficacy plays a major role in career decision making and academic achievement.

When discussing career related self-efficacy, it is important to identify the two types that exist: content and process. Content self-efficacy refers to self-efficacy in specific career fields such as science, technology, engineering and mathematics (Stem). Process self-efficacy refers to the strategies used to navigate the decision-making process (Choi et al., 2012). The processes of self-efficacy play a role in discovering and establishing one's vocational identity. Vocational identity is the realization of one's vocational interests, skills, and occupational goals (Gushue et al., 2006). As adolescents begin to make decisions regarding career choice they begin to rely more heavily on their

vocational identity or belief in their ability to make decisions regarding a career choice. If adolescents question their vocational identity, are unsure about their ability to perform certain tasks, or lack exposure to different careers, then they become indecisive about their career choice. Heightened levels of indecision can serve as a barrier to making long-term, sustainable choices that impact education and career paths.

Career Decision Making Self-Efficacy and Career Indecision

According to Kelly and Lee (2002), CI is defined as the inability to specify an educational or occupational choice. Two types of indecision exist: developmental indecision and chronic indecision or indecisiveness. Developmental indecision is a normative transition stage that is inevitable in career exploration and vocational decision making. Chronic indecision is indecisiveness that can occur across domains and is not exclusive to the career domain (Santos, Ferriera, & Goncalves; 2014).

Kelly and Lee described different causes of CI and identify when each is most likely to occur while acknowledging that the occurrence can be fluid. Information deficit and identity diffusion are causes of CI and most likely occur prior to decision making. Other factors contribute to the difficulty one may experience when making career decisions. Trait indecision may occur due to some cognitive experience while an affective experience may yield choice anxiety, both of which are realistic. Disagreements with others that inhibit the implementation of a career choice can cause CI and occur at any time.

CDMSE has been identified as the best and only predictor of CI (Betz & Voyten, 1997; Taylor & Popma, 1990). Previous studies have found an inverse relationship

between CDMSE and CI (Betz & Voyten, 1997; Di Fabio, Palazzeschi & Austin-Peretz, 2013; Taylor & Popma, 1990). However, Creed et al (2006), in a two-way longitudinal investigation of the relationship between CDMSE and CI among eighth grade students, found that changes in CDMSE were not associated with CI over time (Creed et al, 2006). These findings were contrary to previous studies and suggested a replication of the study. Grier-Reed, Skaar, and Parson (2009) conducted a pre-test and post-test study with 114 college students; 63 receiving the treatment of a constructivist career course and 52 in a control group. The findings did not suggest that increases in CDMSE yielded a decrease in CI. CDMSE and CI are among the dependent variables examined in the current research study. The study sought to determine whether a significant change would result in scores associated with these variables following an educational session that focused on career exploration.

Self-Efficacy and Academic Motivation

Self-efficacy and its relationship to levels of AM have been studied in the past, although a limited amount of research exists using a population of AAUAM, information acquired in previous research is useful and lays the groundwork for the expansion of research in this area.

AM is derived from one's drive to attend school and obtain a degree (Clark et al., 2014). Vallerand and Bissonnette (1992) identify three types of motivation: intrinsic motivation, extrinsic motivation, and amotivation. *Intrinsic motivation* is described as learning something because one enjoys it. *Extrinsic motivation* is to learn something as a means to an end. Cokely, Bernard, and Cunningham (2001) refer to *amotivation* as

something that is not within the students control and not motivated extrinsically or intrinsically.

As students' progress through school levels of motivation decrease and high school motivation is lower than at any other level. Decreased motivation could potentially impact a student's ability to do well or even finish school (An, 2015). Understanding the relationship between high school progression and motivation levels coupled with identifying the other obstacles that adolescent mothers face, could potentially begin to provide a plausible explanation--among other variables--for increased high school dropout rates among adolescent mothers. Prat-Sala and Redford (as cited in Cerino, 2014) indicated that students with high levels of self-efficacy have increased levels of AM linking self-efficacy and AM to academic performance. Furthermore, previous research done with African-American women, examining the relationship between AM and self-efficacy, suggested that interventions should target one's perception of the ability to succeed academically (Thomas, Love, & Roan, 2007).

Academic self-efficacy can be defined as an individual's belief in his or her ability to perform academically (Giunta, 2013; Gore, 2006). Previous research indicated that higher levels of academic self-efficacy and AM are synonymous with higher levels of academic achievement, thus, lowering the probability of dropping out. This is a good indication that increasing self-efficacy can be used as an intervention and a source of academic achievement spanning across educational levels and ethnicities (Arslan, 2013; Giunta, 2013; Lane, 2004; Pina-Nieves & Faira, 2013; Putwain & Sander, 2013; Whannell, 2013). Academic self-efficacy has a significant relationship with academic

performance and has been consistently and strongly related to academic outcomes. Results of a study conducted by Umaru (2013) revealed that students who possessed high levels of self-efficacy were less inclined to engage in academic cheating due to the level of confidence they had in their own capability to succeed academically. However, students that possessed lower levels of self-efficacy were more likely to cheat due to their desire to achieve academically.

Several common themes were identified from the literature review (a) AAUA lack the efficacy to perform academically and choose professional careers (b) perceived career barriers and distal risk factors heavily influence AAUA struggles to succeed at the secondary and postsecondary level (c) a disconnect between post-secondary aspirations and expectations exist among AAUA (d) career exploration needs to be increased in high school for students to attain postsecondary success.

The literature highlights the necessity for career exploration in high schools, but especially in underfunded schools, because succeeding at the postsecondary level is crucial for financial stability to avoid a life of poverty. However, historically career exploration does not exist in low resource schools or if it does it is at a minimal level; therefore, the impact of such programming has not been well documented. Information drawn from themes in the literature review steered the current research study. The SII was used as a career exploration tool because of the wealth of knowledge it provides to participants about personal, educational, and career interests. Furthermore, this type of career exploration can provide information to decrease the gap between postsecondary

aspirations and expectations among AAUA while serving as a guide for postsecondary planning.

The current study assessed self-efficacy using results of the CDSE-SF. Career certainty and indecision ratings from the CDS account for CI. Educational goals were evaluated using self-determination scores from the AMS. Outcome expectations were analyzed from responses given to the statement, "identify your current career choice or post-secondary plan" on the demographic survey scale and results of occupational scales from the SII.

Although the body of knowledge regarding AAUA and career exploration has increased slightly over the last couple of years, gaps in the research still exist. Results from this research can fill the gap in the literature that exists concerning the impact an educational session has on CDMSE, CI, and AM among AAUA. Furthermore, findings from this research can highlight the necessity for career exploration in urban high schools to aid students with making educational and career choices that will sustain them in a global economy.

Rationale for Changes to Original Proposal

The original research proposal was to be conducted with AAUAM who attended three different high schools in a midwestern state. However, several logistical issues arose when attempting to coordinate data collection from the different sites. After several consultations with Walden's Institutional Review Board and my dissertation committee, it was decided that a secondary analysis at my current school site would be the most practical solution to this problem. Therefore, the research was conducted with AAUA, an

overarching population that encompasses AAUAM. Information in the literature review is generally applicable to AAUA in addition to being applicable to AAUAM. From this point forward in the dissertation, the population and participants referenced will be AAUA. However, nonpregnant and nonparenting students were included (in addition to those who may have been pregnant or parenting) and both male and female students were eligible to participate. A full description of the population is provided in chapter 3.

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Chapter 3: Research Method

Introduction

AAUA have fewer opportunities to gain employment in professional occupations due to a lack of self-efficacy regarding academic performance and career goals, as well as minimal opportunities to explore career options, which makes entering the professional arena more difficult. Unfortunately, these young men and women also contend with risk factors associated with impoverished environments (Holland & DeLuca, 2016; Turner & Ziebell, 2011). Low socioeconomic status, underfunded schools, unsafe community and school environments, and poor school attendance (due to other priorities such as work or caring for family members) are all factors that increase the risk of African American adolescents falling into or remaining trapped in what some refer to as the "underclass," an economic class status that does not afford the opportunity for consistent income outside of government assistance, leading to a life in poverty (Wagner, 2013). Therefore, it is imperative to provide AAUA with information that will assist with circumventing this fate.

The current study was quantitative in nature and used a repeated-measures research design. Scores on the CDSE-SF, CDS, and AMS-HS were assessed at two different points in time with the same group of participants to determine whether an educational session focusing on career exploration had a significant effect among AAUA attending a high school in a midwestern state (Aussems et al., 2011; Ellis, 1999, Gravetter & Wallnau, 2009).

This chapter begins with an overview of the research design and the rationale for conducting this study. The methodology used to conduct the research, including descriptions of the population, sampling procedures, recruitment procedures, and data collection, is presented. Detailed descriptions of the CDSE-SF, CDS, and AMS-HS are provided. A discussion of the SII and its use as a tool for career exploration follows. The chapter culminates with a description of threats to both internal and external validity, along with an overview of ethical procedures.

Research Design and Rationale

The current research examined whether exploring career interests via the SII affected levels of CDMSE, CI, and AM among AAUA. The study contained one 2-level categorical independent variable—time—and three continuous dependent variables—scores on the CDSE-SF, CDS, and AMS-HS. The SII was used to facilitate the career exploration process among participants, and an educational session to interpret the results followed.

Because the use of a convenience sample was most practical for this research study, random assignment was not possible (Ausseums, Boomsma, & Snijders, 2011). Research questions addressed whether an educational session significantly changed scores related to CDMSE, CI, and AM among AAUA. To determine if any change occurred, a baseline score was established at pretest; the posttest scores revealed whether a significant change in scores happened. One advantage of using this type of design, commonly referred to as a *repeated-measures design*, is that it eliminates the risk of

substantial differences among participants in one treatment versus another (Gravetter & Wallnau, 2009).

Design choice for a study is contingent on several factors: (a) how information or data collection will occur (e.g., surveys, personal interviews, closed- or open-ended questions, experiments); (b) whether the study will test a theory or allow for emerging approaches using participant views; (c) whether variables will be identified upfront or whether themes will be developed during data collection; (d) standards of validity and reliability; (e) whether the researcher will bring personal values into the study; and (f) whether numerical methods will be used to assess and measure information (Creswell, 2009).

The design chosen for the current study was quantitative in nature and used a quasi-experiment. Because I was seeking to ascertain whether an educational session had a significant effect on scores measuring three dependent variables from one time to another using numerical data from survey assessments, this design was aligned with the research questions. According to Aussems et al. (2011), quasi-experiments are often used to explore topics that fall under the educational sciences, such as educational psychology, and are used to advance knowledge in this area. Furthermore, research in psychology often assesses whether some form of change takes place over time and has resulted from some intervention; a repeated-measures design allows researchers to assess any cognitive, emotional, or behavioral changes that might have taken place (Kogos, 2000). Because the research was conducted in a school setting and all participants were students, certain constraints existed.

The research had to be conducted during a period in which school was in session. During the 2016-2017 school year, school was in session from August to the end of May with three breaks, which occurred in November, December, and March/April. Furthermore, standardized testing took place at least four different times during the year in 1-week increments, with additional test days in October and April. The cost of the assessments ranged from no cost at all to amounts that were deemed expensive. However, I did not have any issues with supplying the assessments for this study. The cost of the assessments is presented in Table 1.

Table 1

Assessment Instruments Used to Measure Dependent Variables

Instruments	Variables measured	Cost
Academic Motivation Scale—High School, 28-item (AMS-HS 28)	Amotivation Extrinsic motivation Intrinsic motivation	$0.00
Career Decision Self-Efficacy Scale—Short Form (CDSE-SF)	Self-appraisal Occupational information Goal selection Plans Problem solving	$160 per pk. of 50 booklets
Career Decision Scale (CDS)	Career indecision Career certainty Barriers to decision making	$118 per pk. of 100 booklets

Methodology

Population

The city's population is 389,521 and is 53.3% African American, 33.4% White, 10% Hispanic or Latino, 2.8% two or more races, 1.8% Asian, and 0.3 % American Indian or Alaskan Native. Thirty-two percent of the population is under 18 years old. The median household income is $26,583; 36% of people live below the poverty level (U.S. Census Bureau, 2016). According to Community and Neighborhood Data for Organizing (NEO CANDO, 2010), 24.3% of the city's population is without a high school degree, while 35% have a high school degree, 6% have an associate's degree, 8% have a bachelor's degree, and 5% have a graduate or professional degree.

