The Influence Of Perceived Barriers, Perceived Social Support, And Career Decision-Making Self-Efficacy On High School Juniors' And Seniors' Postsecondary Plans

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THE INFLUENCE OF PERCEIVED BARRIERS, PERCEIVED SOCIAL SUPPORT, AND CAREER DECISION-MAKING SELF EFFICACY ON HIGH SCHOOL JUNIORS’ AND SENIORS’ POSTSECONDARY PLANS

A Dissertation presented in partial fulfillment of requirements for the degree of Doctor of Philosophy in the Department of Leadership and Counselor Education The University of Mississippi

by

DENISE A. GILSTRAP

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ABSTRACT

National emphasis on postsecondary education highlights the importance of studies that investigate students’ college and career readiness, specifically how self-efficacy and contextual factors may affect their postsecondary aspirations. The primary purpose of this quantitative study was to examine the influence of perceived barriers, perceived social support, and career decision-making self-efficacy on high school juniors’ and seniors’ postsecondary plans. High school juniors and seniors (n = 124) were surveyed to determine the influence of three predictors on their short-term and long-term postsecondary plans. The first predictor, perceptions of educational barriers, consisted of the following barrier groups: efficacy and motivation, support system, personal relationships, lifestyle, program choice, discrimination, financial, and marriage. The second predictor included perceptions of different sources of social support from family, friends, and school. The third predictor was career decision-making self-efficacy, which included five components: self-appraisal, goal selection, occupational information, problem solving, and planning. Predictors were examined using the My Perceptions of Barriers Scale (MPB), the Multidimensional Scale of Perceived Social Support (MSPSS), and the Career Decision Self-Efficacy Scale-Short Form (CDSE-SF). The influence of the predictor variables on postsecondary plans was examined using a multinomial logistic regression. The researcher found that support system and marriage barriers had a significant influence on students’ short-term
postsecondary plans when choosing college or university versus undecided or other. Support system barriers also had a significant influence on students’ long-term plans when choosing undecided or other versus college or university student or graduate. Results also showed that friend-based social support was a significant predictor of students’ choice to attend college after high school and in viewing themselves as college students or graduates within three to five years. Analysis of students’ confidence in career decision-making revealed that occupational information was a significant predictor of students’ plans when choosing to attend and graduate college versus being undecided or choosing other plans. Additionally, planning was a significant predictor of students’ plans to attend college immediately after high school graduation. The implications of these findings are intended to assist school counselors with providing support to high school students with postsecondary planning.
DEDICATION

To my grandmother, Erma Dell Gilstrap. I thank you, I miss you, and I love you. I hope I made you proud.
LIST OF ABBREVIATIONS AND SYMBOLS

ASCA American School Counselor Association
CDSE-SF Career Decision Self-Efficacy Scale-Short Form
MPB My Perceptions of Barriers Scale
MSPSS Multidimensional Scale of Perceived Social Support
SCT Social Cognitive Theory
SCCT Social Cognitive Career Theory
SLT Social Learning Theory
ACKNOWLEDGEMENTS

First, I am thankful for my Creator for His presence in my life and throughout this journey. I cannot express enough how much I love my wonderful family and friends (near and far). I am so thankful for my parents, Demetria and Modesto, who have always supported me and pushed me to take on every goal I set for myself. I am grateful for my brothers (Deandre, Modesto, and Warren) who are always there for me and who gave me all of my beautiful nieces and nephews. Also, many thanks to my aunts (Tameka, Jeanette, Helen, Christine, and Cathy) and my uncles (Roy and Bobby) for their love and encouragement. I’d like to thank my fellow doctoral students James, Mindy, LaQuita, Kassie, Jennifer, Eric, Amelia, and Kim for their friendships and for all the great laughs. I am extremely appreciative of my committee. I am grateful for my chair, Dr. Dugger, who pushed me through this project and helped me grow professionally. I am thankful for Dr. Hsu for helping me develop my quantitative research skills. I’d like to thank Dr. George for her guidance and reassurance, and I’d like to thank Dr. Winburn for always being so supportive and understanding. Also, I’d like to thank Drs. Perryman, Kerwin, and Showalter for their much appreciated encouragement and help that contributed to my development as a counselor educator. I am so grateful for Kim and Michelle for the numerous times they’ve gone above and beyond. Always in my heart will be the many wonderful people I’ve met, my experience, and everything I’ve gained from Ole Miss.
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CHAPTER I: INTRODUCTION

As reflected by recent legislative changes, improving K-12 educational outcomes and preparing students to become college and career ready continues to be a national goal (Conley, 2012). Based on employment projections from the U.S. Bureau of Labor Statistics, the focus on college and career readiness is a response to the predicted labor market needs and the increased percentage of jobs requiring some form of postsecondary training and education. Guidelines within the recently passed Every Student Succeeds Act necessitate the implementation of college and career ready standards in nationwide curricula. However, considering American School Counseling Association’s (ASCA) National Model (2012), students’ college and career preparation has long been an expectation for school counselors and their implementation of comprehensive school counseling services. Specifically, the role of high school counselors largely involves providing postsecondary guidance and support for students (ASCA, 2012; Belasco, 2013), especially for juniors and seniors when the transition from high school becomes more imminent.

Even though national initiatives within the past decade underscore the importance of postsecondary preparedness, school counselors encounter challenges in implementing readiness standards (Farmer-Hinton & McCullough, 2008; Stone-Johnson, 2015). These challenges are mirrored in student reports of feeling inadequately prepared to engage in the process of college and career planning. Gewertz (2015) reported results from a nationwide poll conducted by the nonprofit organization YouthTruth that revealed high school students feel unprepared and
unknowledgeable in making postsecondary plans. Students reported they lack support and guidance. Additionally, studies have shown that students in underrepresented groups who perceive barriers to academic success during and after high school also demonstrate difficulty in postsecondary preparation (Becerra, 2012; Bryant, 2014; Cox, 2016). Geographical challenges are also impediments to postsecondary planning for students living in rural areas, specifically due to lack of work-based learning experiences (Hutchins & Akos, 2012).

Studies have investigated career-decision making and perceived barriers in relation to vocational identity and career exploration of Latino high school students (Gushue, Clarke, Pantzer, & Scanlan, 2006), high school seniors’ financial planning (Poynton, Lapan, Marcotte, 2015), occupational aspirations of Chinese adolescents (Creed, Wong, & Hood, 2009) and community college students (Kelly & Hatcher, 2013). The role of social support in academic achievement has also been researched. Studies have examined the link between social support, school climate, and middle school students’ academic performance (Hopson, Schiller, Lawson, 2014) and the role of teacher-based social support in improving behavior and academic outcomes (Decker, Dona, & Christensen, 2007). The role of social support in postsecondary acquisition of students with disabilities (Banks, 2014; Lombardi, Gerdes, & Murray, 2011) and early college high school students has also been studied. Additionally, the benefit of social support for early college high school students has been investigated (Saenz & Combs, 2015). However, the relationship between perceived barriers, perceived social support, career decision-making self-efficacy, and high school seniors’ postsecondary plans has not been adequately examined.
Purpose of the Study

The purpose of this study is to examine the influence of perceived barriers, perceived social support, and career decision-making self-efficacy on high school juniors’ and seniors’ postsecondary plans. The three independent variables examined in this study were derived from the researcher’s interest in how students’ perceptions of barriers and support systems correlate with confidence in career decision-making to influence their plans for attending college. Furthermore, the researcher sought to examine how these constructs interact to influence students’ plans to enter the workforce or pursue other postsecondary options. The intent of this study is to provide school counselors with essential information that could be useful in offering college and career guidance.

Theoretical Framework

Lent, Brown, & Hackett (1994) conceptualized social cognitive career theory (SCCT) through application of Bandura’s (1986, 1997) social cognitive theory and self-efficacy theory to the career development process. An overview of the theories foundational to SCCT is provided within this study’s literature review. Self-efficacy and the contextual factors addressed by SCCT are the primary constructs that were instrumental in determining the independent variables within this study. These concepts will be discussed in-depth in the review of literature.

Research Questions

The following research questions were formed from the overarching research question of this study: what is the influence of perceived barriers, perceived social support, and career decision-making self-efficacy on high school juniors’ and seniors’ postsecondary plans? Each question is followed by a null hypothesis:
**Research question 1A**: Based on the responses to the My Perceptions of Barriers Scale, how many distinct groups among students can be determined by a cluster analysis?

H₀₁A: Based on the responses to the My Perceptions of Barriers Scale, no distinct groups exist among students as determined by a cluster analysis.

**Research question 1B**: Assuming that clusters are identified based on responses to the My Perceptions of Barriers Scale, what differences in postsecondary plans exist between clusters?

H₀₁B: Differences in postsecondary plans of identified clusters do not exist.

**Research Question 2**: Which sources of social support, measured by the Multidimensional Scale of Perceived Social Support, are most likely to influence postsecondary plans?

H₀₂A: School-based social support will have no significant influence on postsecondary plans.

H₀₂B: Family-based social support will have no significant influence on postsecondary plans.

H₀₂C: Friend-based social support will have no significant influence on postsecondary plans.

**Research Question 3**: Which components of self-efficacy, as measured by the Career Decision Self-Efficacy Scale-Short Form (CDSE-SF), are most likely to influence postsecondary plans?

H₀₃A: Self-appraisal will have no significant influence on postsecondary plans.
$H_03B$: Occupational information will have no significant influence on postsecondary plans.

$H_03C$: Goal selection will have no significant influence on postsecondary plans.

$H_03D$: Planning will have no significant influence on postsecondary plans.

$H_03E$: Problem solving will have no significant influence on postsecondary plans.

**Research Question 4:** Which of the three variables investigated in the current study, (perceptions of barriers, perceived social support, and career decision-making self-efficacy) investigated in the current study, which factor explains the greatest proportion of variability in students’ postsecondary plans?

$H_04$: There will be no statistically significant difference in the proportion of variability explained by the three variables (perceptions of barriers, perceived social support, and career decision-making self-efficacy).

**Significance of the Study**

Academic development and career development represent two of the three domains within the ASCA National Model. ASCA National Standards for Students (2004) include Academic Development and Career Development competencies with indicators emphasizing college and career awareness and skills students should expect to gain from their school counseling programs. College and career planning is pivotal in high school, as the transition into college or the workforce becomes more imminent. School counselors must be aware of strategies to assist students with their postsecondary transition. Although the importance of college and career readiness is widely reflected in academic standards and school culture
emphasized within the school counselor’s role, postsecondary transitions appear to be challenging for both students and school counselors.

Despite increased national recognition of the significance of college and career development in high school curricula, reports have shown that high school students continue to report that they have weak school support systems, lack adequate resources, and do not receive sufficient guidance and counseling and postsecondary planning and preparation (Gewertz, 2015; Poynton, Lapan, & Marcotte, 2015; Wright et al., 2014). This is especially true for students who come from historically underrepresented groups and low-income students, whose college-going aspirations may be affected by poor decision making, low motivation, low family support, and poor guidance counseling (Castleman & Page, 2013; Cox, 2016).

Guiding students in postsecondary planning is an imperative aspect of school counselors' roles (Belasco, 2013). The ASCA National Model (2012) addresses college and career planning within the direct services component of school counselor competencies. Although comprehensive school counseling involves postsecondary planning, school counselors report challenges with systemic implementation of guidance initiatives (Farmer-Hinton & McCullough, 2008; Stone-Johnson, 2015). High school counselors’ extensive workloads present additional problems in providing direct services (Farmer-Hinton & McCullough, 2008).

Research has shown that postsecondary guidance in high school can be beneficial (Bayerl, 2015). For example, exposure to early college programs can translate into successful college experiences for first generation, low-income students (Ndiaye & Wolfe, 2016). In addition, college-going and career-promoting cultures within high schools can be conducive to encouraging students to accomplish their postsecondary plans (Gysbers, 2013; Schneider, Broda,
Judy, Burkander, 2013). This study seeks to extend current knowledge by examining how students’ perceptions of barriers and social support relate to their self-efficacy in career planning, thus influencing current plans for life after high school.

**Delimitations**

This study was designed with a school counseling focus. Recruitment of schools was limited to areas in Mississippi, Missouri, Michigan, Tennessee, and Louisiana. This study only focused on perceptions of juniors and seniors enrolled at participating schools. The independent variables examined in this study were limited to barriers, social support, and career decision-making self-efficacy. The dependent variables investigated were high school juniors’ and seniors’ short-term and long-term postsecondary plans.

**Limitations**

Limitations exist within this study due to sample size and generalizability. Results may only be generalizable to the demographics of the sample. Because this study involved surveying minors, parental consent was necessary. Students who were not of legal consenting age were issued parental consent forms, and only those students who returned parental consent forms were allowed to participate. Therefore, collecting consent forms is presented as a limitation. This study involves completion of self-report surveys, which also presents as a limitation due to response bias (Creswell, 2015).

**Terms and Definitions**

**ASCA National Model:** The American School Counselor Association (ASCA) provides a framework, entitled the ASCA National Model, to guide the implementation of comprehensive school counseling programs (ASCA, 2012). The essential purpose of the model is to promote
data-driven and student-centered services aimed at supporting academic achievement, social and emotional development, and college and career planning. The four components of the ASCA National Model are foundation, management, delivery, and accountability.

Foundation represents the school counselor’s vision in conjunction with the school mission’s statement. This component also identifies goals for student mindsets and behaviors within the three domains: academic, career, and personal/social development. Management entails the school counselor’s evaluation of the school’s needs and measurement of the effectiveness of the school counseling program. This requires collaboration with administrators, teachers, parents, and other stakeholders in strengthening the program. Delivery is comprised of two areas: direct services and indirect services. Direct services represent activities in which school counselors spend time with students in scheduling courses, delivering guidance lessons, and implementing college and career planning and assessments. Responsive services, also included within this component, consist of individual and group counseling that responds to students’ immediate needs or crisis concerns. Indirect services represent consultation and collaboration with teachers, parents, and administrators regarding student services. Lastly, accountability refers to success of the school program as determined by measurable data, which is reflected in school counselors’ performance evaluations (ASCA, 2012).

Although it is recognized that all components collectively are imperative to comprehensive school counseling program implementation, delivery services are particularly essential to this study. College and career planning are directly reflected within the components of delivery services. Additionally, actions that contribute to a positive school climate and healthy interpersonal relationships are supported within these components of the National Model.
Barriers: Barriers are contextual factors that can weaken a person’s ability to transform his or her interests into goals (Lent, 2005). Barriers can hinder the decision-making process and impede on opportunities in exploring interests or achieving goals.

Career decision-making self-efficacy: Career decision-making self-efficacy, as defined by Taylor and Betz (1983), is a person’s belief in his or her ability to successfully engage in the career planning and decision-making process. The Career Decision Self-Efficacy scale created by Taylor and Betz (1983) was used as one of this study’s instruments. Sub-scales of the instrument were developed from five career choice competencies within Crites’ (1978) Career Maturity Theory (Taylor & Betz, 1983). The competencies represent the cognitive processes that go into mature career decision-making (Crites, 1978). They are self-appraisal, occupational information, goal selection, planning, and problem solving. These terms are also defined in this section.

Comprehensive school counseling program: ASCA (2012) identifies comprehensive school counseling programs as programs that correspond with the components and standards emphasized in the ASCA National Model.

Contextual factors: Contextual factors are environmental conditions that influence a person’s career development (Lent, 2005). Social cognitive career theory (SCCT) posits the existence of two categories of contextual factors: distal and proximal (Lent, 2005; Lent, Brown, & Hackett, 1994, 1996). Distal influences are background factors including cultural and gender roles, academic and career role models, and skill development opportunities that could impact cognitive-processes and interests (Lent, Brown, & Hackett, 2000). Distal influences also include early support for pursuing academic interests and extracurricular activities, which are important
in shaping interests and outcome expectations (Lent & Brown, 1996; Lent, Brown, & Hackett, 1994, 1996). Proximal influences refer to the current supports or barriers that are present during active decision-making (Lent & Brown, 1996; Lent et al., 2000). Proximal influences include emotional and financial supports or barriers and also include exposure to “discriminatory hiring practices” (Lent et al., 2000, p. 38).

**Family-based social support:** Family-based social support includes supportive relationships from relatives that contribute to healthy emotional well-being. Family-based social support is a variable examined in this study as measured by the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988). Perceptions of family-based social support are reflected through statements such as “My family really tries to help me” and “I get the emotional support and help I need from my family” (Zimet, Dahlem, Zimet, & Farley, 1988).

**Friend-based social support:** Friend-based social support consists of supportive relationships from friends that contribute to healthy emotional well-being. Friend-based social support is a variable examined in this study as measured by the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988). Perceptions of family-based social support are reflected through statements such as “I can count on my friends when things go wrong” and “I have friends with whom I can share my joys and sorrows” (Zimet et al., 1988).

**Goal selection:** Goal selection is a process within career decision-making in which individuals demonstrate their ability to match their skills to suitable occupations (Crites, 1978). Goal selection is a variable examined in this study as measured by the Career Decision Self-Efficacy Scale- Short Form (Taylor & Betz, 1983).
**Occupational information:** Occupational information is a process within career decision-making that reflects a person’s understanding of the specific tasks and responsibilities of various occupations (Crites, 1978). Occupational information is a variable examined in this study as measured by the Career Decision Self-Efficacy Scale-Short Form (Taylor & Betz, 1983).

**Planning:** Planning is a process within career decision-making that involves a person’s ability to create a career plan for a desired occupation (Crites, 1978). Planning is a variable examined in this study as measured by the Career Decision Self-Efficacy Scale-Short Form (Taylor & Betz, 1983).

**Postsecondary plans:** This study defines postsecondary plans as the path a student intends to pursue upon high school graduation. In this study, postsecondary plans are the dependent variable, with analyses focused on short-term postsecondary plans and long-term postsecondary plans. Short-term postsecondary options (within 6 months of high school graduation) are categorized as community/junior college, 4-year college/university, job/workforce, undecided, and other. Long-term postsecondary options are (within 3 to 5 years after high school graduation) college/university student, college/university graduate, job/workforce-no college, graduate/professional school, and undecided/other.

**Problem solving:** Problem solving is a career choice process that reflects an individual’s ability to deal with problems that arise during the career decision-making process (Crites, 1978). Problem solving is a variable examined in this study as measured by the Career Decision Self-Efficacy Scale-Short Form (Taylor & Betz, 1983).

**School-based social support:** School-based social support is the emotional support students receive from adults at school (e.g. teacher, coach, school counselor, principal) that contribute to
healthy emotional well-being. School-based social support is a variable in this study examined by revised items on the Multidimensional Scale of Perceived Social Support (Zimet et al., 1988). Perceptions of school-based social support are reflected through statements such as “There is an adult at school who is around when I am in need” and “There is an adult at school who cares about my feelings.”