This study focused on AAUA attending a public high school in a large, urban district in a midwestern state. According to a 2016 district report, just under 39,000 students are serviced, of which 65% are Black and non-Hispanic. Thirty-nine high schools exist over 82 square miles. The number of African American high school students enrolled in the district is 7,450. This number does not reflect students who receive their education in detention centers or through home instruction. The target population for this study consisted of the 7,450 AAUA who attended 39 high schools throughout the district. As SCCT considers distal risk factors, it was appropriate to examine those factors among the participants in the study. Demographic characteristics and a summary of specialized services are outlined in Table 2.

Table 2

School District Demographics and Specialized Services

Variable	Percentage
Race	
Black, Non-Hispanic	64.5%
Hispanic	15.8%
White, Non-Hispanic	15.7%
Multiracial	2.6%
Asian or Pacific Islander	1.3%
American Indian or Alaskan Native	.2%
Gender	
Female	48.2%
Male	51.8%
Graduation rate	
Class of 2015	69.1%
Class of 2016	72.1%
Special services	
Free/reduced-price lunch	100.0%
Students with disabilities	21.8%
Gifted students	6.4%
Homeless services	3.6%

"Note." From the site's "district-level website." Data are from 2016.

Sampling and Sampling Procedures

A convenience sample was used in this study because the population was easily accessible. This sampling approach is cost effective and takes less time than random sampling, with the resulting sample often composed of volunteers (Acharya, 2013). Research regarding the number of African American adolescents who reside in the city and attend the public high schools was conducted; information was gathered from agencies such as NEO CANDO, U.S. Census Bureau, and the school district in which students attend. AAUA attending an urban high school located in a midwestern state. were offered the opportunity to participate in the study. This high school was chosen because it is in a neighborhood that has a large population of African Americans and had a graduation rate of 69% in 2015.

Members of the target population face several obstacles. They are not exposed to a vast number of role models who can provide insight into diverse careers. Further, their schools are low on resources, which makes it difficult for these schools to provide quality career exploration programming. Meanwhile, the financial burdens that members of this population face make it difficult for them to see themselves beyond their current state (Cox, 2016; Holland & DeLuca, 2016). The sampling frame was limited to those who identified as African American, were between 15 and 19 years old, and attended the designated high school in a midwestern state. Individuals under the age of 15 and over the age of 19 and individuals who identified as any race but African American were excluded from the study.

To determine an appropriate sample size, G*Power 3.1 was utilized, G*Power 3.1 is a free power analysis Internet program for behavioral sciences. This program provides an a priori power analysis to compute the required sample size when given alpha, power, and effect size for a repeated-measures *t* test (Faul, Erdfelder, Buchner, & Lang, 2009). A priori power analysis indicated that a total sample of 45 people would be needed to detect medium effects ($d = .5$) with 95% power using a *t test* within means with alpha at .05. The sample size for this study was 54, exceeding the minimum number needed (Faul et al., 2009; Mayr, Erdfelder, & Buchner, 2007).

A repeated-measures *t test* was used in the study. According to Gravetter and Wallnau (2009), a repeated-measures design normally requires fewer subjects than an independent-measures design because participants serve as their own control group, as was the case in this study. The CDSE-SF, CDS, and AMS-HS were given as pretests to determine students' level of confidence in their ability to choose and carry out tasks of a specific occupation, students' level of certainty regarding their career choice, and students' motivation to complete high school, respectively, prior to an educational session. This information was gathered from total scores on each assessment. The SII was used as the primary means to facilitate career exploration among students participating in the study. The students gained insight regarding their career interests and what occupations aligned with their interests based on the information derived from the SII. The CDSE-SF, CDS, and AMS-HS were administered again as posttests to determine whether a change in scores occurred from Time 1 to Time 2.

Recruitment Procedures and Data Collection

The initial procedure outlined the following recruitment procedure: flyers recruiting participants for the research study were to be emailed to school administrators and posted throughout the building, allowing students to self-identify as prospective participants. School personnel would then be asked to distribute flyers as an alternate method as well. The flyer would serve as an invitation to participate in the study. In addition, a clearly outlined document with a description of the study, the purpose of the study, and researcher information was developed to distribute to students.

A consent form was to be given to each student to obtain consent for participation in the research study, as well as to convey my commitment to comply with all guidelines regarding confidentiality. In it, I offered assurance that participants were free to withdraw from the study without penalty. The consent form also included my contact information. An assent form was to be given to participants who were 15-17 years old to confirm their willingness to participate in the research. In addition, a survey gathering demographic information such as name, date of birth, ethnicity, primary language, grade in school, current school, and vocational interests, among other information, was to be distributed.

Potential participants were to turn forms in to a school designee upon completion; at that time I would collect the forms from the school designee. After data was collected from the student via the demographic survey, I would examine the data to determine whether the participant fits the criteria for participation in the study. However, when I received IRB approval (10-24-16-0142714) to conduct a secondary analysis using AAUA, I amended the recruitment process as well as some of the forms in the

appendices. These changes are discussed in detail in Chapter 4. However, the research timeline remained the same; a timetable of activities appears in Table 3.

Table 3

Research Timeline

Week	Activity	Length of session
1	Collection of assent, consent forms, and demographic survey. Question-and-answer session. Introduction to the Strong Interest Inventory. Complete the Academic Motivation Scale, Career Decision Scale, and Career Decision Making Self-Efficacy Scale.	1 hr. 45 mins.
2	Complete the Strong Interest Inventory.	1 hr.
3	No session	
4	No session	
5	Participants will receive and engage in the interpretation process of the results from the Strong Interest Inventory. Complete the Academic Motivation Scale, Career Decision Scale, and Career Decision Making Self-Efficacy Scale.	2 hrs. 15 mins.
6	Participants will receive raw score results from the post assessments, and a debriefing session will take place that allows feedback from participants via Career Exploration Evaluation form. The researcher will gather contact information to ensure accuracy.	2 hrs.
10	Participants will be provided with final results of the study via email or U.S. mail.	NA

Instrumentation and Operationalization of Constructs

The research made use of six instruments:

- Career Decision Making Self-Efficacy Scale-Short Form (CDSE-SF)
- Career Decision Scale (CDS)
- Academic Motivation Scale-HS (AMS-HS 28)
- Strong Interest Inventory (SII).
- Demographic survey;
- Programming evaluation sheet

Participants in the study were given the CDSE–SF, CDS, and AMS –HS at two different times during the study to assess the dependent variables: CDMSE, CI, and AM. A description of the assessments is found in the sections that follow.

Career Decision Self-Efficacy Scale—Short Form

The Career Decision Self-Efficacy Scale—Short Form (CDSE-SF; Taylor & Betz, 1983), formerly referred to as the Career Decision Making Self-Efficacy Scale (CDMSES), is a 25-item inventory that was developed in 1983 by Nancy Betz and Karen Taylor. The instrument is published by Mindgardens, Inc. (Nilsson, Schmidt, & Meek, 2002). The CDSE-SF assesses self-efficacy as it relates to career decision making tasks and behaviors using a 5-point Likert type scale (Luzzo, 1996). The CDSE-SF is geared toward specific populations such as high school students. Betz, Klein, and Taylor's (1996) psychometric evaluation of the CDSE-SF revealed that the short form was just as or more reliable than the original form with an alpha value of .94 and concurrent validity correlations for

the CDSE-SF were higher than the original form. Therefore, the CDSE-SF was used in the study. Permission to use this scale in the research was obtained from Mindgardens, Inc. Sample questions from the CDSE-SF scale are available in Appendix B.

Regarding the reliability of the CDSE Luzzo (1996) found the instrument to possess relatively high internal consistency reliability, with a test-retest reliability of .83 after 1.5 months between assessments. Validity testing supported the hypothesis that a relationship exists between career decision making attitudes and scores on the CDSE (Luzzo, 1996). Luzzo (1996) assessed 92 undergraduate students at Eastern University. The mean age of the students was 19.6. Seventy-one percent of students were white and 23% were African American. Betz and Taylor (2012) indicated that a study conducted by Robbins found a moderate relationship between the CDMSE and CI; the correlation equaled .32.

Taylor and Popma (1990) researched the relationship between CDMSE and occupational self-efficacy, vocational indecision, and other factors pertaining to career decision making among 407 college students (203 females, 204 males) at a Mid-Western University. Results revealed a negative relationship between scores on the CDMSES and vocational indecision. The correlation was equal to .51. Positive relationships existed between career decidedness and CDMSE with the correlation equal to .46. There was no proven relationship between CDMSE scores and GPA, as had been the case in previous studies (Luzzo, 1996). These

results combined with previous research confirmed that the CDMSES is a valuable tool for predicting career decidedness as well as a generalized measure of self-efficacy expectations for career decision making tasks. This study used total scores (sum of all 25 items/25) to measure a participant's degree of belief in their ability to successfully complete tasks necessary to making significant career decisions.

Career Decision Scale

The CDS (Osipow, Carney & Warner, 1976), is a 19-item assessment that was developed in 1976 by Samuel H. Osipow, Clarke G. Carney, Jane Winer, Barbara Yanico, and Maryanne Koschier and is published by Psychological Assessment Resources, Inc. The CDS measures CI using a four- point response option format. Sample items can be found in Appendix C.

According to Osipow, Carney, and Warner (1987), Slaney, Palko-Nonemaker, and Alexander examined test-retest reliabilities over a six-week period for the Certainty and Indecision scale items. Yielding correlations ranging from .19 to .70 with total Career Decision Scales of .70. Osipow et al. (1976) proved that groups that have incorporated career planning interventions with individuals that had higher scores on the Indecision scale initially will have a decrease in scores after the intervention.

Feldt (2013) described using the Indecision Scale of the CDS with 686 European American college students (521 women and 165 men). The mean age was 19.0. Cronbach's alpha coefficient for Identity Diffusion was .89 which supports the retest coefficients of the Indecision scale on a whole ranging from .70 to .90. Leon (2010)

researched perceived barriers and CI among 139 African American high school seniors (94 females, 45 males), results indicated that perceived barriers positively predicted CI which was 14.7% of the variance. Cronbach's alpha of reliability scores for the CDS was .87, this is consistent with Osipow's assertion that the CDS has proven to be reliable with diverse populations (1980).

The current study used total scores that were cross referenced with percentile scores, using the scoring box provided in Appendix B of the CDS manual, to determine levels of certainty and indecision.

Academic Motivation Scale—High School Version

The Academic Motivation Scale—High School Version (AMS HS-28, Vallerand et al, 1992) is a 28-item inventory that assesses intrinsic, extrinsic, and amotivation on 7 subscales. The AMS-HS 28 is a sound instrument and has been used extensively to assess motivation in high school students (Komarraju, 2010; Vallerand, 1992). Students participating in the study attended high school, therefore the AMS-HS 28 was used.

A complete copy of the AMS-HS 28 scale can be found in Appendix D. Use of this scale only requires that the researcher mention the complete reference data.

Upon evaluating the reliability and validity of this instrument among American students, Cronbach's alpha ranged from .70 to .86 supporting previous research that indicated internal consistency of scores have been identified as acceptable, good or excellent (Cokely, Bernard, & Cunningham, 2001, Komarraju et al., 2010; Taylor, 2014).

Taylor (2014) assessed motivation orientation, perceived school climate, and academic self-concept among 35 African American and 40 European high school seniors.