**Self-appraisal:** Self-appraisal is the process of self-evaluating one’s skills during the career decision-making process (Crites, 1978). Self-appraisal is a variable examined in this study as measured by the Career Decision Self-Efficacy Scale-Short Form (Taylor & Betz, 1983).

**Self-efficacy:** Self-efficacy is defined as “people’s judgments of their capabilities to organize and execute the courses of action required to attain designated types of performances” (Bandura, 1986, p. 391). Social cognitive career theory (SCCT; Lent, Brown, Hackett, 1996) considers self-efficacy a “codeterminant of performance” (p. 394). According to the theory, self-efficacy can influence a person’s interests, career choice behaviors, performance goals, and learning experiences (Lent, Brown, & Hackett, 1996).

**Social support:** Social support refers to the emotional support and connections within primary groups, such as relatives, friends, and significant other, as measured by the Multidimensional Scale of Perceived Social Support (Zimet et al., 1988). For this study’s intended purposes examining postsecondary plans, the significant other items were revised to measure support from an adult at school.

**Supports:** Opposite of barriers, supports are contextual factors acknowledged as “beneficial environmental conditions” (Lent, Brown, & Hackett, 1996, p. 393). Strong environmental supports are instrumental in developing career interests into goals. Advantageous environmental
conditions and fewer barriers can strengthen self-efficacy and outcome expectations by providing the opportunity structure to pursue career-related interests and goals (Lent, Brown, & Hackett, 1996, p. 393).

**Triadic reciprocality**: As defined by Bandura (1986), triadic reciprocality is "behavior, cognitive, and other personal factors, and environmental influences all operate interactively as determinants of each other" (Bandura, 1986, pp. 23-25). Social cognitive career theory (Lent, Brown, & Hackett, 1996) applies triadic reciprocality to career development in explaining how bi-directional interactions between the person, environment, and behavior are influential in shaping career choices and interests.

**Summary and Overview**

This chapter introduced the problem, purpose of the study, research question and hypotheses, significance of the study, and definition of terms. Chapter 2 provides a synthesis of relevant literature and an overview of the theoretical frameworks guiding this study. Chapter 3 details the methodology of the study, including the study’s design, instrument description (including reliability and validity information), participant information and recruitment, and procedures for data analysis. Chapter 4 presents the results of the study. Chapter 5 is a discussion of the results, including implications, limitations, and suggestions for future research.
CHAPTER II: LITERATURE REVIEW

Introduction

Based on reported trends from the Bureau of Labor Statistics, current labor market projections predict an increase in overall employment by 6.5% between 2014 and 2024. As jobs become more abundant, it is projected that labor market participation will decline due to an aging population. Therefore, as employment needs increase, there will be a demand for individuals to enter the workforce. The examination of national employment trends has led to a focus on the younger generation and the need to prepare them to meet future labor market demands as more jobs are requiring postsecondary training and education. Much of this preparation has centered on national curriculum and education-based initiatives. National educational policies have emphasized the necessity of preparing students for success beyond high school (Conley, 2012; Sloven, 2013). Specifically, college and career readiness standards have become a significant component of academic curriculum for K-12 students. Recent legislative changes continue to reflect schools’ roles in implementing curriculum conducive to success beyond secondary school (Darling-Hammond, Wilhoit, & Pittenger, 2014; Sloven, 2013). Although college and career preparedness has gained traction on a national basis, studies have shown that students continue to feel they lack knowledge and support in making college and career plans (Barnes, Slate, & Rojas-LeBouef, 2010; Gewertz, 2015).
Schools’ understanding of their accountability for helping students become college and career ready is essential to helping students prepare for postsecondary success (Darling-Hammond, Wilhoit & Pittenger, 2014). Studies that investigated college-going cultures determined that students who are exposed to college preparation planning and activities are likely to develop an interest in college (Bosworth, Convertino, & Hurwitz, 2014; Radcliffe & Bos, 2011). Additionally, career education and intervention can be beneficial for students’ career development and workforce considerations (Alfeld, 2015; Choi, Kim, & Kim, 2014). Although all staff members of school systems should work collaboratively to ensure student preparedness, these studies especially underscore the importance of school counselors’ work in helping students with their post-high school transition (Gysbers, 2013; Ryan, 2015).

School counselors play a pivotal role in helping students engage in postsecondary planning (Lautz, Hawkins, & Perez, 2012; McKillip, Rawls, & Barry, 2012). In comprehensive school counseling programs, college and career planning occur within the delivery services component of the ASCA National Model (ASCA, 2012). It is through delivery services that school counselors involve students in postsecondary planning by administering college and career assessments and supporting students in researching opportunities. Studies have considered students’ view of school counselors and found that school counselors’ efforts in preparing students are positively viewed, and students rely on school counselors as resources in obtaining postsecondary information (Bryan, Moore-Thomas, Day-Vines, & Holcomb-McCoy, 2011; Hines & Lemons, 2011).

Studies have examined factors contributing to the lack of postsecondary education aspirations and low achievement (Becerras, 2012; Cox, 2016; Gewertz, 2014). Students have
reported feelings of inadequate preparedness to engage in college planning due to lack of support and guidance. Studies have also found that students believe they lack insufficient academic preparation to be successful in college courses. The ACT College Benchmark report statistics similar to the findings of these studies. According to the report, 76% of the 2010 high school graduates who took the ACT did not meet college readiness benchmark requirements (ACT, 2010). Other factors, such as the presence of barriers and low self-efficacy, have also contributed to students’ hesitation in making decisions to go to college (Brown, Darden, Shelton, & Dipoto, 1999; Cox, 2016; Grieve, 2009; Gushue, Clarke, Pantzer, & Scanlan, 2006; Poynton, Lapan, & Marcotte, 2015).

School systems, including school counselors, can work to understand what hinders students from feeling like they are ready for college. A social cognitive theoretical approach to career development could be useful to understanding how perceived barriers and supports may be useful in building student confidence in career decision-making and establishing postsecondary plans. A goal for this study is to add to existing knowledge of career decision-making self-efficacy of high school students. An additional goal for this study is to extend current literature on postsecondary aspirations by focusing on how perceptions of barriers, perceptions of social support, and career decision-making self-efficacy influence students’ college and career plans. This literature review provides a summary of the theoretical framework guiding this study, including information on the assessment used to measure the constructs in this study.
**Self-Efficacy**

One factor contributing to students’ academic achievement and postsecondary attainment that has been extensively studied is self-efficacy (Creed, Wong, & Hood, 2009; Guan, Capezio, Restubog, Read & Lajom, 2016; Gushue, Clarke, Pantzer, & Scanlan, 2006; Kelly & Hatcher, 2013). Researchers have established that self-efficacy plays a role in students’ academic performance and can influence self-motivation in making college and career decisions. In this study, self-efficacy is examined as one variable that potentially influences the postsecondary plans of high school juniors and seniors.

**Self-Efficacy in Theory**

Bandura (1976) first introduced social learning theory (SLT) and later extended it with social cognitive theory (SCT; Bandura, 1986) to more comprehensively explain how human behavior is influenced by the interaction of person factors, cognitive variables, and environmental influences. Bandura introduced the concept of self-efficacy, also referred to by some scholars as self-efficacy theory, and defined it as “people’s judgments of their capabilities to organize and execute the courses of action required to attain designated types of performances” (p. 391). In an expounded presentation of self-efficacy, Bandura (1997) described personal efficacy as a "key factor" to human agency, stating that when people feel they are unable to perform a task that produces desirable results, then they will not put effort toward that task (p. 3). Additionally, Bandura (1997) stated perceived ability regulates a person’s goals, actions, and sustained efforts. Four factors Bandura (1986, 1997) conceptualized as foundational to self-efficacy are mastery experiences, vicarious learning, verbal persuasion, and physiological and affective states. These factors will be summarized next.
Mastery experiences. Bandura (1997) recognized mastery experiences as the most crucial source of self-efficacy, stating it “involves acquiring the cognitive, behavioral, and self-regulatory tools for creating and executing effective courses of action to manage ever-changing life circumstances” (pp. 80-81). Whereas successful experiences build and maintain a high sense of efficacy, failures can reduce self-efficacy. However, performance alone does not regulate self-efficacy. Bandura (1997) also credited perseverance gained from challenges as supportive in exercising personal agency over achievement goals. Other impactful factors include cognitive processes and presumptions about personal competence and task difficulty, as well as contextual influences, such as environmental conditions and available support.

Personal performance accomplishments can influence self-efficacy due to success experiences (Bandura, 1977, 1997). On the other hand, experienced failures can adversely affect self-efficacy. Self-efficacy can shape outcome expectations, which are an individual's beliefs about the result of a particular action or behavior. Outcome expectations are similar to symbolizing capacities in that imagined outcomes or consequences of an action are visualized prior to enactment. Additionally, self-efficacy combines with outcome expectations to determine whether an individual will choose to pursue or avoid an activity (Bandura, 1986, 1997). If a person believes he is capable of performing a task and the visualized outcomes are perceived as beneficial, then that person is likely to pursue the considered course of action.

Vicarious learning. Vicarious learning is useful to self-assessing personal capability by observing the performance of others (Bandura, 1977, 1986, 1997). Efficacy beliefs are not much affected by models who are perceived by observers as dissimilar (Bandura, 1997). Instead, when people observe others like themselves engage in successful performance experiences and
receive favorable outcomes, personal efficacy beliefs are raised. This point is essential to this study in consideration of social cognitive career theory’s (Lent, Brown, & Hackett, 1996) concept of distal influences, which will be discussed later in this chapter. With access to career role models and opportunities for skill development, individuals are likely to have support in shaping and building career interests, particularly with the opportunity to receive appraisal in performance, which directly affects to self-efficacy and outcome expectations.

Conversely, when people witness the failures of others they feel connected to, this can deter self-confidence. Bandura (1997) referred to the processes of observational learning in explaining how observing and evaluating models influence efficacy beliefs and supports self-assessment of reenactment. Viewing comparable others who perform better, particularly when one has a low sense of personal agency, can decrease motivation and cause feelings of anger or depression.

**Verbal persuasion.** In describing verbal persuasion, Bandura (1977, 1997) posited that having close relationships with supportive and encouraging people strengthens efficacy beliefs. Through verbal persuasion (also referred to as social persuasion), positive praise is credited with nurturing self-efficacy, thus increasing performance effort and positive outcome expectations. Bandura (1997) discussed performance feedback and its role in increasing or diminishing self-efficacy beliefs. Evaluative feedback that is aimed at enhancing a person’s demonstrated abilities or that encourages the performer to put forth increased effort contributes to enhanced efficacy beliefs. Additionally, evaluative feedback that emphasizes gains in performance elevates self-efficacy, while evaluative feedback aimed at skill deficits can diminish efficacy beliefs (Bandura, 1997).
**Physiological and affective states.** Physiological and affective states are physical and emotional symptoms that influence self-efficacy (Bandura, 1977, 1997). Bandura (1997) described these somatic indicators as “physical accomplishments, health functioning, and coping with stressors” (p. 106). Bandura (1997) explained that feelings of high stress and anxiety while attempting a task represent physiological reactions that can negatively affect performance. A distressed physiological state can create dysfunctional thoughts and cause poor performance. Addressing negative physical reactions related to performance ability can improve adverse emotional responses during performance. Therefore, the ability to self-monitor somatic symptoms can help improve performance of a task.

There are three concepts presented by Bandura (1986) that are important to the process of developing postsecondary aspirations and plans, particularly concerning influences from the environment and from others. Bandura (1986) described how overall psychological functioning and self-efficacy are influenced by ongoing reciprocal interaction between the person and the environment. Observational learning, self-regulatory capacity, and triadic reciprocality are summarized to explain how learning occurs through cognitive processes and external influences.

**Observational learning.** Observational learning extends from vicarious learning. As defined in SLT, the premise of observational learning is that learning and behavior are shaped by observing others (Bandura, 1977, 1986, 1997). Bandura (1997) described observational learning as significant to personal development due to its ability to shape behaviors and actions that are appropriate to the learner's environment. According to Bandura (1997), learners acquire behavior from models through observation of their actions and consequences. From this, people
form symbols of appropriate and inappropriate behavior, and these symbols act as guides for future behavior. Bandura (1997) also refers to this as symbolizing capability.

Four integral processes emphasized in observational learning explain how observers create symbolic representations (Bandura 1986, 1997). Bandura (1986, 1997) delineates attentional processes, retention processes, motor reproduction processes, and motivational processes in his explanation of how modeled behavior is essentially captured. A summary of these processes follows.

Attentional processes are particularly important in behavior observation and involves what a person selectively pays attention to, as well as associational patterns that influence who serves as models for behavior (Bandura, 1986, 1997). Individuals who people most often associate with are more likely to become models. Retention processes describe how memory and symbols of observed behavior are retained. Bandura (1997) stated "observational learning and retention are facilitated by such symbolic codes because they carry a great deal of information in an easily stored form" (p. 26). Motor reproduction is the process of transferring symbols into actions (Bandura, 1997). This also involves a person's capacity to reenact the observed behaviors. Motivational processes emphasize the modeled behavior that is viewed as a producer of valued outcomes (Bandura, 1986, 1997). Modeled behavior deemed effective is likely to be selected over behavior that produces undesirable results. Also, observing how the model evaluates his or her own behavior is significant to learned responses. Motivational processes also include encouragement received from a model who has continuously demonstrated favored responses to modeled behavior. Prompting the learner during failed attempts, as well as encouraging the learner after successful imitation, could aid students in
mastering desired outcomes. It is through these above-mentioned processes that people are able to observe and replicate behavior, as well as determine what is effective and ineffective based on recognized outcomes.

The concept of observational learning has been extensively applied to instructional concepts in learning strategies and motivational teaching methods for reading and special education instruction (Hallenbeck & Kauffman, 1995; Kniep & Janssen, 2014). These studies have shown the positive effects observational learning can have on acquiring new information. While no studies were found that applied observational learning to postsecondary achievement, it is important to recognize the importance of observational learning in career development. Lent, Brown, & Hackett (1996) highlight the importance of opportunities to observe behaviors that could be influential in shaping career ideals and interests. In addition to observational learning, self-regulation is essential in creating opportunities to shape behavior and discover interests.

**Self-regulatory capacity.** Bandura (1986) highlighted the importance of self-regulation in shaping learning experiences and building collaborative networks. Self-regulatory capacity is defined as person's ability to manipulate his or her environment, shape his or her actions, and produce favorable outcomes (Bandura, 1986). Self-regulation can be reinforced by external influences to guide future actions and goals. Additionally, self-observation and self-monitoring are important functions within self-regulatory capacity. Self-observation involves a person distinguishing between relevant and irrelevant aspects of his or her behavior, and then selectively attending to what is considered appropriate. Subsequently, self-monitoring is the ability to set realistic performance standards and reflectively apply these standards to the adjustment of behavior.
Self-regulation has been further applied to academic studies, specifically with strategies to enhance secondary students’ metacognitive and self-evaluative abilities (Le & Wolfe, 2013). It has been additionally applied to college student learning (Cohen, 2012). Self-regulation is essential career development in SCCT with the emphasis of regulating behavior based on internal processes and environmental interactions. Additionally, self-regulatory capacity is related to forming perceptions and using this information to guide behavior (Lent, Brown, & Hackett, 1996). This process is further explained in social cognitive theory by triadic reciprocality (Bandura, 1986) and extended to the process of career development in SCCT (Lent, Brown, & Hackett, 1996).

**Triadic reciprocality.** Triadic reciprocality is a model of reciprocal determinism where "behavior, cognitive, and other personal factors, and environmental influences all operate interactively as determinants of each other" (Bandura, 1986, pp. 23-25). As demonstrated in SLT, Bandura (1986) maintained that each bidirectional influence is not necessarily equal in effect. The relative influence of person and environmental factors varies across settings, with either being more influential depending on situations or events. Personal factors are characteristics of the person. The environment component in triadic reciprocality represents the physical and social settings that reinforce learning and behavior, and behavior represents actions and routines based on personal observation and evaluation. SCT posits that much of a person's learning is acquired through interactions with one's environment, including exposure to societal norms that affect the way an individual processes information. Consequently, environmental and social factors are significant to knowledge attainment.
In the reciprocal process, environmental factors interact with behavior and person factors, collectively influencing the process of learning (Bandura, 1986). These environmental factors can be situational events or life events outside of the person's control. Environmental influences include social and external influences that a person encounters on a daily basis.

As a central conceptual element of SCT, self-efficacy is also emphasized as a person-variable within reciprocal determinism (Bandura, 1986). Bandura (1986) stated that “efficacy involves a generative capability in which cognitive, social, and behavioral subskills must be organized into integrated courses of action to serve innumerable purposes” (p. 391). Considering the bidirectional influence of triadic reciprocality, self-efficacy is a person factor that can influence life choices in response to interacting determinants. Because of this, it is important to understand the role of personal agency. When a great sense of personal agency is present, a person feels autonomous in self-regulating motivational processes and actions (Bandura, 1997). Through self-regulation, efficacious people are able to engage in personal reflection, thereby increasing their capability to make decisions and choose alternatives.

Environment is essential to the exertion of personal agency, enabling those who possess a high degree to use external resources and influence to guide personal development (Bandura, 1997). Regarding conducive environmental conditions, Bandura (1997) stated that “people who have the ability to exercise many options and are adept at regulating their own motivation and behavior will have a greater freedom to make things happen than will those who have limited means of personal agency” (p. 7). Yet, when environmental conditions are not encouraging of personal standards that value self-satisfaction and self-worth, personal agency enables a person to resist these environmental elements. Overall, personal agency is key in exercising self-
influence over choices during various environmental conditions. Self-regulatory capacities enable a person to choose or modify behavior to meet expected outcomes (Bandura, 1997).

**Self-Efficacy and Student Development**

This study was designed with a school counseling focus, and one of the predictors examined was school-based social support. Because one element of this study is the focus on in-school support with the postsecondary transition, it is essential to mention Bandura's (1986, 1997) thoughts on student development of self-efficacy. Bandura (1986) recognized school as the place where students gain knowledge and skills beneficial to their growth as productive citizens. Bandura (1986) also criticized schools for not adequately preparing youth for their futures and not sufficiently supporting students with their development of self-efficacy.

Efficacy beliefs affect how students individually interpret their feedback and implement self-evaluative strategies (Bandura, 1997). Bandura (1997) asserted that the cognitive capabilities students form through their initiation of self-regulatory and motivational processes are significant to their academic performance. Because of this, students’ perceived self-efficacy is more indicative of intellectual performance than are performance skills. In additional commentary on student learning, Bandura (1997) stated that students do not have a pre-determined sense of efficacy but rather their self-efficacy is developed as they acquire new learning and build "cognitive subskills" (pp. 214-215). As these cognitive subskills are obtained, continuous evaluation becomes instrumental to students’ development of efficacy beliefs. Thus, considering this study’s focus, it can be concluded that continuous feedback and development of skills for students are essential and could assist with building confidence in postsecondary planning.
Just as learning theories provided frameworks that explained how people process and use information to guide behavior throughout their lifespan, career development theories conceptualize how information gathering and behavior acquisition affect the process of developing a career. Social cognitive career theory (SCCT) was adapted from Bandura’s (1986) SCT theory to highlight interacting behavior and cognitive processes in relation to continuous career development. SCCT also drew upon Hackett and Betz’s (1981) application of self-efficacy to career development. Because the concept of self-efficacy as it pertains to career development is central to this study, SCCT will be discussed further.

**Social Cognitive Career Theory**

SCCT outlines the process of career development using three corresponding models (Lent, Brown, & Hackett, 1994, 1996). The interactional processes within each of these models emphasize how cognitive processes and contextual factors continuously influence a person's career path over time (Lent et al., 1994). For instance, the interest model explains that a person's career interests progress from his or her efficacy beliefs and performance in career-related tasks. When a person has high self-efficacy in a task, he or she tends to be more interested in pursuing a career involving that task.

Lent, Brown, and Hackett (1996) explained that people's career interests are affected by their feelings of competence in their skills as well as their perceived outcomes. This is further reflected in the goals they establish for themselves. Successful experiences correlate with stronger self-efficacy and outcome expectations, thus encouraging more ambitious performance goals. Choice actions are the “efforts to implement goals” and are demonstrated within the choice model (Lent, 2005, p. 109). In the context of triadic reciprocality, choice actions are
categorized as behavior, representing actual or planned steps toward pursuing a career interest. The choice process includes deciding on a goal, taking actions to achieve that goal, and then experiencing performance attainments that further shape career goals and career-related behavior (Lent et al., 1996). Choice actions include acquiring information about a career or enrolling in a training program. This study identifies high school students’ postsecondary plans as behavior due to its alignment with the choice process.

**Career Decision-Making Self-Efficacy Scale**

The short form of the Career Decision-Making Self-Efficacy (CDSE-SF) scale will be used in this study to measure concepts that contribute to students’ confidence in college and career planning. The CDSE is used to “measure an individual’s degree of belief that he/she can successfully complete tasks necessary to making career decisions” (Taylor & Betz, 1983). Sub-scales of this measurement are based on Crites’ (1978) five Career Choice Competencies included in Crites’ Career Maturity Theory. Those competencies are self-appraisal, occupational information, goal selection, planning, and problem solving.

Self-appraisal is a person’s ability to self-assess their skills and abilities. Occupational information is a person’s knowledge of various occupations and the corresponding tasks of those occupations. Goal selection is a person’s ability to choose an occupation and match his or her skills to that occupation. Planning involves creating and executing a plan to pursue a desired occupation. Lastly, problem solving is the ability to solve problems that may arise in the process of pursuing a career. The short form of the CDSE is used in this study. For each subscale, there are five items measuring each competency. This scale will be further discussed in the methodology and can be found in Appendix F.
Contextual Factors

Studies that investigated students’ path to postsecondary education have cited challenges students face in college and career readiness. Many of these challenges reflect contextual factors that present as barriers in accomplishing goals, such as lack of exposure to work experiences, lack of academic preparedness, and financial barriers as well. It is essential for school counselors to recognize how these challenges influence students’ personal career development. Furthermore, it is imperative for school counselors to know how various supports can positively influence students’ self-efficacy in accomplishing career goals and completing tasks that support these goals. This study aims to provide insight into how barriers and supports, along with career decision-making self-efficacy, influence students’ plans for postsecondary attainment.

Contextual factors can play a role in either upholding or deterring the process of pursuing career interests and goals. This study seeks to identify the perceived barriers of high school students in pursuing their postsecondary plans. The role of contextual influences on choice behaviors is conceptualized in SCCT (Lent & Brown, 1996). SCCT will be further summarized, leading into a discussion on contextual factors.

Theory

Conceptualized by Lent, Brown, and Hackett (1994), SCCT explores the development of career interests, choices, and actions. With triadic reciprocality, SCCT demonstrates how person, environment, and behavior variables interact to support the development of career behaviors (Lent, 2005). The person-component in SCCT is comprised of self-efficacy, outcome expectations, and personal goals (along with other personal characteristics), and these components interact reciprocally to produce agency and regulation with regard to career
decisions (Lent et al., 1994, 1996). Further, SCCT demonstrates how person variables (self-efficacy, outcome expectations, and personal goals) coincide to support and influence career development (Lent, 2005).

SCCT’s choice model demonstrates how proximal factors can influence a person's interest in a particular occupational area (Lent, Brown, & Hackett, 1994). Choices may be influenced by career trends or available occupations within a person's geographical area. If a person lives in a location where an industrial occupation is an immediate job choice, then he or she may choose to pursue that as a career. Sometimes performance accomplishments can influence career interests. SCCT shows this with the performance model. Strong self-efficacy and favorable outcome expectations affect a person’s performance goals. Furthermore, low self-efficacy can lead to inferior performance goals. When these goals are acquired, self-efficacy in performance is maintained and outcome expectations increase, encouraging an individual to continuously engage in consistent goal-setting for further performance attainment.

Similar to its functioning as a central component in SCT’s explanation of behavior attainment, self-efficacy remains fundamental in SCCT (Lent et al., 1996). Self-efficacy is described as involving “a dynamic set of self-beliefs that are specific to particular performance domains and that interact complexly with other person, behavior, and environmental factors” (Lent et al., 2000, p. 380). In accord with Bandura's (1997) stance, SCCT maintains that self-efficacy is not static or unchanging but rather has the ability to be shaped by information gained from learning experiences (Lent et al., 2000). These learning experiences begin in childhood and adolescence with exposure to career education and observation of others engaging in occupational behavior (Lent et al., 1996). Additionally, modeling and feedback can support
development and efficacy in career-related performance tasks. These tasks further contribute to the development of career interests and outcome expectations.

Personal goals are objectives developed to achieve intended outcome expectations. Setting personal goals enables people to guide their behavior and exercise personal agency (Bandura, 1997; Lent et al., 2000). SCCT gives two categories of personal goals (Lent, 2005). Choice-content goals represent the type of career a person seeks, while performance goals represent goals regarding the quality of their performance. Thus, setting career goals can guide individuals in creating their own career paths, motivating them to take the necessary steps to reach intended goals and work toward perceived outcome expectations.

Outcome expectations are beliefs about performance outcomes and behaviors (Lent et al., 1996). These beliefs can be supported by extrinsic rewards, such as recognition for successful performance, or intrinsic motivation, such as self-approval. Success in performance tasks can lead to career interests, as high efficacy correlates with desired outcomes (Lent, 2005, p. 105). Also, observing desirable or advantageous outcomes of an occupation can lead to interest in that particular career. However, low efficacy (based on perception or experience) in related performance tasks can dissuade interest and lead one to avoid pursuing a career involving those tasks.

**Distal and proximal factors.** SCCT differentiates two types of contextual factors, distal and proximal, as impactful on a person's career development (Lent et al., 1996, 2000). Distal factors, also referred to as "background influences," are inclusive of a person's culture, family, gender, skills, and abilities that can have an impact on career development (Lent et al., 1996, p. 393). Distal factors also include “socio-cultural influences”, such as ethnicity and
acquired gender-role norms (Lent & Brown, 1996, p. 315). Additionally, distal factors consist of accessible opportunities for skill development and availability of academic and career role models (Lent et al., 1996). Bandura (1986) explained that gender role development begins with early childhood learning experiences through play but continues to manifest through socialization that occurs as children grow. Direct and vicarious learning experiences can reinforce perceptions of gender identity and gender-appropriate behavior. According to SCCT, these perceived gender roles can also have an impact on career development (Lent et al., 1996). Individuals' exposure to gender role socialization, as well as societal reinforcement of these role expectations, can affect their perception of acceptable career choices.

Proximal factors are presented as emotional and financial support, job availability, and socially-reinforced barriers (Lent et al., 1996). Family and community networks are also considered proximal factors. According to Lent and Brown (1996), proximal factors can directly affect a person's career choice, especially during active phases of decision-making. Available opportunities can also have an impact on how career choices are formed. For example, a person may not have an interest in a particular job but will choose to pursue that job based on availability and convenience (Lent, 2005). These types of opportunity-based contextual influences play a role in a person's ability to exercise personal agency in his or her career development.

SCCT's choice and interest models are helpful in understanding how contextual factors influence an individual's career decision making process (Lent et al., 1994, 1996). Both models show how contextual factors affect career choice but can also have an impact on acquired interests. SCCT explains that choosing a career is not a simple act of making a choice, but
rather a multifaceted, ongoing decision-making process that continues to develop over time (Lent, 2005). As a person's self-efficacy, outcome expectations, interests, and skillsets change over time, his or her career paths is likely to reflect this progression. As shown in the choice and interest models, environmental conditions continue to have reciprocal impact throughout career development (Lent et al., 1996). Furthermore, contextual factors can act as supports or constraints in development and pursuit of career-related choices and interests (Lent et al., 1996, 2000).

**Supports and barriers.** Proximal factors can represent supports or barriers in the career development process. Lent (2005) stated that "contextual variables may affect people's ability or willingness to translate their interests into goals and their goals into actions" (p. 110). These contextual influences can also lead an individual to taking certain interest in a career or dissuade an individual from pursuing or even considering a career track (Lent et al., 1994, 1996). On the other hand, although interest in a career track may be present, the environment may consist of a restrictive opportunity structure that would not allow a person to act on that interest.

Strong environmental influences can also contribute to a strong sense of efficacy in accomplishing a goal, particularly if opportunities exist for the person to strengthen a skill through training or feedback on performance (Lent et al., 1996). If a person's interests are supported by strong environmental influences and if few barriers are perceived, then that person is likely to formulate those interests into goals and act on them. On the other hand, environmental influences present barriers to career interests when the environment is not conducive to translating interests into goals. Even if perceived efficacy in a task or skill set is high, environmental barriers may impede interests if the opportunity for development or
j Bass in that area is lacking or nonexistent (Lent et al., 1996). For example, an individual may have a strong interest in mechanical engineering. Barriers that may hinder this interest from becoming a career goal could be lack of relevant high school courses or area college programs. Additional barriers could be the lack of professional connections and career role models or inadequate financial resources. Environmental barriers to pursuing a career interest could also include a negative career outlook. Career interests and goals can diminish if a person recognizes that finding a job within a particular career field will be challenging.

As stated, contextual factors can either support or inhibit the career decision-making process. Studies have shown that intervening factors can affect the choice behaviors of students in terms of gathering information (Gewertz, 2015; Julien, 1999). Julien (1999) investigated information-seeking barriers related to the career decision-making of 400 Canadian adolescents. The data analysis revealed that although there appeared to be a lack of barriers, 40% of participants were unsure of where to seek information. In addition, 38% reported they had to visit too many places to gather information. The researcher noted correlations between students who did not attempt to have their career-related questions answered because they do not know who to go to for information and those who were uncertain of grades needed for their career goal reported overall difficulty in making a career decision. Julien (1999) also reported that 43% of students were uncertain of where to find financial resource information for future educational goals.

A YouthTruth poll administered to 165,000 students across the United States asked students how they felt about their college and career preparation (Gewertz, 2015). Only 44.8% of students reported feeling confident about their level of readiness. More students reported
feeling prepared to pursue college rather than a career, with 59.6% reporting that their schools helped them develop necessary skills or knowledge to prepare for college-level classes. In contrast, students felt they lacked preparation for a career, with only 48.7% reporting their schools helped them understand what they needed to do to secure the career they desired. This information reiterates the importance of school counselors’ roles in providing postsecondary guidance. Having the necessary skills to feel they can succeed in college can contribute to students' efficacy beliefs about going to college after high school. When students feel they lack adequate preparation, their sense of efficacy in accomplishing a task is low, whereas when students feel they have information or knowledge, they have a higher sense of efficacy in completing a task.

Having access to information can support students in achieving their postsecondary plans. As cited in the mentioned studies (Gewertz, 2015; Julien, 1999), lack of information sources leave students feeling uncertain and unprepared in making plans to attend college, which can lead to low self-efficacy. School counselors can provide the support students need through college and career guidance. As a positive contextual influence, school counselors can help students build their sense of efficacy in career decision-making tasks.

Bandura (1986, 1997) discussed the role appraisal from significant others plays in building self-efficacy. SCCT (Lent, Brown, & Hackett, 1996) further highlighted the impact of supportive environmental conditions in the career choice process. Particularly, proximal influences, such as emotional support, could be advantageous to building self-efficacy and facilitating goals related to outcome expectations. Because emotional support is considered
valuable in the career development process, one variable examined in this study was social support.

**Role of social support.** Social support can be acquired within social environments as presented in SCT and through proximal influences as explained in SCCT. Bandura (1986) stated that social environments “provide an especially wide latitude for creating conditions that can have a reciprocal effect on one’s own behavior” (p. 29). Engaging in social interactions further shapes behavior by allowing one to express interests and self-assess personal qualities that are conducive to these interests. SCT and self-efficacy theory (Bandura, 1986, 1997) described how appraisal from significant others builds efficacy beliefs, thus impacting performance and outcome expectations (Bandura, 1986, 1997). In SCCT, social networks can be identified as distal and proximal factors, highlighting access to social and cultural influences that are obtainable in one’s environment (Lent et al., 1994, 1996). These influences provide exposure to experiences instrumental in forming career beliefs and behavior.

To further conceptualize social support for this study, it is considered in the context of personal relationships. Wills (1991) analyzed different theoretical perspectives to determine the many representations of social support and its relation to human functioning. Psychological well-being was a recurring theme, viewed as existing from positive social support. A functional role of social support includes emotional connections to others, which can be helpful in building positive outlooks and promoting companionship. Social support is gained through interpersonal relationships and extensive interaction within one’s community. Through these social ties, people gain support in building coping mechanisms to deal with life stressors and increase access to resources within the community. This idea is foundational to the Multidimensional Scale of
Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988), the instrument used in this study to measure the construct of social support.

Studies have established that a positive relationship exists between social support and students’ academic functioning (Hopson, Schiller, & Lawson, 2014; McCurdy & Cole, 2014; Tian, Zhao, & Huebner, 2015; Wen Wang & Neihart, 2015). A welcoming school climate can be conducive to positive social support by encouraging participation from students and helping them feel safe to voice their views and connect with others (Cobb, 2014). Additionally, a positive school climate has been shown to be supportive in upholding academic achievement, particularly with low-income students (Hopson et al., 2014).

For this study’s purposes, it is important to consider how social support and social environments affect students’ career development. Kozan, diFabio, Blustein, and Kenny (2014) conducted a study exploring the relationship between social support and work-related factors on school engagement of Italian high school students. Social support from teachers, peers, and parents were included in the measure. Work-related factors were identified as career-decision making satisfaction and career planning. School engagement was described as student attitudes about school, including school belongingness. Kozan et al. (2014) found that high levels of teacher support corresponded with high levels of career decision-making satisfaction and career planfulness. These findings are consistent with other studies (Hopson et al., 2014; Tian et al., 2015) that upheld the role of school-based social support in students’ healthy academic functioning.

Studies have also investigated the role of parental support in students’ college choice and career decision-making self-efficacy (Guan et al., 2016; Workman, 2015). Students viewed
supportive family members as positive influences in the choice process, although extremely high levels of parental support could be overwhelming due to the pressure students felt (Workman, 2015). Parental support was shown to positively correlate with career decision-making self-efficacy and career adaptability among Chinese college students (Guan et al., 2016). However, this study also highlighted adherence to cultural norms and customs as well as parental expectations.

Wright, Perrone-McGovern, Boo, & White (2014) integrated the frameworks of Attachment Theory and SCCT to determine whether attachment affected the perceptions of supports and barriers in relation to academic self-efficacy and career decision-making self-efficacy in a sample of undergraduate psychology students. Researchers found that students "who are more securely attached perceive greater levels of social support and fewer career barriers" (p. 42). Students who reported having more supports demonstrated higher self-efficacy in academic career decision-making beliefs.

**Multidimensional Scale of Perceived Social Support**

For this study’s purposes, the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlen, Zimet, & Farley, 1988) will be used to measure the construct of social support. Using concepts from previously published literature, Zimet et al. (1988) explained that the instrument was created from the view of social support as connections through supportive relationships that contribute to healthy emotional well-being and the promotion of healthy behaviors. This measurement was designed to assess three sources of social support: friends, family, and significant other. Zimet et al. (1988) report each scale was “designed to assess perceptions of social support adequacy” from each source (p. 32).
Zimet et al. (1988) contributed development of this instrument to the need for a social support measure that was simple to use and efficient in measuring social support constructs, giving reflection to previously published instruments that separately measured the concepts of social support. This instrument was selected due to its notable psychometric properties in studies involving youth and adolescents (Bruwer, Emsley, Kidd, Lochner, & Seedat, 2008; Canty-Mitchell & Zimet, 2000). Because this study largely focuses on students’ perceptions and postsecondary aspirations, the “significant other” item was modified to “adult at school” to examine any influence of school-based social support on postsecondary plans.

My Perceptions of Barriers Scale

The instrument used in this study to measure students’ perceptions of educational barriers was the My Perceptions of Barriers Scale (MPB; McWhirter, 1997). The MPB was developed with consideration of contextual factors as presented in SCCT, which is primarily why it was chosen for this study. The developer utilized a revised version of the instrument (originally the Perceptions of Educational Barriers Scale) to examine the perceptions of educational barriers for students taking a high school career education class (McWhirter, 2000). Due to its use and validation with high school students (McWhirter, 1997, 2000), the revised MPB was chosen as the measurement for the construct of perceived barriers.

Summary

This study is guided by concepts of SCCT with specific consideration given to the role supports and barriers play in the career development process. Specifically, this study focused on how these factors affect postsecondary aspirations of students. Although studies have examined career decision-making self-efficacy and barriers related to college students (Kelly & Hatcher,
2016) and high school students (Gushue, Clarke, Pantzer & Scanlan, 2006), no studies were found that collectively examined perceived barriers, perceived social support, and career decision-making self-efficacy and the influence of these variables on postsecondary plans. Therefore, this study intends to address the gap in current literature by examining this relationship.