Students were administered the AMS-HS to measure motivation orientation. Results of the study revealed a positive correlation between academic self-concept and academic achievement among African American students. This study used scores from the subscales of the AMS-HS 28 to determine whether participants are extrinsically motivated, intrinsically motivated, or amotivated to perform academically in order to achieve career goals.

Demographic Survey

The demographic survey included questions such as name, date of birth, school, grade, primary language, current health issues, and career aspirations. The complete survey can be found in Appendix A.

Career Exploration Activity Evaluation Form

An evaluation form developed by the researcher provided information regarding the students experience and perceived benefits of the career exploration session. This form was used to gain an immediate understanding of what worked and what did not for students, the form also served a secondary purpose, it provided the opportunity to let students know that their input is valued (Taylor-Powell & Renner, 2009). A copy of the evaluation form can be found in Appendix G.

Career Exploration Programming

Strong Interest Inventory. The SII (Strong, Donnay, & Morris, 2004) is a 291-item inventory that was introduced in 1927 by E.K. Strong Jr. and is published by Consulting Psychologist Press. The SII is primarily used with high school students and uses a 5- point response format scale, responses range from *strongly like to strongly*

dislike (Donnay, Morris, & Schaubhut, 2005, Grutter & Hammer, 2012). Its purpose is to help individuals match their interests with occupational, educational, and leisure pursuits that are compatible with those interests (Donnay et al., 2005).

The SII was chosen because according to Donnay and Morris, et al. (2004) it is the most relevant, most precise interest inventory available, and will provide users with information in four different areas:

- Scores on six *General Occupational* themes that reflect the participant's overall orientation to work
- Scores on the *Basic Interest* scales address consistencies in interests or disinterests in 30 different areas
- Scores on 122 *Occupational* scales represent different occupations and compare similar interests between participants and individuals that already work in those occupations
- Scores on five *Personal Style* scales measure learning and work styles, assume leadership, take risks, and work within teams

Scales of the SII 2004 version have been measured for reliability and validity and have been improved from the 1994 version. As a result, the *GOTs* possessed a Cronbach alpha of .90. The average test-retest reliability for both the *GOT*s and the *OS* were .86. The *BIS* scales estimate of reliability was .87. Cronbach alphas averaged .85 for the five *PSS* scales. The *BIS*s relate to other scales and are considered valid predictors of occupational group membership (Case & Blackwell, 2008).

The SII served as a form of career exploration in the study. Since the sample was comprised of high school students, the high school edition of the SII score report and profile was used. Assessments were immediately scored upon completion by the online tool provided by Consulting Psychological Press. A report for each student was generated and emailed to the researcher. Individual data collected from the SII was not used for the research study but was used to aid participants with the interpretation of their results in a group setting. The researcher facilitated the interpretation activities as outlined by the Strong Interest Inventory User's Guide (Grutter & Hammer, 2012). This method was chosen because it can be a highly efficient and effective way to deliver and interpret results; mini-activities were tailored to group settings and did not violate any issues regarding privacy (Grutter & Hammer, 2012). The focus was placed on the *GOTs, BISs* and *SS*s however the *OSS* and *PSS* were discussed. After participants received the results of the SII, the information was used in the exploration of *General Occupation Themes* and served as an aid for a better understanding of the world of work (Grutter & Hammer, 2012). In using this approach, students received the total benefit from the results of the SII. Sample questions from the SII are located in Appendix E.

Career decision making self-efficacy. CDMSE is the belief in one's ability to choose a career that is compatible with both the individual's personality and abilities and is measured by the CDSE-SF (Taylor & Betz, 1983). Scores on each item range from *1 (no confidence at all in one's ability to complete tasks necessary to make a career decision) to 10 (complete confidence in one's ability to complete tasks necessary to make a career decision).* The CDSE-SF yields six scores: five subscale scores and a total score.

Total scores which is the sum of all 25 items/25 was used for this research to determine levels of career decision self-efficacy. Each subscale score is made up of five items and scoring is cumulative. Response values for the five items for each scale were summed and then divided by 5. Total sub scores were calculated by summing the response values for the 25 items and then dividing by 25. Based on these scoring rules the summed subscale scores should range between 5 and 25. The total summed scores should be between 25 and 125. Average scores for all scales should be between 1 and 5. Average scores correspond to the average response position on the response scale itself. Higher scores on the scale indicate higher levels of career decision self-efficacy (Luzzo, 1996). Scores that range from 1.0 to 2.5 relate to low or little confidence. Scores ranging from 2.5 to 3.5 relate to moderate confidence. Scores of 3.5 and above relate to good confidence (Betz & Taylor, 2012). An example of an item on this instrument includes: "Rate your confidence in making a plan that outlines your goals for the next five years" (Betz & Taylor, 1983).

Career indecision. CI is the inability to specify or make an educational or occupational choice (Kelly, 2002). CI is measured by the CDS (Osipow, Carney, & Warner, 1976). The first two items on the CDS address the respondents' certainty regarding career choice or school major. Items 3-18 address barriers that prevent individuals from making career decisions and item 19 is an open-ended question that allows the respondent to provide a self-description. The sum of items 1 and 2 provide a certainty score, and the sum of the 16 items provide an indecision score (Herman, 2006).

Total scores, the sum of the *Certainty and Indecision scores*, were calculated for accurate scoring.

Using Appendix B of the CDS, located in the manual, normative data for high school students and the percentiles corresponding to the raw scores for the Certainty and Indecision scales were used to complete the scoring box and calculate scores. The percentiles and the norm group were entered in the scoring box under the appropriate headings. *High Certainty Scale* scores, in the 84th percentile or above, indicate that the participant feels certain about making a career choice and choosing a college major. Certainty scores in the 15th percentile or less are significant in indicating career and/or major uncertainty. *High Indecision* scale scores indicate high levels of indecision regarding career choice. Scores that are equal to or higher than the 84th percentile are significant indicating a serious level of indecision. Percentiles were used to determine whether there was further need for intervention. A sample item from the CDS includes: "I have decided on a career and feel comfortable with it. I also know how to go about implementing my choice."

Academic Motivation. AM is the driving factor that influences a person's desire to attend school and obtain a degree (Clark et al., 2014). AM is measured by the Academic Motivation Scale—High School Version (AMS HS-28, Vallerand et al., 1992) in which responses are derived from the question, "Why do you go to school? (Vallerand, 1992; Cokely, 2015). Students respond using a 7- point Likert scale ranging from *1 (does not correspond at all) to 7 (corresponds exactly).* Questions assessing intrinsic motivation are identified by three categories: (a) because students want to gain

knowledge, (b) accomplish a goal, or (c) experience stimulation. Extrinsic motivation is broken down into three categories as well: (a) responses that reveal benefits identified by students, (b) responses that indicate students seek to prove to themselves that they can be successful, (c) responses that indicate the benefit students will have later based on high school completion. The last subscale of Amotivation, involves responses that indicate students are not sure if they should be in school (Vallerand, 1992).

To calculate participant scores on the AMS, the mean response for each subscale must be found. The scores vary between 1 and 7. The mean score is then inserted into a formula: 2((intrinsic motivation to know+intrinsic motivation to accomplishments+intrinsic motivation to experience stimulation/3)) + identification – ((introjected regulation + external regulation/2) +2amotivation) = self-determination index. Scores on the *self-determination scale* range from -*18 (very little self-determination) to +18 (extreme self-determination)*. Higher scores on the subscales correspond with an individual's propensity to be intrinsically, extrinsically, or amotivated (Horyna & Bonds-Raacke, 2012). This procedure was used in this research to determine whether a participant is intrinsically, extrinsically, or amotivated related to academics.

Examples of responses to items that display intrinsic motivation, extrinsic motivation, and amotivation, respectively are as follows: (a) Because I experience pleasure and satisfaction while learning new things, (b) "To prove to myself that I am capable of completing my high school degree, and (c) "Honestly, I don't know; I really feel that I am wasting my time in school."

Data Analysis Plan

Scores from all three instruments were analyzed using SPSS 23.0 for Windows statistical analysis program (Gravetter and Wallnau, 2010). An initial visual check was performed to determine if any information was missing. Any missing values were handled in SPSS using the exclude cases pairwise (Pallant, 2013). Research questions for this study are as follows:

Research Question 1: Is there a significant change in scores on the CDSE-SF from Time 1 to Time 2 among AAUA following participation in an educational session designed to aid students in career and educational choices?

Hypothesis 1: Participation in an educational session designed to aid students in making educational and career choices will yield a significant change in scores on the CDSE-SF among AAUA following the educational session.

$H1_o$: There is no significant difference in scores on the CDSE-SF for AAUA prior to participation in an educational session versus after participation in an educational session.

$H_{1\alpha:}$ There is a significant difference in scores on the CDSE-SF for AAUA prior to participation in an educational session versus after participation in an educational session

Research Question 2: Is there a significant change in scores on the CDS from Time 1 to Time 2 among AAUA following participation in an educational session designed to aid students in making career and educational choices?

Hypothesis 2: Participation in an educational session designed to aid students in making educational and career choices will result in a significant change in scores on the CDS among AAUA following participation in the educational session.

$H2_o$: There is no significant difference in scores on the CDS for AAUA prior to participation in an educational session versus after participation in an educational session.

$H2_\alpha$: There is a significant difference in scores on the CDS for AAUA prior to participation in an educational session versus after participation in an educational session.

Research Question 3: Is there a significant change in scores on the Academic Motivation Scale -High School (AMS-H 28) from Time 1 to Time 2 among AAUA following an educational session designed to aid students in making career and educational choices?

Hypothesis 3: Participation in an educational session designed to aid participants in making educational and career choices will result in a significant change in scores on the AMS among AAUA following participation in an educational session.

$H3_o$: There is no significant difference in scores on the AMS for AAUA prior to participation in an educational session versus after participation in an educational session.

$H3_{\alpha:}$ There is a significant difference in scores on the AMS for AAUA prior to participation in an educational session versus after participation in an educational session.

T tests were conducted to test the hypotheses and obtain the estimated standard error of mean, *t*-distribution, and degrees of freedom. Values for mean differences and standard deviations were used. The standardized mean difference was calculated using Cohen's *d.* (Alpert, Miller, & Harvey, 2009; George & Mallery, 2011).

A paired-samples *t test* has several advantages: (a) reduces the risk of bias because the participants are not substantially different from each other (b) accommodates research that has smaller sample sizes due to targeting a specific population (c) aides in studying change over time (d) eliminates problems caused by individual differences such as age, IQ, and personality (Gravetter and Wallanau, 2010). These characteristics contribute to statistical power and a high level of confidence in the results. However, there are some disadvantages to repeated measures, *t* test. Carryover /order effects and time-related effects are most notable. Carryover can occur if participants remember items from the previous assessment and time-related issues can occur because of the time that lapses between pretests and posttests (Creswell, 2009; Minke, 1997).

There are statistical assumptions that are required for repeated measures *t* tests: the observations within each treatment condition must be independent of one another,

population distribution of difference scores must be normal, dependent variable must be measured at the interval or ratio level, and responses should be obtained from random sampling and be similar across treatments. The population distribution assumption is not of great importance, if the sample size is greater than 30. Random sampling is often not the case in real- life research (Creswell, 2009; Kogos, 2000; Pallant, 2013).

Some data sets contain outliers and it is important to identify them. A decision should be made about removing the outlier from the dataset. In this research several steps were taken:

1. A visual scan of the data was performed to identify any outliers, values that would be considered extremely high or low based on the median values.

2. Boxplots for CDMSE, CI, and AM from prescores were created in SPSS to test for outliers.

3. If outliers did exist, a determination of the cause was made.

4. If a data entry error was the cause it was corrected,

5. If the outlier was caused by an instrumentation error, then that data was removed. Outliers (values that lie outside of the top 25% and the lowest 25% of the median value that are provided by participants) were analyzed in SPSS using two methods: (a) analyzing the data sets with the outliers included and without the outliers if the outcomes were different, then both sets of results were reported along with an explanation as to why the case did not fit within the population of interest (b) mean scores from the pretest and posttest were compared using a *t* test to do a final analysis with and without the outliers to accurately interpret the results of the study

(Huizingh, 2007). If the results were different again the outliers were recoded into the lowest/highest values that were not determined to be outliers (Huizingh, 2007).