Chapter 1 provided an introduction of this study, including relevant terms. This chapter covered the theoretical concepts and existing studies that guide this study. In the next chapter, the research methodology will be discussed, including research design, procedures, and instrumentation.
CHAPTER III: METHODOLOGY

Introduction

Although studies have separately measured career decision-making self-efficacy of adolescents and the impact of social support on career development and academic achievement (Choi, Kim & Kim, 2015; Creed, Wong, & Hood, 2009; Guan et al., 2016; Gushue et al., 2006; Kozan et al, 2014, McWhirter, Rasheed, & Crothers, 2000; McWhirter et al., 2007; Tian, Zhao, & Huebner, 2015; Wen Wang & Neihart, 2015), no studies were found that mutually measured these areas in relation to perceived barriers and postsecondary plans of high school students. The purpose of this descriptive, quantitative study is to examine the relationship between perceived barriers, perceived social support, career decision-making self-efficacy, and high school juniors’ and seniors’ postsecondary plans. This chapter will present details of the research design, including participants, research questions and hypotheses, instrumentation, procedures, and data analysis.

Design

This study used a descriptive quantitative design based on participant selection, data collection procedures, and the lack of manipulation of independent variables. Three assessments were selected for this study to measure the independent variables (perceived barriers, perceived social support, and career decision-making self-efficacy). These assessments were given in an online survey. Surveys can be implemented in a nonexperimental research design for the purpose of understanding characteristics of a population based on data gathered from a sample
(Creswell, 2015; Johnson & Christensen, 2014). Consequently, this study is considered a cross-sectional survey design because it involved collecting data regarding students’ perceptions at one point in time (Creswell, 2015). Distributing the measurements through an online survey was considered the best method to efficiently collect data from the sample. It was also confirmed with participating schools that an online survey would be an effective method of collecting data from students versus a paper and pencil survey.

**Sampling Design**

In the current study, high schools invited to participate were located in various geographic areas, including Mississippi, Missouri, Michigan, Louisiana, and Tennessee. Because juniors and seniors are closer to their postsecondary transition than freshmen and sophomores, the target population for this study was defined as high school juniors and seniors during the 2015-2016 school year in the aforementioned states. Nonrandom sampling techniques were used to recruit participants for the study. To recruit participants, site administrators at 32 different high schools were contacted and informed of the study’s purpose and data collection procedures. Two principals responded to the call for participation. Thus, juniors and seniors from these two high schools participated in this study. Prior to data collection, principals were provided information about the study and were allowed a chance to view the requested demographic information and questionnaire.

**Descriptive Statistics of Participant Demographics**

Because this study relied on convenience and purposive sampling, results may only be generalizable to the demographics of participating students and schools (Johnson & Christensen, 2014). Names of the two participating high schools remain anonymous but will be referred to as...
School A and School B. Demographic information for School A and School B was obtained from the school contact persons. There were a total of 361 juniors and seniors enrolled at School A and a total of 712 juniors and seniors enrolled at School B. The ethnicity summary for juniors and seniors at School A was: 70.36% White, 27.15% Black/African-American, 1.9% Hispanic, 0.3% Asian, and 0.3% American Indian/Native American. Of the combined juniors and seniors enrolled at School A, 52.35% were male and 47.65% were female. For School B, the ethnicity summary was: 91.29% White, 3.51% Hispanic, 3.37% Black/African-American, 0.98% Asian, 0.70% Multiracial, and 0.14% American Indian/Native American. Of the combined juniors and seniors at School B, 51.97% were female and 48.03% were male.

The demographic information reported in this study is based on the 124 students who participated in this study. For the background questionnaire section, participants were asked to identify their gender, age, current classification (junior or senior), parents’ highest level of education, and eligibility for free or reduced lunch. This information is included in Table 1.

Of the 124 participants in this study, 43.5% (n = 54) were male and 56.5% (n = 70) were female. Regarding high school classification, 35.5% (n = 44) were juniors and 64.5% (n = 80) were seniors. Participants were asked to identify their race/ethnicity. Based on the participant’s responses, 77.4% (n = 96) were White, 16.9% (n = 21) were African-American, 1.6% (n = 2) were American Indian or Native American, 1.6% (n = 2) were Hispanic or Latino, 1.6% (n = 2) were Multiracial, and 0.8% (n = 1) was Asian. Participants were asked to identify their parents’ highest level of education. Of the 124 participants, 39.5% (n = 49) reported their parents’ highest level education as college graduate; 20.2% (n = 25) reported their parents’ highest level of education as graduate/professional degree; 16.1% (n = 20) reported their parents’ highest level
of education as high school; 15.3% \( (n = 19) \) reported their parents’ highest level of education as some college; 5.6% \( (n = 7) \) reported their parents’ highest level of education as technical training; and 0.8% \( (n = 1) \) reported parents’ highest level of education as some graduate school. The remaining 2.4% \( (n = 3) \) of participants were unsure of their parents’ highest level of education.

Table 1

Demographic Characteristics of Participants \( (n = 124) \)

<table>
<thead>
<tr>
<th>Category</th>
<th>n</th>
<th>%</th>
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<td>Gender</td>
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<tr>
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<td>1.6</td>
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<td>1.6</td>
</tr>
<tr>
<td>Multiracial</td>
<td>2</td>
<td>1.6</td>
</tr>
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<td>Classification for 2015-2016 Academic Year</td>
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<td>Junior</td>
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<td>Senior</td>
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<td>Some college</td>
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<td>Technical training</td>
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<td>39.5</td>
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<td>Graduate or professional degree</td>
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<td>20.2</td>
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<td>2.4</td>
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<td>Eligibility for Free or Reduced Lunch</td>
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<tr>
<td>Eligible for Free Lunch</td>
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</tr>
<tr>
<td>Eligible for reduced lunch</td>
<td>15</td>
<td>12.5</td>
</tr>
<tr>
<td>Not eligible</td>
<td>72</td>
<td>60.0</td>
</tr>
</tbody>
</table>
Research Question and Hypotheses

The overarching research question for this study was: how do perceptions of barriers, perceptions of social support, and career decision-making self-efficacy influence high school juniors’ and seniors’ postsecondary plans? Figure 1 provides a conceptual model of this study.

The analysis methods used in this study were factor analysis, two-step cluster analysis, and multinomial logistic regression. In this study, mean scores of the components derived from the MPB and mean sub-scale scores for the MSPSS and CDSE-SF were treated as predictor variables, and short-term and long-term postsecondary plans were treated as categorical outcome variables. The following research questions were derivative of the main research question. Each question is presented with a null hypothesis.

Research Question 1A: Based on the responses to the My Perceptions of Barriers Scale, how many distinct groups among students can be determined by a cluster analysis?

H₀₁A: Based on the responses to the My Perceptions of Barriers Scale, no distinct groups exist among students as determined by a cluster analysis.

Research Question 1B: Assuming that clusters are identified based on responses to the My Perceptions of Barriers Scale, what differences in postsecondary plans exist between clusters?

H₀₁B: Differences in postsecondary plans of identified clusters do not exist.
Figure 1. This figure is a conceptual model of the independent and dependent variables that were investigated in this study.

Research Question 2: Which sources of social support, as measured by the Multidimensional Scale of Perceived Social Support, are most likely to influence postsecondary plans?

H02A: School-based social support will have no significant influence on postsecondary plans.

H02B: Family-based social support will have no significant influence on postsecondary plans.

H02C: Friend-based social support will have no significant influence on postsecondary plans.
**Research Question 3:** Which components of self-efficacy, as measured by the Career Decision Self-Efficacy Scale-Short Form (CDSE-SF), are most likely to influence postsecondary plans?

- **H03A:** Self-appraisal will have no significant influence on postsecondary plans.
- **H03B:** Occupational information will have no significant influence on postsecondary plans.
- **H03C:** Goal selection will have no significant influence on postsecondary plans.
- **H03D:** Planning will have no significant influence on postsecondary plans.
- **H03E:** Problem solving will have no significant influence on postsecondary plans.

**Research Question 4:** Which of the three variables investigated in the current study (perceptions of barriers, perceived social support, and career decision-making self-efficacy) explains the greatest proportion of variability in students’ postsecondary plans?

- **H04:** There will be no difference in the proportion of variability explained by the three variables (perceptions of barriers, perceived social support, and career decision-making self-efficacy).

**Instrumentation**

Data for this study was collected using a background questionnaire; two items asking participants about their short-term and long-term postsecondary plans; and three selected instruments. The instruments were: the My Perceptions of Barriers Scale (MPB; McWhirter, 1997), the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988), and the Career Decision Self-Efficacy Scale-Short Form (CDSE-SF; Taylor & Betz, 1983). As required, permission to use instruments was obtained by the developer prior to the study. This information is provided in Appendix A.
**Background Questionnaire**

Demographic information was collected to determine characteristics of the sample. Students were asked to identify five areas: gender, age, race, school classification (junior/senior), parent/guardian educational level, and eligibility for free or reduced lunch. A copy of the background questionnaire can be found in Appendix B.

**Identification of Postsecondary Plans**

Two items were included after the background questionnaire asking students to identify their short-term and long-term postsecondary plans. Short-term postsecondary plans refer to what students plan to do within six months of high school graduation, while long-term postsecondary plans refer to what students plan to do within three to five years after high school graduation. Because this study investigated perceived barriers, perceived social support, and career decision self-efficacy in relation to achieving postsecondary education, the long-term postsecondary plans item was included in consideration of students who may perceive barriers with immediate college enrollment upon high school graduation but still desired to attend college. Appendix C identifies the two postsecondary plans items included in the survey.

Students chose their intended postsecondary plans from categorical options. Those categorical options for short-term postsecondary plans include: junior/community college, 4-year college/university, job/workforce-no college, undecided, and other. Junior/community college refers to an institution of higher education offering two years of courses beyond high school. This option may allow students to earn an associate’s degree. This is also an option that allows students to prepare for entrance into a 4-year college or university. A 4-year college/university is a public or private institution of higher education. Completion of study at a 4-year college or
university typically culminates with a bachelor’s degree. Job/workforce refers to an individual’s choice to pursue employment directly after high school. Individuals who selected undecided as an option indicated they were unsure about their postsecondary plans at the time of survey completion. Participants who selected other do not plan to attend a junior/community college or 4-year college/university nor do they plan to enter the workforce. Choosing this option was an indication of other designated postsecondary plans. For this option, participants were able to enter their specific plans into an open response field. Responses to this item are included in the descriptive statistics.

The long-term postsecondary plans item allowed participants to identify where they see themselves within 3 to 5 years after high school graduation. This option was included to give participants an opportunity to further specify their postsecondary plans beyond short-term intentions. Additionally, this item intended to examine whether students who chose not to pursue higher education immediately after high school planned to do so within five years of graduation.

Categorical options for long-term postsecondary plans included: college/university student, college/university graduate, job/workforce-no college, graduate/professional school, and undecided/other. In the survey, each item was accompanied by a statement that clarified options. College/university student specifies that the participant intends to be enrolled in a college or university. College/university graduate means the participant plans to be graduated from a college or university program. Job/workforce-no college means the participant intends to pursue employment or a career with no current intentions of attending college or a university. Descriptive statistics were calculated for each option and are reported in the results section.
A primary interest in this study was understanding how perceptions of barriers, social support, and career decision-making self-efficacy influence students’ postsecondary plans, specifically going to college. Therefore, 4-year college/university was chosen as the reference category for the data analysis of short-term postsecondary plans. Additionally, the combined category of college/university student and college/university graduate category of long-term postsecondary plans was used as the reference category for long-term postsecondary plans.

**My Perceptions of Barriers Scale**

The My Perceptions of Barriers Scale, developed by McWhirter (1997), is a three part, 84-item questionnaire measuring educational barriers. This scale can be found in Appendix D. Each part consists of 28 identical questions with each section separated by the three following question stems: 1) “How likely is it that this will be a barrier for you?”; 2) “How big of a barrier would/will this be for you?”; and 3) “If you encounter this barrier, how difficult do you think it will be for you to overcome it?”. Each item is measured on a Likert scale using the following point system: A=1, B=2, C=3, and D=4. Higher item and scale scores reflect high perceptions of barriers to postsecondary education and training. The first section measures potential barriers ranging from A (not at all likely) to D (definitely). The second section measures the magnitude of barriers ranging from A (not a barrier) to D (huge barrier). The final section measures difficulty of barriers ranging from A (not at all difficult) to D (extremely difficult). The total score for each scale ranges from 28 to 112. In order to focus on students’ perceptions of the likelihood of barriers, only the likelihood scale was utilized in this study.

Participants with low scores anticipate encountering fewer barriers in obtaining additional training and education after high school. Higher scores correlate with strong anticipation of
encountering barriers with perceived difficulty in overcoming these barriers (McWhirter, Rasheed, & Crothers, 2000). Researchers reported a test–retest reliability coefficient of .57 for a sample of 95 health education participants. Although the reported test-retest reliability coefficient is low, the MPB was adopted for this study because the measurement’s variables align with the theoretical framework guiding this study (SCCT). Additionally, it specifically measures barriers to postsecondary education, which is a primary focus in this study.

**Multidimensional Scale of Perceived Social Support.**

The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988) assesses perceptions of social support and includes three subscales: family, friends, and significant other. Items measuring social support from friends and family include “I can count on my friends when things go wrong” and “My family really tries to help me.” For this study’s purpose of understanding the role of social support specifically at school, wording for the items measuring significant other were modified from “special person” to “adult at school” with a specifier included in the first item. For example, one item measuring school-based social support is “There is an adult at school (e.g. teacher, coach, school counselor, principal) who is around when I am in need.” This scale can be found in Appendix E.

The measurement consists of 12 items with 4 items per subscale. Responses are measured on a seven-point Likert scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). Higher scores on the MSPSS reflect higher perceptions of social support. A mean scale score of 1 to 2.9 represents low support. A moderate scale score ranges from 3 to 5. A high level of support is determined by a mean scale score of 5.1 to 7. The MSPSS has an internal consistency coefficient Cronbach’s alpha of .88 (Zimet et al., 1988). Zimet et al. (1990)
reported the test-retest reliabilities for the sub-scales as .72 (significant other), .85 (family), and .75 (friends).

**Career Decision Self-Efficacy Scale-Short Form.**

The Career Decision Self-Efficacy Scale-Short Form (CDSE-SF; Taylor & Betz, 1983) measures a person’s belief in his or her ability to successfully complete tasks in making career decisions. The scale can be found in Appendix F. The measurement consists of 25 items on a five-point Likert scale, ranging from 1 (*no confidence at all*) to 5 (*complete confidence*). Five subscales were developed based on Crites Career Maturity Inventory published in 1978 (as cited by Taylor & Betz, 1983). The following list includes subscales of the instrument with one correlating item from the survey: Self-Appraisal (*accurately assess your abilities*), Occupational Information (*use the internet to find information about occupations that interest you.*), Goal Selection (*select one major from a list of potential majors you are considering.*), Planning (*make a plan of your goals for the next five years*), and Problem Solving (*determine the steps to take if you are having academic trouble with an aspect of your chosen major*). The CDSE-SF produces five subscale scores and a total scale score. Scores range from 1 to 5. Scores in the range of 1-2.5 represent low confidence in career decision-making; 2.5-3.5 represent moderate confidence in career decision-making; and 3.5-5 represents high confidence in career decision-making. Overall, higher scores reflect high self-efficacy in career decision-making.

The CDSE was originally tested on a large sample of 346 college students (Taylor & Betz, 1983). Developers report an internal consistency reliability coefficient ranging from .86 to .89 for subscale scores and .97 for the total scale score. More recently, Betz, Hammond, and Multon (2005) tested the reliability and validity of the 5-level response continuum with three
samples of college students totaling 1,832 participants. It was determined that the 5-level response continuum was reliable and valid, with coefficient alphas ranging from .78 to .87. For a study predicting career decision-making attitudes and skills based on a large sample of undergraduates, a six-week test-retest coefficient of .83 for the CDSE total score is reported (Luzzo, 1993).

**Procedures**

First, the research proposal was presented to the dissertation committee. After obtaining committee approval, a protocol application for conducting research with human subjects was submitted to University of Mississippi’s Institutional Review Board. Once approval was received from the Institutional Review Board, procedures for completing the study began by obtaining written consent from site administrators at participating schools and receiving a signed data acknowledgement form outlining all procedures. Upon obtaining signatures, this information was submitted to the IRB with form Appendix B, which is required for research in schools. Once the school sites were approved, procedures for collecting data in the schools began.

Because the questionnaires were administered online, technology availability and internet access at each school was confirmed. All enrolled high school juniors and seniors at participating schools were invited to voluntarily participate in the study. Students were informed of the study via email and verbal announcement from the school contact person. Students who were interested in participating and who were also age 18 or older were able to consent to participation when accessing the survey’s link. Students who wished to participate but were not of legal consenting age were issued parental consent forms. A copy of this form is provided in
Appendix G. Of these students, only those who returned parental consent forms to the school contact person were allowed to participate in the study. Identities of students participating in the study remain anonymous. Participation was voluntary; students were allowed to end participation at any time if they decided they no longer wished to participate. They were also allowed to skip items they did not want to answer. Students who assented to participation, returned required parental consent forms, and completed the study questionnaire were entered for gift card drawings. Additionally, teachers who administered the survey to a class were given a gift card.

All questionnaires and measurements were administered in a Qualtrics survey to ensure ease of data collection and to maintain confidentiality of participants. The timeline for data collection was mid-April 2016 through mid-May 2016, allowing approximately four weeks for initiation of procedures and data collection. After approval for the study was gained from the Institutional Review Board, parental consent forms were emailed to principals. Consent forms were issued mid-April 2016 with a recommendation of two weeks to collect all forms from students. It was also recommended that school administrators and teachers schedule at least three days for survey completion in administrator-selected classes. For School A, surveys were administered through one class, and students were also given the option to take the survey in the school counselor’s office. For School B, four teachers were chosen to allow access to the survey during class for those students who wanted to participate. Site administrators and teachers who were chosen to administer the questionnaire were emailed a survey administration script. A copy of this script is provided in Appendix H. The email also contained a link to the survey. It was additionally recommended that if surveying a large number of students, teachers should have the
link to the questionnaire generated on all computers when students entered class so that it was easily accessible and ready to complete.

Teachers were advised to make sure parental consent forms were obtained prior to allowing students access to the survey. At the beginning of the survey, survey administrators were instructed to remind students that participation was voluntary and, if below the legal age of consent, the parental permission form must be submitted before completing the questionnaire. This reminder was also included in survey question #2. Each submitted survey produced a set of scores for each participant.

**Data Analysis**

This section restates the research questions and hypotheses. Following the hypotheses is the statistical method that will be used to analyze each research question. In addition, an overview of the analysis methods is given at the end of this chapter.

**Research Question 1A:** Based on the responses to the My Perceptions of Barriers Scale, how many distinct groups among students can be determined by a cluster analysis?

\( H_0^{1A} \): Based on the responses to the My Perceptions of Barriers Scale, no distinct groups exist among students as determined by a cluster analysis.

**Research Question 1B:** Assuming that clusters are identified based on responses to the My Perceptions of Barriers Scale, what differences in postsecondary plans exist between clusters?

\( H_0^{1B} \): Differences in postsecondary plans of identified clusters do not exist.

**Variables and statistical analysis:** For \( H_0^{1A} \), a factor analysis was conducted to group correlating variables from the My Perceptions of Barriers Scale into components. Average scores from each component were used to run the cluster analysis to determine whether distinct
groups existed. The number of clusters were set to be determined automatically with the maximum set at 15. For H_01B, the dependent variables were short-term postsecondary plans and long-term postsecondary plans. Existing clusters were to be entered as predictor variables. Because the dependent variable included more than two categories, a multinomial logistic regression was the best approach to determine whether there were any differences in postsecondary plans between identified clusters. Procedures for factor analysis and cluster analysis will be further explained in this chapter.

**Research Question 2:** Which sources of social support, as measured by the Multidimensional Scale of Perceived Social Support, are most likely to influence postsecondary plans?

- **H_02A:** School-based social support will have no significant influence on postsecondary plans.
- **H_02B:** Family-based social support will have no significant influence on postsecondary plans.
- **H_02C:** Friend-based social support will have no significant influence on postsecondary plans.

**Variables and statistical analysis:** The independent variables were the three sources of social support (family, friends, and school) as identified and measured by the revised MSPSS. These variables were continuous with a potential range of 4 to 28 for each source. A factor analysis was run to determine the construct validity of the scale. Average scores for each item and sub-scales were computed. A multinomial logistic regression was implemented to examine influence of the predictor variable (family-based social support, school-based social support, and friend-based social support) on the categorical dependent variables (short-term postsecondary
plans and long-term postsecondary plans). The process of multinomial logistic regression will be further explained in this chapter.

**Research Question 3:** Which components of self-efficacy, as measured by the Career Decision Self-Efficacy Scale-Short Form (CDSE-SF), are most likely to influence postsecondary plans?

- **H$_{03A}$:** Self-appraisal will have no significant influence on postsecondary plans.
- **H$_{03B}$:** Occupational information will have no significant influence on postsecondary plans.
- **H$_{03C}$:** Goal selection will have no significant influence on postsecondary plans.
- **H$_{03D}$:** Planning will have no significant influence on postsecondary plans.
- **H$_{03E}$:** Problem solving will have no significant influence on postsecondary plans.

**Variables and statistical analysis:** First, a factor analysis was conducted to determine the construct validity of the instrument. Extracted components were compared to the existing sub-scales of the instrument. Mean scores for each sub-scale were then computed for the regression analysis. A multinomial logistic regression was used to determine any significant influence of career decision-making self-efficacy on the dependent variable. The independent predictor variables were the five continuous components of career decision-making self-efficacy as measured by the CDSE-SF. The dependent categorical variables were short-term postsecondary plans and long-term postsecondary plans.

**Research Question 4:** Which of the three variables investigated in the current study, (perceptions of barriers, perceived social support, and career decision-making self-efficacy) investigated in the current study, which factor explains the greatest proportion of variability in students’ postsecondary plans?
H04: There will be no difference in the proportion of variability explained by the three variables (perceptions of barriers, perceived social support, and career decision-making self-efficacy).

**Statistical analysis:** Explained variance (pseudo $R^2$) derived from the three multinominal logistic regression analyses for Research Question 1 to 3 were to be compared to determine which factor explains the greatest proportion of variability in students’ postsecondary plans.

**Factor Analysis**

The purpose of the factor analysis was to explore relationships of variables within a data set (Meyers, 2012). Factor analysis was conducted for all instruments in this study by measuring the weights of the variables to determine sub-sets with common themes and underlying components. For the MSPSS and CDSE-SF scales, a factor analysis with varimax rotation was used to examine whether extracted principal components aligned with existing sub-scales. For the MPB instrument, no sub-scales of items exist. Therefore, the components that resulted from the factor analysis were used as continuous variables in the cluster analysis to examine null hypothesis 1B. Multidimensional variables were excluded to decrease specification errors with the logistic regression analysis. The Kaiser-Meyer-Olkin measure of sampling adequacy, Bartlett’s test of sphericity, extracted components, eigenvalues, and computed mean scores were reported in the results.

**Two Step Cluster Analysis**

Cluster analysis is a technique for classifying homogenous groups, or clusters, based on shared characteristics (Mooi & Sarstedt, 2011). For research question 1A, a cluster analysis was assigned to identify any distinguishable groups among participants based on their responses to
the 28-item MPB. Since the MPB lacks item-based subscales, this analysis was determined to be the best method to understanding the relationship between perceived barriers and participants’ postsecondary plans. Types of clustering variables, or distinguishing characteristics, must be considered when completing a cluster analysis. Because this research question examined perceived barriers, the components that emerged from the factor analysis in research question 1A were treated as clustering variables in research question 1B. These components were also named based on common features of variables. Thus, investigation of research question 1A and 1B consisted of identifying any groups that shared commonalities in perceived barriers. Because all variables are continuous, a Euclidean distance measure was used (Mooi & Sarstedt, 2011). The cluster analysis was run using Schwarz’s Bayesian Criterion (BIC) as the clustering criterion (Heller & Ghahramani, 2005). These identified clusters were used as covariates in a multinomial logistic regression to examine differences in postsecondary plans among the groups.

**Multinomial Logistic Regression**

Logistic regression is used to examine outcomes of categorical variables from continuous or categorical predictor variables (Field, 2013; Meyers, 2012). With logistic regression, continuous and categorical predictors can be combined when determining categorical outcomes. Multinomial logistic regression is the method of analysis when examining the relationship between predictor variables and multiple levels of categorical membership. For research questions 2 and 3, the standard selection method of multinomial logistic regression was used since predictor variables were entered simultaneously and treated as covariates (Meyers, 2012). The predictor variables (perceived barriers, perceived social support, and career decision-making self-efficacy) were treated as continuous variables. The regression coefficients, the Wald test,
adjusted odds ratio, and confidence intervals for each multinomial logistic regression analysis were reported in the results.

**Assumptions.** There are assumptions the researcher makes when applying the multinominal logistic regression model (Field, 2013, p. 762; Meyers, 2012, p. 524). One assumption includes the “absence of perfect multicollinearity,” or correlation of two or more predictor variables (Meyers, 2012, p. 524). Another assumption is that the relationship between the predictor variable and outcome variable is non-linear; instead, probability is being predicted with the regression equation. The absence of specification errors is an additional assumption.

**Summary**

This chapter outlined details of this study’s methodology. Three predictor variables are being examined in this study to determine their influence on high school juniors’ and seniors postsecondary plans. High school juniors and seniors from two participating schools made up the study’s sample by completing an online survey. The primary method of analyses include factor analysis, cluster analysis, and multinomial logistic regression. The instruments used in this study were the MPB, MSPSS, and CDSE-SF. The subsequent chapter will provide an analysis of the data, followed by a chapter discussing the results of the study.
CHAPTER IV: DATA ANALYSIS

Introduction

The purpose of this study was to examine the influence of perceived barriers, perceived social support, and career decision-making self-efficacy on high school juniors’ and seniors’ postsecondary plans. Participants of this study completed the My Perceptions of Barriers Scale (MPB), the Multidimensional Scale of Perceived Social Support (MSPSS), and the Career Decision Self-Efficacy Scale-Short Form (CDSE-SF). Participants were also asked to identify their gender, age, current classification (junior or senior), parents’ highest level of education, and eligibility for free or reduced lunch. Additionally, participants identified their short-term and long-term postsecondary plans. The analysis methods used in this study were factor analysis, two-step cluster analysis, and multinomial logistic regression. In this study, mean scores of the components derived from the MPB and mean sub-scale scores for the MSPSS and CDSE-SF were treated as predictor variables, and short-term and long-term postsecondary plans were treated as categorical outcome variables.

Response Rate

The response rate was 16.68%, and the completion rate was 69.27%. A total of 179 participants from both schools responded to the survey. On question #2, 28 participants were automatically exited from the survey after indicating they were not of legal consent age and had not submitted parental consent forms. A total of 16 participants exited the survey after completing demographic information. Another eight participants dropped out after completing
the first questionnaire (MPB), and three participants dropped out after completing the second questionnaire (MSPSS). A total of 124 respondents made up the sample population used in this study. Participants’ responses were recorded through a Qualtrics survey. After the surveys were closed, data reports were downloaded from Qualtrics and transferred into the IBM Statistical Package for the Social Sciences (SPSS) software to complete the data analysis.

**Descriptive Statistics of Participant Postsecondary Plans**

Because postsecondary plans were the dependent variables in this study, participants were asked to identify their short-term and long-term postsecondary plans. This information is reported in Table 2. Of the 124 participants’ identification of short-term postsecondary plans, 49.2% \( (n = 61) \) reported 4-year college/university, 34.7% \( (n = 43) \) reported junior/community college, 7.3% \( (n = 9) \) reported as undecided, 4.8% \( (n = 6) \) reported as job or workforce-no college, and 4.0% \( (n = 5) \) reported other. Participants who identified their short-term postsecondary plans as other were given an opportunity to specify their plans in an open response field. Of those who further specified their plans, one participant reported plans to attend technical school. While two participants reported plans to join the Navy, one of those participants indicated plans to complete two years of community college prior to enlisting. Another participant indicated plans to join the Army. One participant’s response was not properly entered into the open response field, thus making the details of the postsecondary plan unclear.
Table 2

*Participants’ Postsecondary Plans (n = 124)*

<table>
<thead>
<tr>
<th>Anticipated postsecondary plans within 6 months of graduation</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior/community college</td>
<td>43</td>
<td>34.7</td>
</tr>
<tr>
<td>4-year college/university</td>
<td>61</td>
<td>49.2</td>
</tr>
<tr>
<td>Job/workforce-no college</td>
<td>6</td>
<td>4.8</td>
</tr>
<tr>
<td><em>Undecided</em></td>
<td>9</td>
<td>7.3</td>
</tr>
<tr>
<td><em>Other</em></td>
<td>5</td>
<td>4.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Anticipated postsecondary plans within 3-5 years of graduation</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>College or university student</em></td>
<td>38</td>
<td>30.6</td>
</tr>
<tr>
<td><em>College or university graduate</em></td>
<td>49</td>
<td>39.5</td>
</tr>
<tr>
<td>Job/workforce-no college</td>
<td>10</td>
<td>8.1</td>
</tr>
<tr>
<td>Graduate/professional school</td>
<td>19</td>
<td>15.3</td>
</tr>
<tr>
<td>Undecided/other</td>
<td>8</td>
<td>6.5</td>
</tr>
</tbody>
</table>

*Note: *These categories of postsecondary plans will be combined for data analysis.*

Of the 124 participants’ responses to long-term postsecondary plans, 39.5% \( (n = 49) \) selected college/university graduate, 30.6% \( (n = 38) \) selected college/university student, 15.3% \( (n = 19) \) selected graduate/professional school, 8.1% \( (n = 10) \) selected job/workforce-no college, and 6.5% \( (n = 8) \) selected undecided/other. Of those eight participants that selected undecided/other, three specified other plans. One participant reported plans to “work on the pipeline”; one participant reported plans for marriage and cosmetology school; and one participant reported “plan on cosmetology school but have money issues”.

Table 3 includes the crosstabulation analysis results for short-term and long-term postsecondary plans. This analysis was completed to identify the relationship between the two variables. Of the 43 participants who identified junior/community college as a short-term postsecondary plan, 32.6% \( (n = 14) \) selected college/university student; 44.2% \( (n = 19) \) selected
college/university graduate; 7.0% (n = 3) selected job/workforce-no college; 7.0% (n = 3) selected graduate/professional school; and 9.3% (n = 4) selected undecided/other for long-term postsecondary plans. Of the 61 participants that selected 4-year college/university as a short-term postsecondary plan, 31.1% (n = 19) selected college/university student, 42.6% (n = 26) selected college/university graduate, and 26.2% (n = 16) selected graduate/professional school for long-term postsecondary plans. None of the participants who selected 4-year college/university as a short-term plan identified “job/workforce-no college” or “undecided/other” as a long-term postsecondary plan. Of the six participants that selected job/workforce-no college as a short-term postsecondary plan, 50% (n = 3) selected college/university student as a long-term plan. 50% (n = 3) selected job/workforce-no college as a long-term postsecondary plan, indicating no current short-term or long-term plans for college enrollment. Of the nine participants who were undecided about their short-term postsecondary plans, 44.4% (n = 4) selected job/workforce-no college for long-term postsecondary plans, while 33.3% (n = 3) selected undecided/other. 11.1% (n = 1) selected college/university student, and 11.1% (n = 1) selected college/university graduate. Of the five participants who chose other as their short-term postsecondary plan, 60.0% (n = 3) selected college/university graduate, 20.0% (n = 1) selected college/university student, and 20.0% (n = 1) selected undecided/other.
Table 3

*Crosstabulation of Participants’ Postsecondary Plans (n = 124)*

<table>
<thead>
<tr>
<th>Postsecondary plans (within 3-5 years)</th>
<th>College/university student</th>
<th>College/university graduate</th>
<th>Job/workforce - no college</th>
<th>Grad./prof. school</th>
<th>Undecided / Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior/community college</td>
<td>14</td>
<td>19</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>32.6%</td>
<td>44.2%</td>
<td>7.0%</td>
<td>7.0%</td>
<td>9.3%</td>
<td>100.0%</td>
</tr>
<tr>
<td>4-year college/university</td>
<td>19</td>
<td>26</td>
<td>0</td>
<td>16</td>
<td>0</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>31.1%</td>
<td>42.6%</td>
<td>0.0%</td>
<td>26.2%</td>
<td>0.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Job/workforce-no college</td>
<td>3</td>
<td>0</td>
<td>50.0%</td>
<td>0 %</td>
<td>0 %</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>50.0%</td>
<td>0.0%</td>
<td>50.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Undecided</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>11.1%</td>
<td>11.1%</td>
<td>44.4%</td>
<td>0.0%</td>
<td>33.3%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>20.0%</td>
<td>60.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>20.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>49</td>
<td>10</td>
<td>19</td>
<td>8</td>
<td>124</td>
</tr>
<tr>
<td></td>
<td>30.6%</td>
<td>39.5%</td>
<td>8.1%</td>
<td>15.3%</td>
<td>6.5%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

**Descriptive Statistics of Perceptions of Educational Barriers**

The 28-item My Perceptions of Barriers Scale (MPB; McWhirter, 1997) was used to measure participants’ anticipation of barriers related to their postsecondary plans. Each item was scored on a scale of 1 ("not at all likely to be a barrier") to 4 ("definitely will be a barrier"). The mean was calculated to determine which items represented higher perception of barriers, and the standard deviation was calculated to determine variation in responses to each item. This information is reported in Table 4.
Table 4

Mean and Standard Deviations for MPB Items (n = 124)

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Not enough money</td>
<td>2.27</td>
<td>.980</td>
</tr>
<tr>
<td>2. Not smart enough</td>
<td>1.59</td>
<td>.849</td>
</tr>
<tr>
<td>3. Not confident enough</td>
<td>1.81</td>
<td>.917</td>
</tr>
<tr>
<td>4. Friends don’t support my plans</td>
<td>1.35</td>
<td>.767</td>
</tr>
<tr>
<td>5. Having to work while going to school</td>
<td>2.11</td>
<td>.895</td>
</tr>
<tr>
<td>6. Not fitting in at new school or program</td>
<td>1.53</td>
<td>.715</td>
</tr>
<tr>
<td>7. Takes a long time to finish the training</td>
<td>1.69</td>
<td>.748</td>
</tr>
<tr>
<td>8. Being married</td>
<td>1.49</td>
<td>.841</td>
</tr>
<tr>
<td>9. Teachers don’t support my plans</td>
<td>1.35</td>
<td>.735</td>
</tr>
<tr>
<td>10. Not being interested in classes/training</td>
<td>1.60</td>
<td>.894</td>
</tr>
<tr>
<td>11. Not being prepared enough</td>
<td>1.89</td>
<td>.957</td>
</tr>
<tr>
<td>12. Family responsibilities</td>
<td>1.83</td>
<td>.866</td>
</tr>
<tr>
<td>13. Lack of motivation</td>
<td>1.77</td>
<td>.970</td>
</tr>
<tr>
<td>14. Not talented enough</td>
<td>1.55</td>
<td>.859</td>
</tr>
<tr>
<td>15. Pressure from boyfriend/girlfriend</td>
<td>1.32</td>
<td>.716</td>
</tr>
<tr>
<td>16. Sex discrimination</td>
<td>1.25</td>
<td>.579</td>
</tr>
<tr>
<td>17. Racial/ethnic discrimination</td>
<td>1.31</td>
<td>.769</td>
</tr>
<tr>
<td>18. Pregnancy/having children</td>
<td>1.27</td>
<td>.667</td>
</tr>
<tr>
<td>19. Lack of study skills</td>
<td>1.93</td>
<td>.932</td>
</tr>
<tr>
<td>20. Not knowing what kind of school or training I want</td>
<td>1.71</td>
<td>.900</td>
</tr>
<tr>
<td>21. None of my friends are doing what I’m doing</td>
<td>1.37</td>
<td>.692</td>
</tr>
<tr>
<td>22. Not being able to get into the program I want</td>
<td>1.83</td>
<td>.793</td>
</tr>
<tr>
<td>23. Parents don’t support my plans</td>
<td>1.36</td>
<td>.758</td>
</tr>
<tr>
<td>24. School too stressful</td>
<td>2.08</td>
<td>.951</td>
</tr>
<tr>
<td>25. Not wanting to move away</td>
<td>1.63</td>
<td>.888</td>
</tr>
<tr>
<td>26. School/program very expensive</td>
<td>2.27</td>
<td>.955</td>
</tr>
<tr>
<td>27. The school/training I want is not available here</td>
<td>1.52</td>
<td>.850</td>
</tr>
<tr>
<td>28. Other don’t think I can do it</td>
<td>1.37</td>
<td>.738</td>
</tr>
</tbody>
</table>

Note. The MPB is made up of three scales representing the likelihood, magnitude, and difficulty of 28 items. This table represents likelihood scale used in this study with scores translated as the following: 1.0-2.0 (low), 2.0-2.5 (moderate), 2.5-4.0 (moderately high to high).