Threats of Validity

Threats to External Validity

Interaction of selection and treatment are threats to external validity and researchers must be mindful of generalizing research results to populations outside the scope of their research. Therefore, in this research results were only generalized to AAUA to address the issues of interaction of selection and treatment and interaction of setting and treatment (Creswell, 2009; Moskowitz, Russell, Sadikaj, & Sutton, 2009).

Threats to Internal Validity

It is recognized that threats to internal validity exist. To minimize threats such as: *maturation, compensatory or demoralization rivalries, instrumentation, carryover and time related effects*; some precautionary measures were taken (Creswell, 2009; Kogos, 2000). Participants in the study fell within the age group of 15-19 years old. Because the participants in the study were changing and maturing at the same time, threats of maturation were minimal (Creswell, 2009). All participants were offered equal opportunity to receive the treatment; this element nullified the chances of demoralization and compensatory rivalries. The CDSE-SF, CDS, and AMS-HS were used as both pretest and posttest assessments to preserve the validity of the instruments used in the experiment (Creswell, 2009). Since participants responded to the same assessments at two different points in time carryover effects such as remembering previous answers to improve or diminish outcomes were possible. Time-related effects may have arisen

because of outside influences that take place from one treatment to the other. Therefore, post assessments were administered in a different order from preassessments and only a few weeks lapsed between treatments. These processes are known as counterbalancing (Minke, 1997).

Construct Validity

Construct validity is a concern that arises in most research studies. Researchers want to ensure that the constructs/variables in the research are adequately measured. The instruments used in this research have proven to be valid assessments for the constructs of CDMSE, CI, and AM (Ospiow, 1976; Strong, Monnay, & Donner, 2004; Taylor & Betz, 1983; Vallerand et al., 1992).

Ethical Procedures

Permission was obtained from a high school principal and the district in which the study was conducted prior to data collection. A proposal of the research study was submitted to the Institutional Review Board at Walden University for approval. Research that involves working with human subjects requires special certifications; the researcher completed a web-based course with the National Institute of Health. It is also important to obtain assent and informed consent for minor participants (APA, 2010). A description of the study, an assurance of confidentiality, assurance of freedom to withdraw, and the researchers contact information are some key elements that must be included in the consent form as indicated by Creswell (2009). Loffman, Pelkonen, and Pietila (2004) identify problems with informed consent and confidentiality of interviews as two issues that take place in union, among many ethical issues that can emerge. Regarding the two

issues, participants were informed that the information received as a result of the findings are for research purposes only. Furthermore, it was explained that no negative consequences will occur should they decide to withdraw from the study.

Protecting the privacy of the information provided on the survey(s) is critical. According to American Psychological Associations' Code of Ethics (2010) Standard 4.01, Psychologists have an obligation to protect confidential information obtained during the study. To ensure that this standard was adhered to during the survey collection process, some precautionary measures were taken. Information from assessments was gathered via pen and pencil method. Surveys were collected from students and immediately placed in a secure envelope which remained in the researcher's possession until they were locked in a secure file cabinet. Hard copies of raw data were stored in a dissertation storage container in a locked room. The information was scanned to both an external hard drive that is password protected and a flash drive that is in a locked container.

Adequate support of research findings should be provided using assessments that are both reliable and valid as stated in standard 9.02 of the American Psychological Association's Ethical Principles of Psychologists and Code of Ethics (2010). The use of the CDSE-SF (Taylor & Betz, 1983), AMS-HS (Vallerand, 1992), CDS (Osipow, Carney & Warner, 1976), and the SII (Donnay, Morris, & Schaubhut, 2005) address this issue. Additionally, data was only collected by an individual that was deemed qualified to administer assessments through education. In this case it was the school counselor.

All manuals for research instruments used in the study were reviewed prior to administration of the assessment. Identifying and addressing ethical issues is an important component of both the research process and disseminating information regarding research findings. A debriefing session took place at the end of the study. Information was gathered from students about their career search experience and a website for further research was provided. The researcher obtained demographic information such as address, phone number, and email address to ensure that they had not changed from the information provided on the demographic survey.

Summary

This chapter outlined the repeated measures research design that was used in the study. An explanation regarding choice of the repeated measures design was afforded as well as a description of the sample population. The rationale for instrument selection and choice of data analysis tools was also described. Research instruments used in the study were discussed and the constructs in which the instruments measured. Threats to validity and ethical issues were identified along with solutions that were employed to address concerns. Chapter 4 will provide specific information regarding the data collection process, outline the time frame in which data was collected, address any variations from the original research proposal, and describe any unexpected findings made during the collection process.

Chapter 4: Results

Opportunities to engage in career exploration are scarce for students who attend schools in urban districts due to a lack of school resources and other factors that take precedence over researching career options. Unfortunately, in many cases, these factors leave students unprepared academically, contending with decreased academic motivation, lack of confidence in their ability to make career decisions and perform the tasks associated with a chosen career, career indecision, and difficulty attaining postsecondary goals, all of which do not bode well for financial stability. Furthermore, lack of education increases the chances that individuals will be trapped working menial jobs that leave them dependent on some form of government assistance for long periods of time. The purpose of this research was to bring awareness to the need for career exploration programming in urban schools and to facilitate both secondary and postsecondary success for students. An additional goal of this research was to add to the limited body of research that exists regarding AAUA and career exploration.

In this chapter, research questions are restated, and an explanation of procedural changes that were implemented is provided. An overview of the data collection process and results from statistical analyses is also presented, followed by a summary of answers to the study's research questions.

Using a quantitative study, I explored the effect an educational session had on participant scores generated from the CDSE-SF, which measured career self-efficacy; CDS, used to measure CI; and the AMS-HS, which measured AM. Three research questions and hypotheses were explored:

RQ_1: Is there a significant change in scores on the Career Decision Self-Efficacy Scale—Short Form (CDSE-SF) from Time 1 to Time 2 among African American urban adolescents (AAUA) following participation in an educational session designed to aid students in career and educational choices?

H_o: There is no significant change in scores on the CDSE-SF from Time 1 to Time 2 among AAUA following participation in an educational session designed to aid participants in making career and educational choices.

H_1: There is a significant change in scores on the CDSE-SF from Time 1 to Time 2 among AAUA following participation in an educational session designed to aid students in making career and educational choices.

RQ_2: Is there a significant change in scores on the Career Decision Scale (CDS) from Time 1 to Time 2 among AAUA following participation in an educational session designed to aid students in making career and educational choices?

H_o: There is no significant change in scores on the CDS from Time 1 to Time 2 among AAUA following participation in an educational session designed to aid students in making career and educational choices.

$H_{1:}$ There is a significant change in scores on the CDS from Time 1 to Time 2 among AAUA following participation in an educational session designed to aid students in making career and educational choices.

RQ_3: Is there a significant change in scores on the Academic Motivation Scale—High School version (AMS-HS 28) from Time 1 to Time 2 among AAUA following participation in an educational session designed to aid students in making career and educational choices?

H_o: There is no significant change in scores on the AMS-HS 28 from Time 1 to Time 2 among AAUA following participation in an educational session designed to aid students in making career and educational choices.

$H_{1:}$ There is a significant change in scores on the AMS-HS 28 from Time 1 to Time 2 among AAUA following participation in an educational session designed to aid students in making career and educational choices.

Procedural Changes

Several adjustments were made to the original proposed study. First, the proposed sample was to be composed of AAUAM who were enrolled in the Moms First program. After initial confirmation from the agency, permission to complete the research study was not granted. The second plan included completing the research with AAUAM attending three urban high schools located in a midwestern state. Permission was granted from each

school. Walden University's Institutional Review Board, however, stipulated that the data should be collected by the school counselor in each building. Due to the overwhelming amount of responsibilities that the counselors had in each building, this approach was not feasible.

After several consultations with Walden's Institutional Review Board, it was agreed that a secondary analysis would be the most appropriate approach for completing the research study. Conducting a secondary analysis required several adjustments to my original proposal: (a) data collection was completed using a secondary analysis; (b) data collection was reduced from three sites to one site; (c) participation was extended to all African American students attending the school aged 15-19 years; and (d) the recruitment process was amended.

Because a secondary analysis was used to complete the research, permission to analyze the dataset that was collected in my role as a district employee was obtained. Permission was granted from a high school located in a midwestern state, and a Data Use Agreement was obtained from the local school district. Both documents were submitted to Walden University's Institutional Review Board.

Reduction in the number of sites made it difficult to access enough AAUAM for the sample size needed for the original study. Therefore, the opportunity to participate in the research study was extended to all 15- to 19-year-old AAUA who attended the high school. Although the current study did not focus on AAUAM and career exploration; the study did focus on AAUA who faced the same underlying distal risk factors that AAUAM face. Overall, the research questions and hypotheses remained the same as in

Chapter 1; but, questions and hypotheses were amended to reflect the population of the current study.

The recruitment process was amended to include all eligible students. Students were invited to participate in the research via presentations conducted at parent meetings and during advisory. Flyers were also placed throughout the building. Those parents and students who expressed an interest in participating received parent consent forms that described the career research project.

A convenience sample of 54 urban high school students, male and female, 15 to 19 years of age, who primarily identified as African American was used in the study. Therefore, the same cultural and contextual factors that AAUAM contend with: race, poverty, perceived occupational barriers, and lack of education were still present and served as strong influences on career behaviors and outcomes for AAUA (Bounds, 2017).

Data Collection

Final approval to commence data collection was received on October 24, 2016. The recruitment process began on November 28, 2016, due to the Thanksgiving holiday. Data collection was completed in three phases beginning on November 28, 2016 and ending on March 21, 2017.

Recruitment

Flyers promoting the research study were distributed, and a brief presentation was given at parent meetings and in advisory courses. A copy of the flyer can be found in Appendix H. The research project was also presented at student "town hall" meetings on December 1, 2, 5, and 6, 2016. A timeline of the research project can be found in

Appendix F. All interested students received a flyer explaining the project and a permission slip to complete and return. The initial goal was to receive 100 signed permission slips before administering the demographic survey, CDSE-SF, CDS, and AMS. As of December 9, 2016, 42 permission slips had been completed and returned. By December 16, 2016, 45 permission slips had been received. One last recruitment attempt was made on December 19, 2016 to reach the initial goal of 100.

Phase 1

Phase 1 consisted of obtaining additional permission slips and students completing the demographic survey, CDSE-SF, CDS, and AMS-HS. The first set of assessments was administered on December 21, 2016, and a total of 67 permission slips were received. Sixty-six students had completed the demographic survey as of January 20, 2017. However, only 60 students had completed all four assessments. Table 3 in Chapter 3 provided a preliminary outline in which Phase 1 was supposed to take 1 week to complete; however, with the amount of time it took to complete assessments and the Christmas holiday, Phase 1 took 2 weeks to complete.

Educational Session

Sixty students were invited to participate, via electronic mail, in an online version of the SII (Strong et al., 2004). Invitations were sent on January 30, 2017. The 291-item inventory allowed students to explore their general likes and dislikes, understand how their likes and dislikes related to activities pursued in different occupations, and match those results with similar characteristics of people working in compatible career fields.

Students completed the SII during a 3-week period from February 2 to February 24, 2017. At the end of the third week, 55 students had completed the SII.