The items with the highest means represented moderately perceived likelihood of barriers. The mean scores were 2.27 for “not enough money” (SD = .980) and “school/program very expensive” (SD = .955). “School too stressful” had a mean score of 2.08 (SD = .951).
“Having to work while going to school” had a mean score of 2.11 (SD = .895). Items with the lowest mean scores presented as lower likelihood of perceived barriers. “Pregnancy/having children” had the lowest mean score of 1.27 (SD = .667). The mean score for “racial/ethnic discrimination” was 1.31 (SD = .769), and the mean score for “pressure from boyfriend/girlfriend” was 1.32 (SD = .716). Therefore, pregnancy, racial discrimination, and pressure in personal relationships appeared to reflect the lowest perceived likelihood of barriers in participants’ pursuit of postsecondary plans.

**Descriptive Statistics of Perceived Social Support**

The 12-item revised Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, Farley, 1988) measured three areas of social support. Social support from an adult at school, family, and friends are measured with 4 items per scale. Each item was measured on a scale of 1 (*very strongly disagree*) to 7 (*very strongly agree*). A mean scale score of 1 to 2.9 reflects low support. 3.0 to 5 reflects moderate levels of support. Lastly, a mean scale score of 5.1 to 7 reflects high support. The mean and standard deviation for each item were calculated and are reported in Table 5. Because some participants opted to skip items, the reported mean and standard deviation are based on complete participant responses to all items of the revised MSPSS ($n = 121$).

Overall, mean scores of responses reflected moderate to high levels of perceived social support with high standard deviations found across items. Items with mean scores that reflected high levels of perceived support included “I have friends with whom I can share my joys and sorrows” ($M = 5.37$, $SD = 1.79$); “my family really tries to help me”, ($M = 5.35$, $SD = 1.74$); and “my family is willing to help me make decisions” ($M = 5.22$, $SD = 1.75$). Items with mean
scores that reflected moderate levels of perceived support included: “I have an adult at school who is a real source of comfort for me” (M = 4.79, SD = 1.90) and “I can talk about my problems with my family” (M = 4.85, SD = 2.00).

Table 5

*Mean and Standard Deviations for MSPSS (n = 121)*

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>5.27</td>
<td>1.80</td>
</tr>
<tr>
<td>2.</td>
<td>4.93</td>
<td>1.87</td>
</tr>
<tr>
<td>3.</td>
<td>5.35</td>
<td>1.74</td>
</tr>
<tr>
<td>4.</td>
<td>5.04</td>
<td>1.89</td>
</tr>
<tr>
<td>5.</td>
<td>4.79</td>
<td>1.90</td>
</tr>
<tr>
<td>6.</td>
<td>5.22</td>
<td>1.68</td>
</tr>
<tr>
<td>7.</td>
<td>5.07</td>
<td>1.71</td>
</tr>
<tr>
<td>8.</td>
<td>4.85</td>
<td>2.00</td>
</tr>
<tr>
<td>9.</td>
<td>5.37</td>
<td>1.79</td>
</tr>
<tr>
<td>10.</td>
<td>4.93</td>
<td>1.80</td>
</tr>
<tr>
<td>11.</td>
<td>5.22</td>
<td>1.75</td>
</tr>
<tr>
<td>12.</td>
<td>5.20</td>
<td>1.87</td>
</tr>
</tbody>
</table>

*Note: Sample (n = 121) based on participants who responded to all items; 1.0-2.9 represents low support, 3.0-5.0 represents moderate support, and 5.1 to 7 represents high support.*

**Descriptive Statistics of Career Decision-Making Self-Efficacy**

The 25-item Career Decision-Making Self-Efficacy-Short Form (CDSE-SF; Taylor & Betz, 1983) was used to measure participants’ self-efficacy in tasks related to college and career decision-making. Each item presented a task measured on a scale of 1 (*no confidence at all*) to 5 (*complete confidence*). The scale consisted of five subscales: self-appraisal, occupational information, goal selection, planning, and problem solving. Participants were allowed to skip items within the questionnaire. Thus, the reported mean and standard deviation of the 25-items is based on complete responses of all items from 109 (n=109) participants. This information is reported in Table 6.
Table 6

*Mean and Standard Deviations for CDSE-SF (n = 109)*

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Use the internet to find information about occupations that interest you</td>
<td>4.01</td>
<td>1.03</td>
</tr>
<tr>
<td>2. Select one major from a list of potential majors you are considering</td>
<td>3.84</td>
<td>1.05</td>
</tr>
<tr>
<td>3. Make a plan of your goals for the next five years</td>
<td>3.74</td>
<td>0.99</td>
</tr>
<tr>
<td>4. Determine the steps to take if you are having academic trouble with an aspect of your chosen major</td>
<td>3.55</td>
<td>1.09</td>
</tr>
<tr>
<td>5. Accurately assess your abilities</td>
<td>3.58</td>
<td>1.05</td>
</tr>
<tr>
<td>6. Select one occupation from a list of potential occupations you are considering</td>
<td>3.89</td>
<td>0.97</td>
</tr>
<tr>
<td>7. Determine the steps you need to take to successfully complete your chosen major</td>
<td>3.89</td>
<td>0.99</td>
</tr>
<tr>
<td>8. Persistently work at your major or career goal even when you get frustrated</td>
<td>3.81</td>
<td>0.98</td>
</tr>
<tr>
<td>9. Determine what your ideal job would be</td>
<td>3.95</td>
<td>0.98</td>
</tr>
<tr>
<td>10. Find out the employment trends for an occupation in the next decade</td>
<td>3.60</td>
<td>1.03</td>
</tr>
<tr>
<td>11. Choose a career that will fit your preferred lifestyle</td>
<td>3.93</td>
<td>1.03</td>
</tr>
<tr>
<td>12. Prepare a good resume</td>
<td>3.65</td>
<td>1.05</td>
</tr>
<tr>
<td>13. Change majors if you did not like your first choice</td>
<td>3.39</td>
<td>1.04</td>
</tr>
<tr>
<td>14. Decide what you value most in an occupation</td>
<td>3.85</td>
<td>0.98</td>
</tr>
<tr>
<td>15. Find out about the average yearly earnings of people in an occupation</td>
<td>3.92</td>
<td>1.05</td>
</tr>
<tr>
<td>16. Make a career decision and then not worry whether it was right or wrong</td>
<td>3.39</td>
<td>1.08</td>
</tr>
<tr>
<td>17. Change occupations if you are not satisfied with the one you enter</td>
<td>3.52</td>
<td>1.02</td>
</tr>
<tr>
<td>18. Figure out what you are and are not ready to sacrifice to achieve your career goals</td>
<td>3.59</td>
<td>1.03</td>
</tr>
<tr>
<td>19. Talk with a person already employed in the field you are interested in</td>
<td>3.97</td>
<td>1.05</td>
</tr>
<tr>
<td>20. Choose a major or career that will fit your interests</td>
<td>4.07</td>
<td>0.98</td>
</tr>
<tr>
<td>21. Identify employers, firms, and institutions relevant to your career possibilities</td>
<td>3.75</td>
<td>0.95</td>
</tr>
<tr>
<td>22. Define the type of lifestyle you would like to live</td>
<td>3.97</td>
<td>0.97</td>
</tr>
</tbody>
</table>

*Note:* Sample (n = 109) based participants who responded to all items; 1.0-2.5 represents *little* confidence, 2.5-3.5 represents *moderate* confidence, and 3.5 to 5.0 represents *high* confidence.

The mean and standard deviation of each item of the CDSE-SF were calculated. A mean score of 1 to 2.5 represents low confidence; 2.5 to 3.5 represents moderate confidence; and 3.5 to
5 represents high confidence. Participants demonstrated high confidence in “Choose a major or career that will fit your interests” (M = 4.07, SD = 0.98); “use the internet to find information about occupations that interest you” (M = 4.01, SD = 1.03); “talk with a person already employed in the field you are interested in” (M = 3.97, SD = 1.05); and “define the type of lifestyle you would like to live” (M = 3.97, SD = 0.97). Based on mean scores, students demonstrated moderate confidence in “make a career decision and then not worry whether it was right or wrong” (M = 3.39, SD = 1.08) and “change majors if you did not like your first choice” (M = 3.39, SD = 1.04).

Results for Analyses of Research Questions

This section includes details of the analyses results for each research question. Research questions are restated, followed by the null hypotheses. Also included in this section are tables that summarize the findings of each analysis.

Research Question 1A: Based on the responses to the My Perceptions of Barriers Scale, how many distinct groups among students can be determined by a cluster analysis?

H01A: Based on the responses to the My Perceptions of Barriers Scale, no distinct groups exist among students as determined by a cluster analysis.

Research Question 1B: Assuming that clusters are identified based on responses to the My Perceptions of Barriers Scale, what differences in postsecondary plans exist between clusters?

H01B: Differences in postsecondary plans of identified clusters do not exist.

An exploratory factor analysis of the 28 items of the My Perceptions of Barriers scale (MPB; McWhirter, 1997) was conducted on the data from 124 high school juniors and seniors. Prior to running the analysis, data screening was completed to examine descriptive statistics of
each item. This information was reported in Table 4. The Kaiser-Meyer-Olkin measure of sampling adequacy was .819, indicating the data was suitable for principal component analysis. Additionally, the Bartlett’s test of sphericity was significant ($p < .001$), indicating sufficient correlation between variables to proceed with data analysis.

The principal component analysis with varimax rotation resulted in a total of eight factors with eigenvalues (i.e., direct measure of the amount of explained variance) greater than 1.00, cumulatively accounting for 68.39% of the total variance (Meyers, 2012). Groups of barriers were constructed as presented in Table 7. Based on factor loading values, item 7 (“Takes a long time to finish plans”) appeared to be multidimensional; thus, this item was not assigned a component and excluded from further analyses. Communalities are also reported in Table 7 to demonstrate that variables were substantially captured (Meyers, 2012). After reviewing the variables within components, each component was given a general name that identified the types of barriers within that factor. This information was presented in Table 8.

$H_01A$ was investigated by a two-step cluster analysis. The cluster analysis was run with each component entered as a continuous variable. Since all variables are continuous, a Euclidean distance measure was used (Mooi & Sarstedt, 2011). Clusters were set to be determined automatically with a maximum of 15. The analysis was run using Schwarz’s Bayesian Criterion (BIC) as the clustering criterion. The cluster analysis yielded support for the null in that no distinct groups existed among students. Because no distinct groups existed among participants, research question $1B$ was not examined. However, a multinomial logistic regression was run to determine any relationships between the components and participants’ postsecondary plans. This information is presented in additional analyses.
Table 7

*Factor Loadings for Exploratory Factor Analysis with Varimax Rotation and Communalities for MPB Items*

<table>
<thead>
<tr>
<th>Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>h²</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0.635</td>
<td>0.264</td>
<td>0.113</td>
<td>0.374</td>
<td>0.226</td>
<td>0.009</td>
<td>0.047</td>
<td>0.200</td>
<td>0.718</td>
</tr>
<tr>
<td>3</td>
<td>0.630</td>
<td>0.261</td>
<td>0.069</td>
<td>0.095</td>
<td>-0.330</td>
<td>0.163</td>
<td>0.204</td>
<td>-0.074</td>
<td>0.662</td>
</tr>
<tr>
<td>10</td>
<td>0.696</td>
<td>0.053</td>
<td>0.224</td>
<td>0.135</td>
<td>0.290</td>
<td>0.326</td>
<td>0.011</td>
<td>0.176</td>
<td>0.777</td>
</tr>
<tr>
<td>11</td>
<td>0.789</td>
<td>0.134</td>
<td>0.122</td>
<td>0.045</td>
<td>0.137</td>
<td>0.008</td>
<td>0.080</td>
<td>-0.204</td>
<td>0.725</td>
</tr>
<tr>
<td>13</td>
<td>0.596</td>
<td>-0.058</td>
<td>0.294</td>
<td>0.303</td>
<td>0.082</td>
<td>0.314</td>
<td>0.021</td>
<td>-0.038</td>
<td>0.645</td>
</tr>
<tr>
<td>14</td>
<td>0.657</td>
<td>0.298</td>
<td>0.138</td>
<td>0.290</td>
<td>0.050</td>
<td>0.008</td>
<td>0.085</td>
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<tr>
<td>19</td>
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<td>0.011</td>
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<td>0.182</td>
<td>0.096</td>
<td>0.129</td>
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</tr>
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<td>4</td>
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<td>0.131</td>
<td>-0.043</td>
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<td>0.008</td>
<td>0.082</td>
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<td>0.126</td>
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</tr>
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<td>28</td>
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<td>0.779</td>
<td>-0.173</td>
<td>0.169</td>
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<td>-0.021</td>
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</tr>
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<td>0.386</td>
<td>-0.011</td>
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<td>15</td>
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<td>0.064</td>
<td>0.198</td>
<td>0.273</td>
<td>-0.086</td>
<td>0.644</td>
</tr>
<tr>
<td>18</td>
<td>0.233</td>
<td>-0.066</td>
<td>0.809</td>
<td>-0.061</td>
<td>0.176</td>
<td>0.009</td>
<td>0.086</td>
<td>0.136</td>
<td>0.774</td>
</tr>
<tr>
<td>23</td>
<td>0.140</td>
<td>0.235</td>
<td>0.691</td>
<td>0.274</td>
<td>0.100</td>
<td>0.071</td>
<td>0.093</td>
<td>-0.267</td>
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<td>0.228</td>
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<td>-0.053</td>
<td>0.397</td>
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<td>21</td>
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<td>0.002</td>
<td>0.694</td>
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<td>0.071</td>
<td>0.012</td>
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<td>0.118</td>
<td>0.560</td>
<td>0.054</td>
<td>0.127</td>
<td>-0.140</td>
<td>0.644</td>
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<td>22</td>
<td>0.463</td>
<td>0.109</td>
<td>0.045</td>
<td>0.079</td>
<td>0.641</td>
<td>-0.092</td>
<td>0.078</td>
<td>0.172</td>
<td>0.689</td>
</tr>
<tr>
<td>27</td>
<td>0.002</td>
<td>0.158</td>
<td>0.188</td>
<td>0.106</td>
<td>0.648</td>
<td>0.205</td>
<td>0.182</td>
<td>-0.061</td>
<td>0.570</td>
</tr>
<tr>
<td>16</td>
<td>0.194</td>
<td>0.023</td>
<td>-0.044</td>
<td>-0.170</td>
<td>0.078</td>
<td>0.806</td>
<td>0.050</td>
<td>0.070</td>
<td>0.733</td>
</tr>
<tr>
<td>17</td>
<td>0.069</td>
<td>0.232</td>
<td>0.200</td>
<td>0.211</td>
<td>0.045</td>
<td>0.810</td>
<td>-0.048</td>
<td>0.062</td>
<td>0.808</td>
</tr>
<tr>
<td>1</td>
<td>0.134</td>
<td>0.010</td>
<td>0.113</td>
<td>-0.015</td>
<td>0.037</td>
<td>-0.047</td>
<td>0.881</td>
<td>-0.076</td>
<td>0.816</td>
</tr>
<tr>
<td>26</td>
<td>0.085</td>
<td>0.095</td>
<td>0.062</td>
<td>0.228</td>
<td>0.338</td>
<td>0.085</td>
<td>0.790</td>
<td>0.013</td>
<td>0.817</td>
</tr>
<tr>
<td>8</td>
<td>0.195</td>
<td>0.189</td>
<td>-0.005</td>
<td>0.095</td>
<td>0.026</td>
<td>0.218</td>
<td>-0.041</td>
<td>0.748</td>
<td>0.693</td>
</tr>
</tbody>
</table>

*Note: Multidimensional items excluded*
Table 8

*Identified Factors of MPB Based on Common Barriers*

<table>
<thead>
<tr>
<th>Component</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MPB 1</strong></td>
<td>Efficacy and Motivational Barriers</td>
</tr>
<tr>
<td></td>
<td>2. Not smart enough</td>
</tr>
<tr>
<td></td>
<td>3. Not confident enough</td>
</tr>
<tr>
<td></td>
<td>10. Not being interested in classes/training</td>
</tr>
<tr>
<td></td>
<td>11. Not being prepared enough</td>
</tr>
<tr>
<td></td>
<td>13. Lack of motivation</td>
</tr>
<tr>
<td></td>
<td>14. Not talented enough</td>
</tr>
<tr>
<td></td>
<td>19. Lack of study skills</td>
</tr>
<tr>
<td><strong>MPB 2</strong></td>
<td>Support System Barriers</td>
</tr>
<tr>
<td></td>
<td>4. Friends don’t support my plans</td>
</tr>
<tr>
<td></td>
<td>6. Not fitting in at new school or program</td>
</tr>
<tr>
<td></td>
<td>28. Others don’t think I can do it</td>
</tr>
<tr>
<td><strong>MPB 3</strong></td>
<td>Personal Relationships Barriers</td>
</tr>
<tr>
<td></td>
<td>9. Teachers don’t support my plans</td>
</tr>
<tr>
<td></td>
<td>15. Pressure from boyfriend/girlfriend</td>
</tr>
<tr>
<td></td>
<td>18. Pregnancy/having children</td>
</tr>
<tr>
<td></td>
<td>23. Parents don’t support my plans</td>
</tr>
<tr>
<td><strong>MPB 4</strong></td>
<td>Lifestyle Barriers</td>
</tr>
<tr>
<td></td>
<td>5. Having to work while going to school</td>
</tr>
<tr>
<td></td>
<td>21. None of my friends are doing what I’m doing</td>
</tr>
<tr>
<td></td>
<td>24. School too stressful</td>
</tr>
<tr>
<td></td>
<td>25. Not wanting to move away</td>
</tr>
<tr>
<td><strong>MPB 5</strong></td>
<td>Program Choice barriers</td>
</tr>
<tr>
<td></td>
<td>20. Not knowing what kind of school or training I want</td>
</tr>
<tr>
<td></td>
<td>22. Not being able to get into the program I want</td>
</tr>
<tr>
<td></td>
<td>27. The schooling/training I want not available here</td>
</tr>
<tr>
<td><strong>MPB 6</strong></td>
<td>Discrimination Barriers</td>
</tr>
<tr>
<td></td>
<td>16. Sex discrimination</td>
</tr>
<tr>
<td></td>
<td>17. Racial discrimination</td>
</tr>
<tr>
<td><strong>MPB 7</strong></td>
<td>Financial Barriers</td>
</tr>
<tr>
<td></td>
<td>1. Not enough money</td>
</tr>
<tr>
<td></td>
<td>26. School program/very expensive</td>
</tr>
<tr>
<td><strong>MPB 8</strong></td>
<td>Marriage Barriers</td>
</tr>
<tr>
<td></td>
<td>8 Being married</td>
</tr>
</tbody>
</table>

**Research Question 2:** Which sources of social support, as measured by the Multidimensional Scale of Perceived Social Support, are most likely to influence postsecondary plans?
$H_02A$: School-based social support will have no significant influence on postsecondary plans.