Students completing the SII attended an interactive workshop in two groups on March 2 and 3, 2017. Results from the inventory were interpreted. The sessions were 80 minutes in length. The educational session had four main goals:

1. To teach students about general occupation themes that aligned with their interests. *Holland codes* are basic categories of occupational interests classified into six themes:
    - *Realistic*—building, repairing, working outdoors
    - *Investigative*—researching, analyzing, inquiring
    - *Artistic*—creating or enjoying art, drama, music, writing
    - *Social*—helping, instructing, caregiving
    - *Enterprising*—selling, managing, persuading
    - *Conventional*—accounting, organizing, processing data (Strong et al., 2004).
2. To inform students about how their basic interests related to their general occupation themes.
3. To provide students with a better understanding of their preference to work in teams or alone.
4. To educate students regarding tools available to conduct research about their top occupations as identified by the SII.

The educational session consisted of several interactive activities that described Holland codes to students. Through the results report and the activities, participants learned their highest theme scores, standard scores, and personal style preferences.

Phase 2

The administration of the postassessments of the CDSE-SF, CDS, and AMS began on March 6, 2017 and was completed on March 21, 2017. One student transferred before completing the postassessments. At the end of the second phase, 54 students had completed the demographic survey and all preassessments and postassessments.

Demographic Characteristics of the Sample

A total of 54 students completed all assessments and engaged in an educational session. African Americans had the largest representation in the sample (98%). Fifty-nine percent of participants identified as female, and 41% identified as male. Participants ranged in age from 15-19 years, with a mean age of 17.1. Seniors represented 54% of the sample, juniors represented 46%, and freshmen represented 2%. All participants indicated that they were fluent in English and attended high school in an urban district in a midwestern state where 100% of the population received free lunch, as indicated on the "district-level" website (2016). The population was normally distributed. Table 4 provides a breakdown of the sample's demographic statistics.

Table 4

Demographic Characteristics of Participants

Variable		Frequency	Percent
Race	American Indian or Alaska Native	1	1.9
	Black or African American	53	98.1
Gender	Female	32	59.3
	Male	22	40.7
Age	15	1	1.9
	16	13	24.1
	17	20	37.0
	18	18	33.3
	19	2	3.7
Grade	09	1	1.9
	11	24	46.3
	12	29	53.7
Fluent in English	Yes	54	100.0
	No	0	0.0

***Note*. *n* = 54.**

Participants' Career Self-Assessment and Strong Interest Inventory

According to Kemboi, Kindiki, and Misigo (2016), students who have low vocational identity may choose careers that are not compatible with their personality, increasing the potential for multiple career changes. Participants in the current study identified their postsecondary career choices on the demographic survey administered prior to the educational session. Occupations indicated on the demographic survey were cross-referenced with Bureau of Labor Statistics (2017) occupational codes. The results of the self-assessment were compared with the results of the SII to examine self-perception versus identified occupations based on interests. Results of the current study revealed that most students saw themselves working in occupations that required completion of a certificated program. Results for self-identified occupations are displayed in Table 5.

The SII identified occupations for participants based on their interests and their responses that resembled those of others already working in the field(s). This information was also cross-referenced with the Bureau of Labor Statistics (2017) occupational codes. This process was used to determine occupational codes. Results indicated that most students showed an interest in occupations that included healthcare practitioners and production workers. Table 6 displays results for occupations identified by the SII.

Table 5

Self-Identified Participant Occupations

Percentage of participants	Bureau of Labor Statistics occupational codes
41%	Installation, Maintenance, and Repair Occupations, Transportation and Material Moving Occupations, Healthcare Support Occupations, Protective Services Occupations, Arts, Design Entertainment. Personal Care and Services Occupations, Military, Food Prep & Service Related Occupations
30%	Healthcare Practitioners and Technical Occupations
11%	Business & Financial Occupations, Architecture and Engineering
11%	Undecided
7%	Education, Training, and Library Occupations Computer & Mathematical Occupations, Legal Occupations

Note. $N = 54$. Occupational codes adapted from Bureau of Labor Statistics (2017).

Table 6

Participant Occupations Identified by Strong Interest Inventory

Percentage of participants	Occupations identified by Strong Interest Inventory
20%	Healthcare Practitioners
19%	Production Workers
13%	Community & Social Service Occupations
11%	Management Occupations
11%	Arts, Design, & Entertainment, Office & Administrative Reports
11%	Business & Financial Operations, Legal Occupations, Education, Training & Library Occupations
9%	Protective services, Healthcare Support Occupations, Personal Care and Service Occupations, Military
6%	Computer and Mathematical Occupations

Note. $N = 54$. Occupational codes adapted from Bureau of Labor Statistics (2017).

Data Analysis

Scores from completed CDSE-SF, CDS, and AMS were analyzed based on total scale and subscale scores that measured CI, CDMSE, and AM. This section began with a description of the process used to assess normality. Next, reliability statistics were presented. The results of the paired samples *t* test were presented, followed by results of *Pearson correlations* that were performed. Finally, information revealed from self-reports and data generated from the SII was presented.

Assessing Normality

In the current study, the dependent variables of CI, CDMSE, and AM were evaluated for normality on both pretest and posttest assessments. All dependent variables were measured on an interval level. Normality was assessed by analyzing the mean and trimmed mean, *Kolmogrov-Smirnov* statistic, histograms, and boxplots. The mean and trimmed mean were very closely related in each scale, therefore the extreme values had little or no influence on the mean. Although the Kolmogrov-Smirnov statistic indicated some potential violation of assumptions, based on the size of the sample ($n>30$), I can assume that these statistics did not pose a significant threat (Pallant, 2013). Histograms were used to determine whether the shape of the distribution was normal. Boxplots provided information about outliers and based on the range of the values, cases were retained or thrown out. In this study, all cases were retained.

Reliability

Career Decision Self-Efficacy Scale—Short Form. Previous research specifies that the five subscales making up the CDSE-SF have good internal consistency.

According to Paulsen and Betz, (2004) the *Self-Appraisal* scale had a Cronbach's alpha of *.81*; *Occupational Information* scale, *.82*; *Goal Selection* scale, *.82*; *Planning* scale, *.84*; and *Problem-Solving* scale, *.80.* In the current study, pretest and posttest results of both the Goal Selection and Problem-Solving Scales show adequate reliability. The pretest Cronbach Alpha coefficient reported for the Self-Appraisal scale also displays adequate reliability. Table 7 shows reliability results for the CDSE-SF in the current study.

Table 7

Reliability Results for the Career Decision Self-Efficacy Scale—Short Form

Scale	Pretest	Posttest
Self-Appraisal	.76	.60
Occupational Information	.67	.64
Goal Selection	.75	.75
Planning	.62	.69
Problem Solving	.71	.72

Note. Adequate reliability values > .7; good reliability > .8.

Career Decision Scale. Leon (2010) researched CI with 139 African American high school students. The overall Cronbach Alpha for the African American population was *.87*. thus, demonstrating the reliability of this scale with diverse populations as Osipow (1980) asserted. In the current study, both the Certainty and Indecision subscales of the CDS revealed adequate reliability. Table 8 displays Cronbach's alpha for the CDS in the current study.

Table 8

Reliability Results for the Career Decision Scale

Scale	Pretest	Posttest
Certainty Scale	.75	.87
Indecision Scale	.89	.92

Note. Adequate reliability values > .7; good reliability > .8.

Academic Motivation Scale. According to Vallerand (1992) internal consistency of the Academic Motivation Scale is *.81*. In the current study, all the posttest scales displayed adequate reliability, with Extrinsic Motivation Introjected having the greatest reliability. Cronbach alpha coefficients for both pretests and posttests of the AMS are displayed in Table 9.

Table 9

Reliability Results for the Academic Motivation Scale

Scale	Pretest	Posttest
Int. Motivation Toward Accomplishment	.71	.70
Int. Motivation to Experience Stimulation	.71	.77
Intrinsic Motivation to Know	.69	.84
Extrinsic Motivation Identified	.66	.79
Extrinsic Motivation Introjected	.90	.86
Extrinsic Motivation External	.54	.70
Amotivation	.63	.77
Total	.69	.79

Note. Adequate reliability values > .7; good reliability > .8.

Relationship of Key Variables

My hypotheses were that participation in an educational session designed to aid participants in making sound educational and career choices would yield a significant change in scores on the CDSE-SF, CDS, and AMS-HS. There instruments were used to measure CDMSE, CI, and AM respectively. Paired samples *t* test were conducted in SPSS to analyze the difference in scores from Time 1 to Time 2. Bivariate correlations were used to provide an overview and insight into the relationship between the dependent variables assessed in the current study. In addition, bivariate correlations were used to explore the premise that a negative linear relationship exists between CDMSE and CI as well as to determine the strength of that relationship (Choi, Park, & Yang, 2012; Field,

2005). The relationship between CDMSE and AM was also analyzed using bivariate correlations for the same purpose discussed in the example of CDMSE and CI. Guidelines set by Cohen (1988) were used to determine the strength of the relationships. A small relationship was identified when r = .10 to .29, a medium relationship existed when r= .30 to .49, and a large relationship existed when r = .50 to 1.0.

Career decision self-efficacy and career indecision. Previous research indicates that CDMSE and CI are significantly correlated (Choi, Park, & Yang, 2012). The current study evaluates the relationship between career decision self-efficacy (as measured by TSEMSPRE, TSEMSPOST) and CI (as measured by TINDPRE CDSCERTPRE, CDSCERTPOST, CDSINDECPOST) using Pearson's correlation coefficient. Preliminary analyses were performed to ensure that there were no violation of assumptions of normality, linearity and homoscedasticity.

The relationship between CDMSE and certainty scores was assessed. At pretest, there was a moderate, positive correlation between the two variables, *r (53) =.37, p=.01*. Because a repeated measures design was used, a Pearson's correlation was computed to assess the relationship between CDMSE and certainty scores at posttest as well. This analysis revealed that no significant correlation existed between the two variables, *r (53) = .14, p=.31.*

When assessing the correlation between CDMSE and CI, the analysis revealed a nonsignificant relationship at pretest*, r (53) =-.23, p= .09.* There was a moderate, negative correlation between CDMSE and CI at posttest, *r (53) = -.38, p=.01* as career self-efficacy increases indecision decreases.

Career decision self-efficacy and academic motivation. The relationship between CDMSE (as measured by TSEMSPRE, TSEMSPOST) and AM (as measured by TINTMOTPRE, TINTMOTPOST, TEXTMOTPRE, TEXTMOTPO) was investigated using Pearson correlation coefficient. Preliminary analyses were performed to ensure no violation of assumptions for normality, linearity and homoscedasticity. There was a moderate, positive correlation between CDMSE and intrinsic motivation at pretest, *r (53) = .35, p= .01*. There was a large positive correlation between CDMSE and intrinsic motivation at post-test, *r (53) =.50, p < .01*, as self-efficacy increases intrinsic motivation increases as well. There was also a moderate relationship between CDMSE and extrinsic motivation at pretest *r (53) =.35, p=.01* as self-efficacy increases extrinsic motivation also tends to increase. At posttest, a large positive correlation, *r (53) = .51, p<.01* existed between CDMSE and extrinsic motivation. Table 10 displays correlations between CDMSE, CI, and AM at Time 1. Table 11 displays correlations between CDMSE, CI, and AM at Time 2.

Table 10

Correlations Between Career Self-Efficacy, Career Indecision, and Academic Motivation, Time 1

	1	2	3	4	5
1. Self-efficacy	----	NS	.37**	.35**	.35**
2. Career indecision		---	-.38**	NS	NS
3. Career certainty			.---	.30*	NS
4. Intrinsic motivation				---	.56
5. Extrinsic motivation					---

Note. NS = nonsignificant.
* $p < .05$. ** $p < .01$.

Table 11

Correlations Between Career Self-Efficacy, Career Indecision, and Academic Motivation, Time 2

	1	2	3	4	5
1. Self-efficacy	---	-.38**	NS	.50**	.51**
2. Career indecision		---	-.33*	NS	NS
3. Career certainty			---	NS	NS
4. Intrinsic motivation				---	.66**
5. Extrinsic motivation					---

Note. NS = nonsignificant.
* $p < .05$. ** $p < .01$.

Paired-Samples *t* Test

Paired-samples *t* test were conducted to evaluate whether there were differences in scores on the CDSE-SF, CDS, and AMS before and after an educational session designed to aid participants in making career and educational choices. The dependent variables were all measured on an interval level and assessed CDMSE, CI, and AM.

Career decision self-efficacy. The CDSE-SF was used to evaluate participants' CDMSE using total scores as well as the five subscales: Self-Appraisal, Occupational Information, Goal Selection, Planning, and Problem Solving. Overall scores from Time 1 *(M=4.0, SD =.51776)* to Time 2 *(M=4.0, SD=.54046*), *t (53) =1.095, p>.05*. (two-tailed) a value of $p = .279 > .05$ indicated there was no significant difference between CDSE-SF scores from Time 1 to Time 2 therefore I failed to reject the null hypothesis. The mean difference between the two scores was with a 95 percent confidence interval stretching from a lower bound of *.06844* to an upper bound of *.23288.* The *eta* squared statistic *.022* indicated a small effect size. CDSE-SF subscale scores for participants

(*N=54*) indicate that: the highest mean score was on the Occupational Information Scale *(M= 4.2, M= 4.1)* and the lowest mean score was on the Problem-Solving scale (*M= 3.8, M= 3.6)* on pretest and posttest.

Although there is no significant difference in scores from Time 1 to Time 2, on overall scale scores or sub-scale scores, I analyzed the overall magnitude of the educational session's effect and the analysis revealed that a small effect existed on the Planning and the Problem Solving sub-scale scores with *eta* squared statistics of *.02* and *.05* respectively. A summary of the paired samples *t* tests for the CDSE-SF is presented in Table 12.

Table 12

Summary of Career Decision Self-Efficacy Paired-Samples t Test

Scale	Pretest		Posttest		Mean	*t*	*df*	Sig.	Eta²
	M	*SD*	*M*	*SD*	diff.			2-tailed	
Self-Appraisal	4.1	.65725	4.0	.59214	.0250	.292	53	.771	.001
Occupational Info	4.2	.66548	4.1	.65898	.0750	.706	53	.483	.009
Goal Selection	4.1	.66027	4.0	.68874	.0444	.450	53	.654	.003
Planning	4.1	.56674	4.1	.62601	.0759	.999	53	.322	.018
Problem Solving	3.8	.67859	3.6	.77428	.1907	1.644	53	.106	.048
Total score (25 items)	4.0	.51776	4.0	.54046	.0822	1.095	53	.279	.022

Note. Eta² .01 = small effect, .06 = moderate effect, .14 = large effect.
*p < .05, two-tailed.

The CDS provides two sets of information. The raw scores from the Certainty and Indecision scales and subsequent steps that should be taken with participants as a result of percentile scores. The first two items on the scale assess Career Certainty, the sum of items (3-18) and the last question (19), a free response question assess CI. That information is incorporated with participant characteristics such as age, grade, and sex, to normalize the data. Using the norming table, percentile scores indicate four possible outcomes: (a) the possibility that the test data might be invalid, (b) the need for further assessment to determine certainty or indecision, (c) high likelihood of need for intervention, and (d) little felt need for intervention.

In the current study, Paired samples *t t*est were used to compare total certainty scores from Time 1 to Time 2, total indecision scores from Time 1 to Time 2, and overall means of both certainty percentile scores and indecision percentile scores.

Examining total scores for certainty of career choice and school major results revealed that participants were highly certain regarding these issues: Time 1 (*M= 6.53, SD = 1.34*) to Time 2 (*M= 6.77, SD= 1.34*), *t (53) = -1.11, p<.05*. (two- tailed). The value of *p .271* is > *.05* indicating no significant difference between Certainty scores from Time 1 to Time 2. I failed to reject the null hypothesis. The mean difference in the two scores was -*.240* with a 95 percent confidence interval stretching from a lower bound of -*.67453* to an upper bound of *.19305*. The *eta* squared statistic *(.022*) indicated a small effect size.

Total scores on the Indecision scale indicate: Time 1 (*M= 33.74, SD = 9.68*) to Time 2 (*M= 33.62*, SD= *10.56*), t (*53*) = *.320*, p>.05. (two- tailed). The value of p *.750* is

> .05 indicating no significant difference between Indecision scores from Time 1 to Time 2. I failed to reject the null hypothesis. The mean difference in the two scores was *.37037* with a 95 percent confidence interval stretching from a lower bound of *-1.95* to an upper bound of *2.69*. The *eta* squared statistic *(.001*) indicated no effect size. There were no statistically significant differences in scores on either of the scales from Time 1 to Time 2. Table 13 provides results of paired samples t-tests for both the Certainty and Indecision scales.

Table 13

Summary of Career Indecision Paired-Samples t Test

Scale	Pretest		Posttest		Mean	*t*	*df*	Sig.	Eta²
	M	*SD*	*M*	*SD*	diff.			2-tailed	
Career Certainty	6.53	1.34	6.77	1.34	-.24074	-1.11	53	.271	.022
Indecision	33.74	9.68	33.62	10.56	.37037	.320	53	.750	.001

Note. *Eta*² .01 = small effect, .06 = moderate effect, .14 = large effect.
*$p < .05$, two-tailed.

After evaluating total certainty scores and total indecision scores I looked at the overall percentiles. Percentiles on the two scales are inversely related. High certainty percentiles indicate that participants are sure about their career and school major. High Indecision percentiles indicate indecision regarding career choice. Table 14 displays combinations of high, low, and middle range percentiles and provides a visual of the parameters used to determine what should happen next with participants based on the information gathered from the normed data (Osipow, 1987).

Table 14

Interpretive Hypotheses for Certainty and Indecision Scores

	Indecision		
Certainty	High >84th percentile	Middle 16-84th percentile	Low < 16th percentile
High > 84th percentile	Possible invalid test data	Further need for assessment	Little felt need for intervention
Middle 16th 84th percentile	Further need for assessment	Further need for assessment	Further need for assessment
Low < 16th percentile	High likelihood of need for intervention	Further need for assessment	Possible invalid test data

Note. Adapted from *Manual for Career Decision Scale* (p. 3), by S. H. Osipow, 1987, Lutz, FL: Psychological Assessment Resources. Copyright 1980 by. Psychological Assessment Resources, Inc. Adapted with permission.

Certainty percentile scores yielded mean scores of (*M= 76.72, SD =.23.50*) at Time 1 to (M=*81.88*, SD=*.20.98*) at time 2, t (*53*) = *-1.351*, p>.05. (two- tailed). The value of p .183 is > .05 indicating no significant difference between percentiles corresponding to total scores from Time 1 to Time 2 and the null hypothesis is accepted. The mean difference in the two percentile scores was with a 95 percent confidence interval stretching from a lower bound of -12.83962. to an upper bound of 2.50629. The *eta* squared statistic .033 indicated that the magnitude of the educational sessions' effect on scores was small. Percentile scores also indicated that participants needed further assessment regarding career and educational certainty.

Indecision percentiles yielded mean scores of (*M*= 62.42, *SD* =28.64) at Time 1 to (*M*= 62.81, *SD*=.30.62) at Time 2, t (53) = -.104, p>.05. (two- tailed). The value of p .918 is > .05 indicating there is no significant difference between percentiles corresponding to total scores from Time 1 to Time 2 and the null hypothesis is accepted. The mean difference in the two percentile scores was with a 95 percent confidence interval stretching from a lower bound of -7.922. to an upper bound of 7.144. The *eta* squared statistic .000 indicated that the magnitude of the educational session had no effect on percentile scores.

Academic motivation. The Academic Motivation Scale produces an overall **s**elf-determination score for participants. This score is calculated by finding the mean response of each subscale score and entering that score into a specific formula: 2((know+acc+stim/3)) + iden - ((intro+reg/2) + 2amo) = self-determination index. This score is used to indicate how much self -determination individuals possess. According to R. Vallerand (personal communication, March 3, 2015) *scores range from -18 (very little self-determination) to 18 (extreme self-determination*). High index scores are associated with positive consequences and low index scores are associated with negative consequences for individuals.

The current study analyzed Self-Determination scores using paired samples *t* test, results are as follows: from Time 1 (M= 6.80, SD=3.13) to Time 2 (M= 5.74, SD= 3.20), t (53) = 2.134, p < .05 (two-tailed) with a p value of .037 indicating that there was a significant decrease in scores from Time 1 to Time 2.

Paired samples t-test were also conducted to evaluate the impact of an educational session on students' scores on the seven subscales of the Academic Motivation Scale. A significant change in scores occurred related to Introjection, an extrinsic motivation. Scores decreased related to execution of behaviors to improve self-esteem or to avoid anxiety/guilt that may arise for not carrying the behaviors out (Stover, de la Iglesia, & Boubeta, 2012). Small effect sizes were present on the *Introjection* and Amotivation scales. Table 15 provides results for the paired samples t-test for each of the seven subscales from the Academic Motivation Scale.

Table 15

Summary of Academic Motivation Paired-Samples t Test

Scale	Pretest		Posttest		Mean	*t*	*df*	Sig.	Eta²
	M	*SD*	*M*	*SD*	diff.			(2-tailed)	
Int. Mot. to Know	22.94	3.41	21.98	4.54	.96296	1.60	53	.101	.05
Mot. to Accomplish	21.24	4.29	20.35	4.49	.88889	1.391	53	.170	.04
Int. Mot to Exp. Stim	18.96	5.06	18.42	5 .55	.53704	.656	53	.514	.01
Total Intrinsic Mot.	15.87	2.81	15.22	3.16	.64796	1.446	53	.154	.04
Identification	24.38	3.36	23.51	4.35	.87037	1.566	53	.123	.04
Introjected	25.00	4.50	23.79	4.88	1.20370	1.924	53	.060	.07
External Regulation	24.44	3.75	24.57	3.75	-.12963	-.187	53	.853	.00
Total Extrinsic Mot.	18.48	2.24	17.99	2.68	.48778	1.278	53	.207	.03
Amotivation	7.29	4.10	8.51	5.30	-1.2222	-1.633	53	.108	.05

Note. *Eta*² .01 = small effect, .06 = moderate effect, .14 = large effect.
*$p < .05$, two-tailed.

Summary

The current study hypothesized that scores measuring CDMSE, CI, and AM would be statistically different from participants' initial scores after participating in an educational session. Analyzing mean scores for CDMSE revealed that no statistically significant difference in scores occurred, thus failing to reject the null hypothesis. The Eta^2 statistic indicated a small effect size.

Scores from the certainty and indecision scales that measured CI revealed that there was no statistically significant difference in scores from Time 1 to Time 2 and therefore I failed to reject the null hypothesis. A small effect size on certainty scores is indicated and no effect size was found on indecision scores. Percentile scores on both scales indicated a moderate need for further assessment.

Analysis of AM using scores from the seven subscales and a self-determination score. Overall, there was no statistically significant difference in scores measuring total intrinsic and extrinsic motivation from Time 1 to Time 2. A small effect size was found for intrinsic motivation and extrinsic motivation. In addition to these findings, self - determination scores revealed a significant decrease from Time 1 to Time 2.

Pearson correlations showed no significant correlation between CDMSE and CI at Time 1. However, a moderate negative correlation existed between those variables at Time 2. The relationship between CDMSE and AM was also analyzed using Pearson correlations and results revealed that a moderate correlation existed at Time 1 and increased to a large correlation at Time 2.

Results of the demographic survey and the SII revealed interesting findings. The demographic survey revealed that 48% of students identified postsecondary career choices that the minimum requirement was a 4-year degree or more, of that percentage 30% required an advanced degree. However, results of the SII revealed that only 41% of students were interested in careers that require a 4-year degree or more. Of that 41% only 20% of students were interested in careers that required an advanced degree. Furthermore, 41% of students identified careers that required a 2-year degree or less and SII results revealed that 39% of students expressed an interest in tasks associated with careers that required a 2-year degree or less.