$H_02B$: Family-based social support will have no significant influence on postsecondary plans.

$H_02C$: Friend-based social support will have no significant influence on postsecondary plans.

The primary analysis for these hypotheses was multinomial logistic regression. Prior to conducting the regression equation, an exploratory factor analysis was completed to determine the construct validity of the revised MSPSS. The exploratory factor analysis of the 12 items from the revised MSPSS was completed from the responses of 121 participants in the sample. Responses from 3 participants were not included in analysis due to skipped items. Descriptive statistics of each item are reported in Table 5. The Kaiser-Meyer-Olkin measure of sampling adequacy was .893, a suitable level for principal component analysis. The Bartlett’s test of sphericity was significant ($p < .001$), indicating sufficient correlation between variables. Three factors had eigenvalues greater than 1.00 with a cumulative total variance of 83%. The three subscales of the MSPSS materialized from the factor analysis. Table 9 presents the internal consistencies of each sub-scale as assessed by coefficient alpha ranging from .907 to .942, demonstrating good internal consistency.

Table 9

*Reliabilities for Sub-Scales of MSPSS*

<table>
<thead>
<tr>
<th>MSPSS Subscales</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Social Support</td>
<td>.907</td>
</tr>
<tr>
<td>Family Social Support</td>
<td>.929</td>
</tr>
<tr>
<td>Friends Social Support</td>
<td>.942</td>
</tr>
</tbody>
</table>
A standard multinomial logistic regression was used to predict postsecondary plans of high school juniors and seniors in the sample. Four categories of short-term postsecondary plans were entered as categorical dependent variables: junior/community college, 4-year college/university, job/workforce-no college, and undecided/other. As stated in the previous chapter, undecided and other were separate options on the survey questionnaire but were combined for the data analysis in order to decrease the number of outcome variables for the analysis. 4-year college/university was used as the reference category for short-term plans. College/university student or graduate was used as the reference category for long-term plans. Higher scores indicated higher perceptions of social support.

Although each null hypothesis separately focused on sources of social support (school-based, family-based, and friend-based), results for the three predictor model are also presented. The result of the Chi-square test indicated that the three-predictor model of sources of social support did provide a statistically significant explanation on short-term postsecondary plans \([-2 \text{ Log Likelihood} = 248.219, x^2 = (9, N=124) = 17.252, p = .045]\). However, the result of the Chi-square test suggested the three predictor model did not provide a statistically significant explanation on long-term postsecondary plans \([-2 \text{ Log Likelihood}= 203.081, x^2 = (9, N=124) = 14.494, p = .106]\). Some significant indicators within the model were found and should be interpreted conservatively. The Nagelkerke pseudo \(R^2\) indicated that the model accounted for approximately 15% of total variance for short-term postsecondary plans and approximately 13% of total variance for long-term postsecondary plans. For short-term postsecondary plans, the overall prediction rate was 54.0%, with correct prediction rates of 23.3%, 90.2%, 16.7%, and 7.1% for junior/community college, 4-year college/university, job/workforce-no college, and
undecided/other, correspondingly. For long-term postsecondary plans, the overall prediction rate was 69.4%, with correct prediction rates of 97.7% for college university student or graduate, 0.0% for job/workforce-no college, 5.3% for graduate/professional school, and 0.0% for undecided/other.

Table 10

*Multinomial Logistic Regression Results: Social Support as a Predictor of Short-term Postsecondary Plans*

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE-b</th>
<th>Wald</th>
<th>df</th>
<th>Exp (B)</th>
<th>95% CI Exp (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior/Community College</td>
<td>School</td>
<td>0.065</td>
<td>0.165</td>
<td>0.154</td>
<td>1</td>
<td>1.067</td>
</tr>
<tr>
<td></td>
<td>Family</td>
<td>0.062</td>
<td>0.157</td>
<td>0.155</td>
<td>1</td>
<td>1.064</td>
</tr>
<tr>
<td></td>
<td>Friends</td>
<td>-0.309</td>
<td>2.883</td>
<td>2.883</td>
<td>1</td>
<td>0.734</td>
</tr>
<tr>
<td>Job/workforce-no college</td>
<td>School</td>
<td>-0.064</td>
<td>0.321</td>
<td>0.040</td>
<td>1</td>
<td>0.938</td>
</tr>
<tr>
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<td>Family</td>
<td>0.727</td>
<td>0.380</td>
<td>3.659</td>
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<td>2.069</td>
</tr>
<tr>
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<td>Friends</td>
<td>-0.724*</td>
<td>0.354</td>
<td>4.186</td>
<td>1</td>
<td>0.485</td>
</tr>
<tr>
<td>Undecided/Other**</td>
<td>School</td>
<td>0.447</td>
<td>0.258</td>
<td>3.008</td>
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<td>1.563</td>
</tr>
<tr>
<td></td>
<td>Family</td>
<td>-0.058</td>
<td>0.230</td>
<td>0.063</td>
<td>1</td>
<td>0.944</td>
</tr>
<tr>
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<td>Friends</td>
<td>-0.723*</td>
<td>0.269</td>
<td>7.206</td>
<td>1</td>
<td>0.485</td>
</tr>
</tbody>
</table>

*Note.* Variables (school, family, friends) represent different sources of social support. The dependent variable was short-term postsecondary plans with 4-year college/university as the reference category; Multinomial Nagelkerke $R^2=.146; *p < .05; **categories combined for data analysis.

The results of multinomial logistic regression with short-term postsecondary plans as an outcome were presented in Table 10 including regression coefficients, the Wald test, adjusted odds ratio [Exp($B$)], and the 95% confidence intervals (CI) for odds ratio. The influence of friend-based social support in choosing 4-year college/university versus job/workforce-no college and undecided or other was significant. More specifically, the odds ratio was 0.485, which can be understood as for every additional score of friend social support, the odds of choosing job/workforce-no college or choosing undecided/other decreased by 51.5% (1-0.485).
while holding all other predictors constant. That is, students who perceived a lower level of friend-based social support were more likely to choose job/workforce-no college as their postsecondary plan rather than 4-year college/university. Additionally, students who perceived a lower level of friend-based social support were more likely to be undecided or choose other plans rather than 4-year college/university.

Table 11

*Multinomial Logistic Regression Results: Social Support as a Predictor of Long-term Postsecondary Plans*

<table>
<thead>
<tr>
<th>Variable</th>
<th>School</th>
<th>b</th>
<th>SE-b</th>
<th>Wald</th>
<th>df</th>
<th>Exp (B)</th>
<th>95% CI Exp (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job/ No college</td>
<td>School</td>
<td>0.193</td>
<td>0.276</td>
<td>0.485</td>
<td>1</td>
<td>1.212</td>
<td>0.705-2.084</td>
</tr>
<tr>
<td></td>
<td>Family</td>
<td>-0.060</td>
<td>0.250</td>
<td>0.058</td>
<td>1</td>
<td>0.942</td>
<td>0.577-1.536</td>
</tr>
<tr>
<td></td>
<td>Friends</td>
<td>-0.305</td>
<td>0.283</td>
<td>1.162</td>
<td>1</td>
<td>0.737</td>
<td>0.423-1.284</td>
</tr>
<tr>
<td>Graduate/ school</td>
<td>School</td>
<td>-0.387</td>
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<td>3.850</td>
<td>1</td>
<td>0.679</td>
<td>0.461-1.000</td>
</tr>
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<td>Family</td>
<td>0.264</td>
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<td>1.302</td>
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</tr>
<tr>
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<td>Friends</td>
<td>0.022</td>
<td>0.222</td>
<td>0.010</td>
<td>1</td>
<td>1.022</td>
<td>0.661-1.580</td>
</tr>
<tr>
<td>Undecided/ Other</td>
<td>School</td>
<td>0.100</td>
<td>0.297</td>
<td>0.113</td>
<td>1</td>
<td>1.105</td>
<td>0.617-1.980</td>
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<tr>
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<td>Family</td>
<td>0.348</td>
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<td>1.597</td>
<td>1</td>
<td>1.416</td>
<td>0.826-2.428</td>
</tr>
<tr>
<td></td>
<td>Friends</td>
<td>-0.799*</td>
<td>0.322</td>
<td>6.167</td>
<td>1</td>
<td>0.450</td>
<td>0.239-0.845</td>
</tr>
</tbody>
</table>

*Note.* Variables (school, family, friends) represent different sources of social support. The dependent variable was short-term postsecondary plans with college/university student or graduate as the reference category; Multinomial Nagelkerke $R^2=.131$; *p* < .05

Table 11 presents the results of the multinomial logistic regression with long-term postsecondary plans as the outcome. The influence of friend-based social support was significant. The odds ratio was 0.450, which can be interpreted as for every additional point of friend social support, the odds of being undecided or choosing other plans decreased by 55% (1-0.450) while holding all other predictors constant. Thus, students who perceived a lower level
of friend-based social support were more likely to choose undecided or other rather than college/university student or graduate.

In conclusion of the analysis for research question 2, the results provided no statistically significant explanation for the influence of family-based social support or school-based social support on long-term and short-term postsecondary plans. Therefore, there is support for \( H_0^{2A} \) and \( H_0^{2B} \). Results provided a statistically significant explanation for friend-based social support on short-term and long-term postsecondary plans. Thus, the analysis of friend-based social support indicated rejection of \( H_0^{2C} \).

**Research Question 3**: Which components of self-efficacy, as measured by the Career Decision Self-Efficacy Scale-Short Form (CDSE-SF), are most likely to influence postsecondary plans?

- \( H_0^{3A} \): Self-appraisal will have no significant influence on postsecondary plans.
- \( H_0^{3B} \): Occupational information will have no significant influence on postsecondary plans.
- \( H_0^{3C} \): Goal selection will have no significant influence on postsecondary plans.
- \( H_0^{3D} \): Planning will have no significant influence on postsecondary plans.
- \( H_0^{3E} \): Problem solving will have no significant influence on postsecondary plans.

The exploratory factor analysis of the 25 items of the CDSE-SF was completed from the data of 124 high school juniors and seniors included in the sample. Descriptive statistics for each item were presented in Table 6. The present data was suitable for principal component analysis with the Kaiser-Meyer-Olkin measure of sampling adequacy of .92. The Bartlett’s test of sphericity was significant \((p < .001)\), an indication of sufficient correlation between variables to continue with analysis.
Presently, the CDSE-SF instrument includes five subscales: self-appraisal, occupational information, goal selection, planning, and problem solving. There are 5 items within each subscale intended to measure tasks related to their respective component of career decision self-efficacy. Contrastingly, factors derived from the principal component analysis did not align with the instrument’s subscales. Instead, there were a total of three factors with eigenvalues greater than 1.
than 1.00, with a cumulative 64.08% of the total variance. The first factor consisting 11 variables accounted for 23.08% of the total variance, and the second factor consisting of six variables accounted for 43.85% of the total variance. Results from factor analysis are presented in Table 12.

Variables that were extracted from the three components did not correspond with grouping of variables of the CDSE-SF, with items 8 (“Persistently work at your major or goal or career goal even when you get frustrated”) and 24 (“Successfully manage the job interview process”) appearing to be multidimensional. Thus, the five sub-scales did not emerge with the sample from this study. As stated by Roberts (2008), similar results were reported in previous studies where five subscales of the instrument did not materialize from the sample (Betz, Klein, & Taylor, 1996; Chaney, Hammond, Betz, & Multon, 2007). Although five sub-scales did not materialize with the principal component analysis, multinomial logistic regression analysis was conducted using the sub-scales to measure the five areas of career decision self-efficacy based on Crites (1978) five Career Choice Competencies. Table 13 presents the internal consistencies of each sub-scale as assessed by coefficient alpha ranging from .830 to .872, demonstrating good internal consistency.

To determine influence of career decision self-efficacy on postsecondary plans, a standard multinomial logistic regression was used. For short-term plans, 4-year college/university was used as the reference category. For long-term postsecondary plans, college/university student or graduate was used as the reference category. The continuous predictor variables for each equation were self-appraisal, occupational information, goal
selection, planning, and problem solving, respectively, with higher scores indicating higher levels of self-efficacy in completing related tasks.

Table 13

*Reliabilities for Sub-Scales of CDSE-SF*

<table>
<thead>
<tr>
<th>CDSE-SF Subscales</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Appraisal</td>
<td>.872</td>
</tr>
<tr>
<td>Occupational Information</td>
<td>.833</td>
</tr>
<tr>
<td>Goal Selection</td>
<td>.858</td>
</tr>
<tr>
<td>Planning</td>
<td>.830</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>.853</td>
</tr>
</tbody>
</table>

Although each null hypothesis focuses on the individual components of self-efficacy as measured by the CDSE-SF, results for the five predictor model are presented. The result of the Chi-square test indicated that the five predictor model of components of career decision-making self-efficacy did provide a statistically significant explanation on short-term postsecondary plans [\(-2 \text{ Log Likelihood} = 236.010, \chi^2 (15, N=124) = 27.401, p = .026\)]. Additionally, the Chi-square test for the five predictor model of components of career decision-making self-efficacy did provide a statistically significant explanation on long-term postsecondary plans [\(-2 \text{ Log Likelihood} = 189.073, \chi^2 (15, N=124) = 27.019, p = .029\)]. Further, the Nagelkerke pseudo $R^2$ indicated the model accounted for 22% of the total variance for short-term plans and 23% total variance for long-term postsecondary plans. For short-term postsecondary plans, the overall prediction rate was 56.5%, with correct prediction rates of 37.2%, 83.6%, 0.0%, and 21.4% for junior/community college, 4-year college/university, job/workforce-no college, and undecided/other, respectively. For long-term postsecondary plans, the overall prediction rate was 69.4%, with correct prediction rates of 100.0% for college university student or graduate,
0.0% for job/workforce-no college, 5.3% for graduate/professional school, and 12.5% for undecided or other.

Table 1

*Multinomial Logistic Regression Results: Career Decision-Making Self-Efficacy as a Predictor of Short-term Postsecondary Plans*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE-b</th>
<th>Wald</th>
<th>df</th>
<th>Exp (B)</th>
<th>95% CI Exp (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior/Community College</td>
<td>SA</td>
<td>-1.214</td>
<td>0.714</td>
<td>2.890</td>
<td>1</td>
<td>0.297</td>
</tr>
<tr>
<td></td>
<td>OI</td>
<td>-0.787</td>
<td>0.632</td>
<td>1.549</td>
<td>1</td>
<td>0.455</td>
</tr>
<tr>
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<td>GS</td>
<td>0.571</td>
<td>0.506</td>
<td>1.278</td>
<td>1</td>
<td>1.771</td>
</tr>
<tr>
<td></td>
<td>P</td>
<td>0.877</td>
<td>0.657</td>
<td>1.783</td>
<td>1</td>
<td>2.405</td>
</tr>
<tr>
<td></td>
<td>PS</td>
<td>0.166</td>
<td>0.547</td>
<td>0.092</td>
<td>1</td>
<td>1.181</td>
</tr>
<tr>
<td>Job/workforce-no college</td>
<td>SA</td>
<td>-2.255</td>
<td>1.535</td>
<td>2.158</td>
<td>1</td>
<td>2.692</td>
</tr>
<tr>
<td></td>
<td>OI</td>
<td>-0.834</td>
<td>1.238</td>
<td>0.454</td>
<td>1</td>
<td>0.060</td>
</tr>
<tr>
<td></td>
<td>GS</td>
<td>-0.242</td>
<td>1.208</td>
<td>0.040</td>
<td>1</td>
<td>2.918</td>
</tr>
<tr>
<td></td>
<td>P</td>
<td>0.568</td>
<td>1.469</td>
<td>0.149</td>
<td>1</td>
<td>0.967</td>
</tr>
<tr>
<td></td>
<td>PS</td>
<td>1.672</td>
<td>1.493</td>
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<td>1.080</td>
</tr>
<tr>
<td>Undecided/Other**</td>
<td>SA</td>
<td>0.990</td>
<td>1.029</td>
<td>0.926</td>
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<td>2.692</td>
</tr>
<tr>
<td></td>
<td>OI</td>
<td>-2.806*</td>
<td>0.907</td>
<td>9.574</td>
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<td>0.060</td>
</tr>
<tr>
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<td>GS</td>
<td>1.071</td>
<td>0.772</td>
<td>1.922</td>
<td>1</td>
<td>2.918</td>
</tr>
<tr>
<td></td>
<td>P</td>
<td>-0.033</td>
<td>0.847</td>
<td>0.002</td>
<td>1</td>
<td>0.967</td>
</tr>
<tr>
<td></td>
<td>PS</td>
<td>0.077</td>
<td>0.890</td>
<td>0.007</td>
<td>1</td>
<td>1.080</td>
</tr>
</tbody>
</table>

*Note. SA= Self-Appraisal; OI= Occupational Information; GS= Goal Selection; P= Planning; PS= Problem Solving. The dependent variable was short-term postsecondary plans with 4-year college/university as the reference category; Multinomial Nagelkerke $R^2=.222$; *p > .05; **categories combined for data analysis.*

Table 14 presents the regression coefficients, the Wald test, adjusted odds ratio [Exp(B)], and the 95% confidence intervals (CI) for odds ratio for each predictor contrasting short-term postsecondary plans. The influence of occupational information was significant. The odds ratio was 0.060, which can be interpreted as for every additional score of occupational information, the odds of choosing undecided or other decreased by 94% (1-0.060) while holding all other
predictors constant. Thus, the results showed that students with high confidence in occupational information were more likely to choose 4-year college/university versus undecided or other.