Chapter 5 will discuss how the results of the current study can impact students and educators and support or disprove current knowledge in the discipline. Limitations of the study are presented, followed by recommendations for future research.

Chapter 5: Results

Introduction

The purpose of this research was to study the effect of an educational session on CDMSE, CI, and AM among AAUA. Career exploration aids students with becoming efficacious concerning sustainable education and career choices that may allow them to avoid a life of poverty. Additionally, I wanted to fill the gap in the literature that exists regarding career exploration with AAUA, specifically evaluating the variables CDMSE, CI, and AM. Furthermore, the data obtained from this research may be used to promote awareness regarding the need for career exploration in urban school districts to promote both secondary and postsecondary success.

The current study explored whether a significant change in scores on the CDSE-SF, CDS, and AMS-HS occurred from Time 1 to Time 2 following an educational session designed to aid participants in making career and educational choices.

Four key findings were extracted from the current research:

1. Results of paired-samples *t* test revealed no statistically significant difference in scores from Time 1 to Time 2 on the CDSE-SF, CDS, or AMS-HS, thus failing to reject the null hypotheses.
2. A moderate correlation existed between CDMSE and AM at Time 1; however, a large correlation existed at Time 2.
3. No significant correlation existed between CDMSE and CI existed at Time 1; however, a moderate negative correlation existed between CDMSE and CI at Time 2.

4. Forty-eight percent of students identified postsecondary career choices on the demographic survey that required a 4-year degree, but only 41% of the occupations cross-referenced with participant interests on the SII required a 4-year degree.

Interpretation of Findings

As previously indicated in the procedural changes section, this study was a departure from the original proposed study. Initially, my research was to be conducted with AAUAM, exploring whether scores on the CDSE-SF, CDS, and AMS-HS would change significantly after participation in an educational session used to aid students in making sustainable educational and career choices. However, due to logistical issues and the possibility that an adequate sample size would not be available, my research study shifted its focus to nonparenting AAUA. Although participants in this study were not identified as parents or pregnant, they faced the same contextual factors of living in and receiving an education in an urban environment. While taking care of a dependent may not have been at the forefront for these participants, they still ran a high risk of living in poverty resulting from a lack of educational attainment. According to Cooper (2016), in 2013, the overall national graduation rate was 81%, whereas the national African American graduation rate was 71%; furthermore, the majority of African Americans who did not graduate attended schools in urban areas. Therefore, it seemed appropriate to evaluate whether a significant change in scores occurred on assessments that measure CDMSE, CI, and AM using paired samples *t* test to address the research questions/hypotheses that I initially proposed.

In the current study, CDMSE, CI and AM were measured at Time 1 and Time 2 and paired-samples *t* tests were conducted in SPSS. As a result of my statistical analysis, I was unable to reject the null hypotheses for the three research questions addressed in the study. My findings are inconsistent with the findings of Komaaraju et al. (2014), who found an increase in career self-efficacy scores on all subscales of the CDSE-SF from pretest to posttest following exposure to a course designed to explore careers in psychology.

Possible explanations for findings of the current study regarding CDMSE might include the affirmation of participants' sense of self and level of confidence that existed at Time 1. Good confidence is defined as having scores of 3.5 or higher on a 5.0 scale; the participant mean score for the current study was 4.0. Good confidence in personal skill sets at pretest provided little indication of the need for intervention. These higher scores may serve as a plausible explanation for nonsignificant changes in self-efficacy scores from Time 1 to Time 2.

Although research on CDMSE and AM is limited, Komaaraju et al. (2014) found increases in career-self efficacy to be a predictor of increased self-determination scores on the AMS-HS after participants completed a course designed to explore careers in psychology. The current study addressed the relationship between CDMSE and AM. Analysis of bivariate correlations revealed a moderate correlation at Time1 that increased to large at Time 2. However, results revealed a significant decrease in self-determination scores. This finding is unique to the current study.

For some students, realization/awareness of their postsecondary desires, along with the confirmation of those desires with the results of the SII, may have contributed to the overall increased strength of the relationship between CDMSE and AM. The decrease in scores on the introjection scale (extrinsic motivation) may be an indication of increased self-esteem and increased confidence in school achievement to reach postsecondary goals, making those goals more realistic. In addition, students may have felt less compelled to take on the attributes of others and more empowered to rely on their own motivation to accomplish their goals.

Mixed results exist concerning the relationship between CDMSE and CI. According to Betz and Voyten (1997); Di Fabio et al., 2013; and Taylor and Popma (1990), an inverse relationship exists between CDMSE and CI. However, Grier-Reed, et al. (2009) did not find that CDMSE reduces CI.

In the current study, a Pearson correlation analysis of the variables CDMSE and CI revealed that a negative moderate correlation existed between CDMSE and CI at Time 2. This supported the finding that higher CDMSE scores are associated with lower CI scores primarily because higher scores on the CDSE-SF were associated with lower scores on the CDS. Students in the current study identified their career choices on the demographic survey during Phase 1 of the data collection process. The demographic survey revealed that 48% of students saw themselves in postsecondary occupations such as healthcare practitioners, architects, and computer and mathematical occupations. The minimum education requirement for these occupations is a 4-year degree. Results of the SII indicated that 41% of students indicated that they were interested in tasks associated

with healthcare practitioners, management positions, legal occupations, and computer and mathematical occupations. The percentage of students that self-identified occupations that required a 4-year degree or more decreased when they identified their likes and dislike. This finding is consistent with Holland and Deluca (2016); who indicated that students overall career aspirations are misaligned with their career expectations.

Forty-one percent of students saw themselves in occupations such as: healthcare support, protective services, food prep, and personal care and service occupations. These occupations require an associate's degree, completion of a vocational program, or a high school diploma rather than a 4-year degree program. Thirty-nine percent of participants received SII results indicating high interest and compatibility with the same types of occupations. This may be an indication that participants already possessed levels of efficacy that decreased CI. This was displayed in the high certainty percentiles of students. Furthermore, confirmation of what participants perceived to be an appropriate career choice may be responsible for the moderate correlation that existed at Time 2. Hackett (2013) indicated that demographic variables, contextual factors, and life experiences heavily influence self-efficacy, goals, and outcome expectations. It is worth noting that students' career aspirations related to occupations that required an associate's degree or less was more aligned with identified interests on the SII. This might be an indication that students felt more comfortable pursuing careers that aligned with their current socioeconomic status.

Isik (2014) explained that little research examining the effectiveness of interest inventories on the variables of CI and CDMSE exist, with the exception of the work of

Luzzo and Day (1999), and that career exploration using interest inventories coupled with the participation of assessment takers in the interpretation of results has been effective in increasing CDMSE while being necessary for the participant to receive the full benefit. Research by Isik (2014) revealed that participation in the interest assessment process was effective in increasing career decision self-efficacy.

The current study used the SII as a career assessment. An interactive educational session allowed participants to be actively involved in the interpretation of their results and the results of other participants. Although paired-samples *t* test revealed no significant difference in overall scores from Time 1 to Time 2, suggesting that the educational session did not facilitate a change in scores. However, the increase from no significant correlation between CDMSE and CI at Time 1 to a moderate negative correlation between CDMSE and CI at time 2 indicated that career exploration was associated with CDMSE, adding support for the findings of Isik (2014).

Limitations of the Study

The current study had several limitations. Random selection is the preferred method when conducting research to validate the results of a study when generalizing to a larger population (Aussems et al., 2011; Creswell, 2009). The current study used a convenience sample of AAUA. Because the sample size was less than 100 and random sampling did not take place, inferences may not be valid when generalizing to the larger population. However, it is understood that sample sizes of 100 may not be practical in the social sciences and tools such as G* Power are available to calculate adequate sample sizes. I used G* Power to determine the size of my sample; a sample of 45 was deemed to

be adequate. Because my sample size was 54, it is considered adequate for statistical power. Furthermore, additional calculations such as *Eta* squared for paired-samples *t* test were conducted to determine actual effect size. In addition, most participants reported feeling confident in approaching certain tasks at pretest, which might be attributed to participants' willingness to take part in the study, making it difficult to generalize results or determine true significant change.

Test effect was identified as a limitation of the study in Chapter 1 and could also have some bearing on the results. Testing effects or test carryover generally affect scores in a positive direction; however, in the current study, experimental fatigue could be a plausible explanation for the decrease or stability in scores. Because students completed a total of six assessments, three at pretest and three at posttest, the focus may have been more on completion than on answering the questions thoughtfully.

Recommendations

A few recommendations can be made based on the procedures and findings of the current study. The first recommendation is to extend the research to multiple urban high schools to gain a rich data set that can be more generalizable to the larger population. Second, incorporate a qualitative instrument that will capture information about students' levels of indecision, what participants perceive to be barriers, and parental occupations, which would likely serve as an aid to address the need for further assessment and drive appropriate programming. Third, future research might follow-up with participants to examine how they used the inventory results and what impact the information received from the interest inventory had on their career choice. Fourth, conduct a study that

explores the following questions: (a) Are AAUA efficacious in certain areas, such as those that reflect their current socioeconomic status? and (b) Are student likes and dislikes driven by levels of exposure to different occupations?

Implications

Despite the limitations of this study, these findings can be useful to high school students, school counselors, and administrators. Large correlations between CDMSE and AM and a moderate inverse relationship between CDMSE and CI suggest that career exploration does impact CDMSE, CI, and AM. School counselors should act as strong advocates for career exploration programming in schools that consists not only of interest inventories and the interpretation of results, but also progressive programming that includes job shadowing, apprenticeship programs, internships, and field experience to allow students to see themselves in an array of occupations. School counselors should use information gathered from interest inventories to encourage students to explore multiple occupations within their career fields of interest. Programming that increases CDMSE can aid students in choosing a career plan that allows them to pursue their interests, gain awareness of the education necessary to complete a degree/certification, and outline a possible financial plan. Exposure to career activities in high school can also be used to increase high school graduation rates among AAUA and aid in postsecondary decision making.

According to Cooper (2016), the national graduation rate was 81% in 2013. Unfortunately, African American students had a graduation rate of 71%. Furthermore, many African Americans who did not graduate attended schools in urban areas across the

country. Even when African American urban students make it to college, many are faced with high levels of CI and low levels of CDMSE and AM, which may contribute to additional financial burdens related to college costs. This, in part, is due to the lack of college and career readiness experienced by 40% of high school graduates (College Board, 2015).

According to the College Board (2015), the average cost for 1 year of tuition for the 2014-2015 school year at various types of institutions was as follows: 4-year public in-state institutions—$18,931, 4-year public out-of-state institutions—$32,893, and 4-year private institutions—$42,445. Unfortunately, current trends have indicated that most students take longer than 4 years to complete their first bachelor's degree. Therefore, the cost of completing a bachelor's degree can range from $75,724 to $169,780. Financial burdens and lack of preparedness for postsecondary endeavors provide more challenges for African American urban students attempting to attain a postsecondary degree and gain access to higher paying occupations. In many cases, students incur large amounts of student loan debt and have not attained a postsecondary degree. Furthermore, according to the U.S. Department of Education's National Center for Education Statistics (2017), the percentage of African American students who entered college in 2009 and completed a bachelor's degree at a 4-year public institution in 4 years was 20.6%, compared to 48.7% of Asians/Pacific Islanders, 44.2% of Whites, and 30.5% of Hispanic students who started college in 2009 and attended a 4-year public institution. If students are equipped with the personal information needed to make sound decisions that lead to sustainable

occupations, it is likely that the amount of educational debt will decrease substantially as well as the number of years it takes to attain a degree.

Conclusion

This study was intended to add to the limited amount of information available regarding AAUA and career exploration. The primary focus was evaluating the impact of an educational session designed to aid participants in making career and educational choices on scores of assessments that measure CI, CDMSE, and AM. The overall results of the study revealed that there was no significant change in scores on the CDSE-SF, CDS, or AMS-HS.

Other valuable information was provided. Results revealed that there was a large positive correlation between CDMSE and AM, a negative inverse correlation between CDMSE and CI, and a small correlation between gender and CDMSE. The current study exposed 54 AAUA students to the SII, which provided information that could assist them in making career choices that are based on their likes and interests rather than based on limited knowledge regarding the tasks involved. The educational session gave meaning to the computer generated results students received after completing the SII and the group interpretation of the results afforded them the opportunity to examine their learning styles, personality characteristics, and basic interests while learning about others as well.

Scores on the CDS posttest indicated that further assessment was needed after the educational session. Because there is a limited amount of information available regarding CDMSE, CI, and AM among AAUA, there is certainly a need for more research to identify how educators can provide significant support around career development.

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Appendix A: Demographic Survey

Name: _____

Address: _____

Phone Number: _____ Date of Birth: _____

Gender: _____

Please indicate your Race:

American Indian or Alaska Native _____ Asian_____ Black or African American _____ Native Hawaiian or Other Pacific Islander _____ White _____

Other_____

Please indicate your ethnicity? ____Hispanic or Latino ___ Non-Hispanic or Latino

Do you speak/write/read English fluently? Yes_____ No_____

Current School: _____

Current Grade: _____ Grade Point Average: _____

How many years have you been in high school including this year? _____

How many days of school have you missed during the current school year? _____

Indicate your post-secondary plans (Please choose one):

2-year college: _____ 4-year college/university: _____ Military: _____

Vocational program: _____Enter the workforce: _____ undecided: _____

Indicate your current career choice: _____

Are you currently pregnant? Yes ____ No____

If no, how old is you your child (ren)? _____

Is this child your first child? Yes ___ No____

If no, how many children do you have? _____

Are you currently under the care of a physician or other health professional for another condition? If yes, please explain_____

Appendix B: Sample Items From the CDSE-SF

Sample questions from the Career Decision Self-Efficacy Scale Short Form

INSTRUCTIONS: For each statement below, please read carefully and indicate how much confidence you have that you could accomplish each of these tasks by marking your answer according to the following 5-point continuum. Mark your answer by filling in the correct circle on the answer sheet.

Example:

No confidence at all	**Very Little confidence**	**Moderate confidence**	**Much confidence**	**Complete confidence**
1	**2**	**3**	**4**	**5**

How much confidence do you have that you could:

	1	2	3	4	5
1. Present a good picture of who you are on paper.	☐	☐	☐	☐	☐
2. Choose an occupation that is interesting to you.	☐	☐	☐	☐	☐
3. Leave a good impression on a potential employer.	☐	☐	☐	☐	☐

If your response on the 5-point continuum was 5, “Complete Confidence”, you would fill in the number 5 on the answer sheet.

Betz, N.E. & Taylor, K.M. (2012). Career Decision Self-Efficacy Scale. Retrieved from http://www.mindgarden.com

Appendix C: Sample Questions of CDS

Sample questions from Career Decision Scale

This questionnaire contains some statements that people commonly make about their educational and occupational plans. Some of the statements may apply to you; others may not. Please read through them and indicate how closely each item describes you in your thinking about a career or an educational choice by circling the appropriate number on the answer sheet.

4 is exactly like me 3 is very much like me 2 is only slightly like me 1 is not like me at all

CIRCLE ANSWER

	Like Me		Not like Me	
1. I haven't found any careers that seem interesting enough to pursue	4	3	2	1
2. I don't know what I am good at so I can't choose a career	4	3	2	1
3. I have to do a lot of research before I can choose a career	4	3	2	1

Appendix D: Academic Motivation Scale

Robert J. Vallerand, Luc G. Pelletier, Marc R. Blais, Nathalie M. Briere, Caroline B. Senecal, Evelyne F. Vallieres, 1992-1993
Educational and Psychological Measurement, vols. 52 and 53

WHY DO YOU GO TO SCHOOL?

Using the scale below, indicate to what extent each of the following items presently corresponds to one of the reasons why you go to school.

Does not Correspond at all	*Corresponds a little*	*Corresponds moderately*		*Corresponds a lot*		*Corresponds exactly*
1	*2*	*3*	*4*	*5*	*6*	*7*

1.	*Because I need at least a high-school degree in order to find a high-paying job later on.*	*1*	*2*	*3*	*4*	*5*	*6*	*7*
2.	*Because I experience pleasure and satisfaction while learning new things*	*1*	*2*	*3*	*4*	*5*	*6*	*7*
3.	*Because I think that a high-school education will help me better prepare for the career I have chosen.*	*1*	*2*	*3*	*4*	*5*	*6*	*7*
4.	Because I really like going to school.	*1*	*2*	*3*	*4*	*5*	*6*	*7*
5.	Honestly, I don't know; I really feel that I am wasting my time in school.	*1*	*2*	*3*	*4*	*5*	*6*	*7*
6.	*For the pleasure I experience while surpassing myself in my studies.*	*1*	*2*	*3*	*4*	*5*	*6*	*7*
7.	*To prove to myself that I am capable of completing my high-school degree.*	*1*	*2*	*3*	*4*	*5*	*6*	*7*
8.	In order to obtain a more prestigious job later on.	*1*	*2*	*3*	*4*	*5*	*6*	*7*
9.	For the pleasure I experience when I discover new things never seen before.	*1*	*2*	*3*	*4*	*5*	*6*	*7*
10.	Because eventually it will enable me to enter the job market in a field that I like.	*1*	*2*	*3*	*4*	*5*	*6*	*7*
11.	Because for me, school is fun.	*1*	*2*	*3*	*4*	*5*	*6*	*7*
12.	I once had good reasons for going to school; however, now I wonder whether I should continue.	*1*	*2*	*3*	*4*	*5*	*6*	*7*
13.	For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments.	*1*	*2*	*3*	*4*	*5*	*6*	*7*
14.	Because of the fact that when I succeed in school I feel important.	*1*	*2*	*3*	*4*	*5*	*6*	*7*
15.	Because I want to have "the good life" later on.	*1*	*2*	*3*	*4*	*5*	*6*	*7*
16.	For the pleasure that I experience in broadening my knowledge about subjects which appeal to me.	*1*	*2*	*3*	*4*	*5*	*6*	*7*
17.	Because this will help me make a better choice regarding my career orientation.	*1*	*2*	*3*	*4*	*5*	*6*	*7*
18.	For the pleasure that I experience when I am taken by discussions with interesting teachers.	*1*	*2*	*3*	*4*	*5*	*6*	*7*
19.	I can't see why I go to school and frankly, I couldn't care less	*1*	*2*	*3*	*4*	*5*	*6*	*7*
20.	For the satisfaction I feel when I am in the process of accomplishing difficult academic activities	*1*	*2*	*3*	*4*	*5*	*6*	*7*
21.	To show myself that I am an intelligent person.	*1*	*2*	*3*	*4*	*5*	*6*	*7*

22.	In order to have a better salary later on.	*1*	*2*	*3*	*4*	*5*	*6*	*7*
23.	Because my studies allow me to continue to learn about many things that interest me	*1*	*2*	*3*	*4*	*5*	*6*	*7*
24.	Because I believe that my high school education will improve my competence as a worker.	*1*	*2*	*3*	*4*	*5*	*6*	*7*
25.	For the "high" feeling that I experience while reading about various interesting subjects.	*1*	*2*	*3*	*4*	*5*	*6*	*7*
26.	I don't know; I can't understand what I am doing in school.	*1*	*2*	*3*	*4*	*5*	*6*	*7*
27.	Because high school allows me to experience a personal satisfaction in my quest for excellence in my studies	*1*	*2*	*3*	*4*	*5*	*6*	*7*
28.	Because I want to show myself that I can succeed in my studies.	*1*	*2*	*3*	*4*	*5*	*6*	*7*

KEY FOR AMS HS-28

2, 9, 16, 23 Intrinsic motivation – to know

6, 13, 20, 27 Intrinsic motivation – toward accomplishment

4, 11, 18, 25 Intrinsic motivation – to experience stimulation

3, 10, 17, 24 Extrinsic motivation – identified

7, 14, 21, 28 Extrinsic motivation – introjected

1, 8, 15, 22 Extrinsic motivation – external regulation

5, 12, 19, 26 Amotivation

Note: To use this scale you require only to mention the complete reference data.

Thank you for your interest.

Good luck in your research.

Appendix E: Sample Questions From the Strong Interest Inventory

Sample Items for the

Newly Revised Strong Interest Inventory®

Section I
Occupations

1. Accountant	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike
2. Actor/Actress	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike
3. Administrative Assistant	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike
4. Advertising Executive	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike

Section II
Subject Areas

110. Agriculture	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike
111. Algebra	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike
117. Computer Science	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike
121. English Composition	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike

Section III
Activities

154. Making a speech	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike
155. Doing research work	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike
156. Writing reports	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike
157. Discussing politics	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike

Section IV
Leisure Activities

239. Listening to jazz	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike
240. Planning a large party	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike
243. Playing team sports with friends	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike
244. Campaigning for Office	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike

Section V
People

268. High School Students	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike
270. Nonconformists	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike
271. People who assume leadership	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike
280. Athletic people	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike

Section VI
Your Characteristics

283. Prefer working alone rather than committees	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike
284. Have mechanical inventiveness	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike
285. Can prepare successful advertisements	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike
286. Stimulate ambitions of my associates	□ Strongly Like	□ Like	□ Indifferent	□ Dislike	□ Strongly Dislike

Appendix F: Description of Research Project

My name is [redacted] and I am doing a research project to determine whether academic motivation, the belief that one can have confidence in choosing a career and have confidence in their ability to carry out the tasks of certain careers by participating in career exploration. All African-Americans who are 15 to 19 years of age and attend a designated urban high school in a midwestern state are invited to participate in the study.

ABOUT THE PROJECT:
If you agree to participate in this project, you will be asked to complete the following activities:

Week	Activity	Length of Session	Location
1	Collection of Assent forms, Consent Forms, and Demographic Survey. Question and Answer Session. Complete surveys on academic motivation and career attitudes. Introduction of Strong Interest Inventory.	1 hr. 45 mins.	Room TBD
2	Complete the Strong Interest Inventory	1 hr.	Room TBD
3	No session		
4	No session		
5	Participants will receive and engage in the interpretation process of the results from the Strong Interest Inventory. Complete surveys on academic motivation and career attitudes.	2 hrs. 15 mins.	Room TBD
6	Participants will receive raw score results from the post assessments and a debriefing of the study will take place. Researcher will gather contact information to ensure accuracy	2 hrs.	Room TBD
10	Participants will be provided with results of the study via email or US mail	NA	

Appendix G: Evaluation for Career Exploration Lesson

Please take a moment to think about the Career Exploration Session. Below are several statements regarding your experience using the Strong Interest Inventory, p lease rate each statement on a scale from 1-5. When "1" means this does not apply to me and "5" means it definitely applies to me.

Statements	Ratings
I learned about my natural interests	
I learned about specific occupational interests	
The scores I received on the scales accurately reflect my interests	
I now know more about how much education I need to pursue my occupational interests	
I felt frustrated responding to the questions on the Strong Interest Inventory	
Overall, this activity helped me discover my career and educational interest	

Please feel free to use the space below to provide any additional comments about your experience regarding this career exploration activity:

_____

_____

_____

Appendix H: Recruitment Flyer

Did you know ……

In 2009 only 66.1% of African-American students attending a public school graduated vs. 83 % of European American students

Did you know……

The employment rate for:

High School Dropouts = 45%

High School Graduates = 68.1%

College Graduates = 86.7 %

How familiar are you with your career choice?

How do you accomplish this task……

Participate in a career exploration research project that will allow you to pick a career that you enjoy and make money at the same time. Ask [redacted] how to sign-up.