Table 15

*Multinomial Logistic Regression Results: Career Decision-Making Self-Efficacy as a Predictor of Long-term Postsecondary Plans*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE-b</th>
<th>Wald</th>
<th>df</th>
<th>Exp (B)</th>
<th>95% CI Exp (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job/workforce-No college</td>
<td>SA</td>
<td>0.080</td>
<td>1.075</td>
<td>0.006</td>
<td>1.083</td>
<td>0.132-8.907</td>
</tr>
<tr>
<td></td>
<td>OI</td>
<td>0.009</td>
<td>0.933</td>
<td>0.000</td>
<td>1.009</td>
<td>0.162-6.287</td>
</tr>
<tr>
<td></td>
<td>GS</td>
<td>0.419</td>
<td>0.854</td>
<td>0.241</td>
<td>1.521</td>
<td>0.285-8.104</td>
</tr>
<tr>
<td></td>
<td>P</td>
<td>-2.267*</td>
<td>1.086</td>
<td>4.356</td>
<td>0.104</td>
<td>0.012-0.871</td>
</tr>
<tr>
<td></td>
<td>PS</td>
<td>0.890</td>
<td>1.107</td>
<td>0.646</td>
<td>2.434</td>
<td>0.278-21.290</td>
</tr>
<tr>
<td>Graduate/Professional school</td>
<td>SA</td>
<td>0.609</td>
<td>0.927</td>
<td>0.927</td>
<td>0.511</td>
<td>0.299-11.318</td>
</tr>
<tr>
<td></td>
<td>OI</td>
<td>0.793</td>
<td>0.908</td>
<td>0.908</td>
<td>0.382</td>
<td>0.373-13.103</td>
</tr>
<tr>
<td></td>
<td>GS</td>
<td>0.645</td>
<td>0.643</td>
<td>0.643</td>
<td>0.316</td>
<td>0.540-6.731</td>
</tr>
<tr>
<td></td>
<td>P</td>
<td>-0.352</td>
<td>0.859</td>
<td>0.859</td>
<td>0.682</td>
<td>0.131-3.784</td>
</tr>
<tr>
<td></td>
<td>PS</td>
<td>-0.663</td>
<td>0.651</td>
<td>0.651</td>
<td>0.308</td>
<td>0.144-1.845</td>
</tr>
<tr>
<td>Undecided/Other</td>
<td>SA</td>
<td>2.177</td>
<td>1.152</td>
<td>1.152</td>
<td>0.059</td>
<td>0.923-84.306</td>
</tr>
<tr>
<td></td>
<td>OI</td>
<td>-1.704*</td>
<td>0.838</td>
<td>0.838</td>
<td>0.042</td>
<td>0.035-0.939</td>
</tr>
<tr>
<td></td>
<td>GS</td>
<td>-0.434</td>
<td>0.909</td>
<td>0.909</td>
<td>0.633</td>
<td>0.109-3.847</td>
</tr>
<tr>
<td></td>
<td>P</td>
<td>0.087</td>
<td>0.965</td>
<td>0.965</td>
<td>0.928</td>
<td>0.165-7.239</td>
</tr>
<tr>
<td></td>
<td>PS</td>
<td>-1.150</td>
<td>0.995</td>
<td>0.995</td>
<td>0.248</td>
<td>0.045-2.228</td>
</tr>
</tbody>
</table>

Note. SA= Self-Appraisal; OI= Occupational Information; GS= Goal Selection; P= Planning; PS= Problem Solving. The dependent variable was short-term postsecondary plans with college/university student or graduate as the reference category; Multinomial Nagelkerke $R^2=.233; *p > .05$

Table 15 presents the regression coefficients, the Wald test, adjusted odds ratio [Exp(B)], and the 95% confidence intervals (CI) for odds ratio for each predictor contrasting long-term postsecondary plans. The influence of planning was significant. The odds ratio was 0.104, which can be interpreted as for every additional score of planning, the odds of choosing job-workforce-no college decreased by 89.60% (1-0.104) while holding all other predictors constant. The results showed that students with high confidence in planning were more likely to choose
college/university student or graduate as a long-term plan rather than job/workforce-no college. The influence of occupational information was also significant. The odds ratio was 0.042, which can be interpreted as for every additional score of occupational information, the odds of being undecided or choosing other postsecondary plans decreased by 95.80% (1-0.042) while holding all other predictors constant. Thus, the results revealed that students with high confidence in occupational information were more likely to choose college/university student or graduate as a long-term postsecondary plan versus undecided or other.

In review of the analysis for research question 3, the results provided no statistically significant explanation for the influence of self-appraisal, goal selection, and problem solving on long-term and short-term postsecondary plans. Therefore, there is support for H03A, H03C and H03E. Results provided a statistically significant explanation for occupational information on short-term and long-term postsecondary plans. Additionally, results provided a statistically significant explanation for planning on long-term postsecondary plans. Thus, the analysis results for occupational information and planning indicated rejection of H03B and H03D.

Additional Analyses

Using the eight factors from the principal component analysis, participants’ perceptions of barriers were further analyzed. Table 8 presents the identification of barrier groups based on items within the component. Figure 2 provides a graph of mean scores for barrier groups.

Table 16 includes the calculated mean scores and standard deviations of each component. Participants had higher perceptions of financial barriers (M = 2.27, SD = .871). The barrier group with the lowest mean score was support system barriers (M = 1.28, SD = .592). However, the multinomial logistic regression revealed high perception of support system barriers were
likely to influence choosing other or undecided plans versus college/university student or graduate.

Figure 2. Means for components derived from factor analysis of My Perceptions of Barriers Scale. Note: Cronbach’s alpha=.779

Table 16

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.73</td>
<td>.694</td>
</tr>
<tr>
<td>2</td>
<td>1.42</td>
<td>.610</td>
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<tr>
<td>3</td>
<td>1.33</td>
<td>.550</td>
</tr>
<tr>
<td>4</td>
<td>1.80</td>
<td>.603</td>
</tr>
<tr>
<td>5</td>
<td>1.69</td>
<td>.652</td>
</tr>
<tr>
<td>6</td>
<td>1.28</td>
<td>.592</td>
</tr>
<tr>
<td>7</td>
<td>2.27</td>
<td>.871</td>
</tr>
<tr>
<td>8</td>
<td>1.49</td>
<td>.841</td>
</tr>
</tbody>
</table>

The result of the Chi-square test indicated that the eight predictor model of components of perceived barriers did provide a statistically significant explanation on short-term postsecondary plans [-2 Log Likelihood = 221.711, x²(24, N=124) = 51.137, p = .001].
However, the Chi-square test did not provide a statistically significant explanation on long-term postsecondary plans [-2 Log Likelihood = 193.540, x2(24, N=124) = 51.137, p = .092]. There are some significant predictors within the model, but interpretation of these predictors should be conservative. The Nagelkerke pseudo $R^2$ indicated the model accounted for 38% of the total variance for short-term postsecondary plans and 28% of the total variance for long-term postsecondary plans.

Table 17 presents the regression coefficients, the Wald test, adjusted odds ratio [Exp(B)], and the 95% confidence intervals (CI) for odds ratio for each predictor contrasting short-term postsecondary plans. The influence of support system barriers (MPB 2) was significant. The odds ratio was 4.095, which can be interpreted as for every additional score of support system barriers, the odds of being undecided or choosing other postsecondary plans increased by 309.5% (4.095-1) while holding all other predictors constant. The influence of marriage barriers (MPB 8) was also significant. The odds ratio was 2.517, which can be interpreted as for every additional score of marriage barriers, the odds of being undecided or choosing other postsecondary plans increased by 151.7% (2.517-1) while holding all other predictors constant. Thus, the results showed that students with high perceptions of support system and marriage barriers were more likely to be undecided or choose other postsecondary plans compared to 4-year college or university.
### Table 17

**Multinomial Logistic Regression Results: Perceived Barriers as a Predictor of Short-term Postsecondary Plans**

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE-b</th>
<th>Wald</th>
<th>df</th>
<th>Exp (B)</th>
<th>95% CI Exp (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior/Community College</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MPB 1</td>
<td>0.824</td>
<td>0.49</td>
<td>2.978</td>
<td>1</td>
<td>2.280</td>
<td>0.894-5.815</td>
</tr>
<tr>
<td>MPB 2</td>
<td>-0.231</td>
<td>0.59</td>
<td>0.155</td>
<td>1</td>
<td>0.794</td>
<td>0.252-2.504</td>
</tr>
<tr>
<td>MPB 3</td>
<td>0.273</td>
<td>0.59</td>
<td>0.215</td>
<td>1</td>
<td>1.314</td>
<td>0.414-4.165</td>
</tr>
<tr>
<td>MPB 4</td>
<td>0.576</td>
<td>0.48</td>
<td>1.441</td>
<td>1</td>
<td>1.779</td>
<td>0.695-4.559</td>
</tr>
<tr>
<td>MPB 5</td>
<td>-0.412</td>
<td>0.49</td>
<td>0.704</td>
<td>1</td>
<td>0.662</td>
<td>0.253-1.735</td>
</tr>
<tr>
<td>MPB 6</td>
<td>0.182</td>
<td>0.47</td>
<td>0.149</td>
<td>1</td>
<td>1.200</td>
<td>0.476-3.024</td>
</tr>
<tr>
<td>MPB 7</td>
<td>-0.498</td>
<td>0.30</td>
<td>2.727</td>
<td>1</td>
<td>0.608</td>
<td>0.337-1.097</td>
</tr>
<tr>
<td>MPB 8</td>
<td>0.264</td>
<td>0.32</td>
<td>0.677</td>
<td>1</td>
<td>1.302</td>
<td>0.694-2.441</td>
</tr>
<tr>
<td>Job/workforce-no college</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MPB 1</td>
<td>1.634</td>
<td>0.891</td>
<td>3.366</td>
<td>1</td>
<td>5.124</td>
<td>0.894-29.358</td>
</tr>
<tr>
<td>MPB 2</td>
<td>0.337</td>
<td>0.943</td>
<td>0.128</td>
<td>1</td>
<td>1.401</td>
<td>0.221-8.888</td>
</tr>
<tr>
<td>MPB 3</td>
<td>0.562</td>
<td>0.943</td>
<td>0.355</td>
<td>1</td>
<td>1.755</td>
<td>0.276-11.147</td>
</tr>
<tr>
<td>MPB 4</td>
<td>0.435</td>
<td>0.934</td>
<td>0.216</td>
<td>1</td>
<td>1.544</td>
<td>0.247-9.639</td>
</tr>
<tr>
<td>MPB 5</td>
<td>-0.397</td>
<td>0.905</td>
<td>0.193</td>
<td>1</td>
<td>0.672</td>
<td>0.114-3.964</td>
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<tr>
<td>MPB 6</td>
<td>0.103</td>
<td>0.817</td>
<td>0.016</td>
<td>1</td>
<td>1.108</td>
<td>0.224-5.495</td>
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<tr>
<td>MPB 7</td>
<td>-0.690</td>
<td>0.737</td>
<td>0.876</td>
<td>1</td>
<td>0.502</td>
<td>0.118-2.126</td>
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<td>MPB 8</td>
<td>0.668</td>
<td>0.512</td>
<td>1.703</td>
<td>1</td>
<td>1.950</td>
<td>0.715-5.319</td>
</tr>
<tr>
<td>Undecided/Other**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MPB 1</td>
<td>-0.089</td>
<td>0.793</td>
<td>0.012</td>
<td>1</td>
<td>0.915</td>
<td>0.193-4.333</td>
</tr>
<tr>
<td>MPB 2</td>
<td>1.410*</td>
<td>0.671</td>
<td>4.415</td>
<td>1</td>
<td>4.095</td>
<td>1.099-15.255</td>
</tr>
<tr>
<td>MPB 3</td>
<td>0.721</td>
<td>0.721</td>
<td>1.002</td>
<td>1</td>
<td>2.057</td>
<td>0.501-8.447</td>
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<tr>
<td>MPB 4</td>
<td>0.264</td>
<td>0.701</td>
<td>0.142</td>
<td>1</td>
<td>1.302</td>
<td>0.330-5.142</td>
</tr>
<tr>
<td>MPB 5</td>
<td>-0.296</td>
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<td>0.187</td>
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<td>0.743</td>
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<tr>
<td>MPB 6</td>
<td>0.983</td>
<td>0.573</td>
<td>2.941</td>
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<td>2.672</td>
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<tr>
<td>MPB 7</td>
<td>0.295</td>
<td>0.482</td>
<td>0.375</td>
<td>1</td>
<td>1.343</td>
<td>0.523-3.452</td>
</tr>
<tr>
<td>MPB 8</td>
<td>0.923*</td>
<td>0.440</td>
<td>4.403</td>
<td>1</td>
<td>2.517</td>
<td>1.063-5.959</td>
</tr>
</tbody>
</table>

*Note.* The dependent variable was short-term postsecondary plans with 4-year college/university as the reference category; Multinomial Nagelkerke $R^2=.379$; *p < .05; **categories combined for data analysis.

The results of the multinomial logistic regression with long-term postsecondary plans are presented in Table 18. The influence of support system barriers (MPB 2) was significant. The odds ratio was 6.203, which can be interpreted as for each additional point of support system barriers the odds of being undecided or choosing other plans versus college/university student or
graduate increased by 520.3% (6.203-1) while holding all other predictors constant. Therefore, the results showed that students with high perceptions of support system barriers were more likely to be undecided or choose other long-term postsecondary plans compared to college/university student or graduate.

Table 18

*Multinomial Logistic Regression Results: Perceived Barriers as a Predictor of Long-term Postsecondary Plans*

<table>
<thead>
<tr>
<th>Variable</th>
<th>MPB 1</th>
<th>SE-b</th>
<th>Wald</th>
<th>df</th>
<th>Exp (B)</th>
<th>95% CI</th>
<th>Exp (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job/workforce-no college</td>
<td>-0.015</td>
<td>0.704</td>
<td>0.000</td>
<td>1</td>
<td>0.986</td>
<td>0.248-3.917</td>
<td></td>
</tr>
<tr>
<td>MPB 2</td>
<td>1.124</td>
<td>0.581</td>
<td>3.740</td>
<td>1</td>
<td>3.077</td>
<td>0.985-9.609</td>
<td></td>
</tr>
<tr>
<td>MPB 3</td>
<td>0.691</td>
<td>0.660</td>
<td>1.094</td>
<td>1</td>
<td>1.995</td>
<td>0.547-7.278</td>
<td></td>
</tr>
<tr>
<td>MPB 4</td>
<td>0.014</td>
<td>0.631</td>
<td>0.000</td>
<td>1</td>
<td>1.014</td>
<td>0.294-3.493</td>
<td></td>
</tr>
<tr>
<td>MPB 5</td>
<td>-0.419</td>
<td>0.614</td>
<td>0.465</td>
<td>1</td>
<td>0.658</td>
<td>0.198-2.191</td>
<td></td>
</tr>
<tr>
<td>MPB 6</td>
<td>0.405</td>
<td>0.547</td>
<td>0.548</td>
<td>1</td>
<td>1.500</td>
<td>0.513-4.384</td>
<td></td>
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<tr>
<td>MPB 7</td>
<td>0.287</td>
<td>0.448</td>
<td>0.410</td>
<td>1</td>
<td>1.332</td>
<td>0.554-3.207</td>
<td></td>
</tr>
<tr>
<td>MPB 8</td>
<td>0.124</td>
<td>0.390</td>
<td>0.101</td>
<td>1</td>
<td>1.132</td>
<td>0.527-2.431</td>
<td></td>
</tr>
<tr>
<td>Graduate/professional school</td>
<td>-1.063</td>
<td>0.748</td>
<td>2.019</td>
<td>1</td>
<td>0.345</td>
<td>0.080-1.497</td>
<td></td>
</tr>
<tr>
<td>MPB 2</td>
<td>0.734</td>
<td>0.750</td>
<td>0.957</td>
<td>1</td>
<td>2.083</td>
<td>0.479-9.059</td>
<td></td>
</tr>
<tr>
<td>MPB 3</td>
<td>-1.214</td>
<td>1.328</td>
<td>0.835</td>
<td>1</td>
<td>0.297</td>
<td>0.022-4.012</td>
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</tr>
<tr>
<td>MPB 4</td>
<td>-0.187</td>
<td>0.699</td>
<td>0.071</td>
<td>1</td>
<td>0.830</td>
<td>0.211-3.263</td>
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</tr>
<tr>
<td>MPB 5</td>
<td>0.216</td>
<td>0.689</td>
<td>0.099</td>
<td>1</td>
<td>1.242</td>
<td>0.322-4.789</td>
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</tr>
<tr>
<td>MPB 6</td>
<td>-0.786</td>
<td>0.973</td>
<td>0.653</td>
<td>1</td>
<td>0.456</td>
<td>0.068-3.066</td>
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</tr>
<tr>
<td>MPB 7</td>
<td>-0.366</td>
<td>0.371</td>
<td>0.974</td>
<td>1</td>
<td>0.693</td>
<td>0.335-1.435</td>
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</tr>
<tr>
<td>MPB 8</td>
<td>-0.140</td>
<td>0.445</td>
<td>0.099</td>
<td>1</td>
<td>0.869</td>
<td>0.363-2.080</td>
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<td>Undecided/Other</td>
<td>-0.822</td>
<td>0.931</td>
<td>0.779</td>
<td>1</td>
<td>0.440</td>
<td>0.071-2.725</td>
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<td>MPB 2</td>
<td>1.825*</td>
<td>0.786</td>
<td>5.388</td>
<td>1</td>
<td>6.203</td>
<td>1.328-28.963</td>
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</tr>
<tr>
<td>MPB 3</td>
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<td>0.750</td>
<td>2.133</td>
<td>1</td>
<td>2.991</td>
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<td>MPB 4</td>
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<td>0.660</td>
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<td>0.397</td>
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<td>MPB 6</td>
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<td>0.1660</td>
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<td>0.728</td>
<td>0.158-3.353</td>
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<td>MPB 7</td>
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<td>0.493</td>
<td>0.038</td>
<td>1</td>
<td>0.909</td>
<td>0.346-2.387</td>
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<tr>
<td>MPB 8</td>
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<td>0.509</td>
<td>0.139</td>
<td>1</td>
<td>0.827</td>
<td>0.305-2.244</td>
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</tr>
</tbody>
</table>

*Note.* The dependent variable was long-term postsecondary plans with college/university student graduate as the reference category; Multinomial Nagelkerke $R^2=.283; *p < .05
**Research Question 4**: Which of the three variables investigated in the current study (perceptions of barriers, perceived social support, and career decision-making self-efficacy) explains the greatest proportion of variability in students’ postsecondary plans?

H₀₄: There will be no difference in the proportion of variability explained by the three variables (perceptions of barriers, perceived social support, and career decision-making self-efficacy).

Analysis of this hypothesis included comparing explained variability (pseudo $R^2$) from research questions 2 and 3, as well as the additional multinomial logistic regression analysis of perceived barriers, to explain the greatest proportion of variability. Table 19 provides a summary of the Nagelkerke pseudo $R^2$ that derived from the multinomial logistic analyses of the above-mentioned research questions and additional analysis. Perceptions of barriers explained the greatest proportion of variability, accounting for 38% variance in short-term postsecondary plans and 28% variance in long-term postsecondary plans. Thus, H₀₄ can be rejected as perceptions of barriers presented the greatest proportion of variability in students’ postsecondary plans.

Table 19

*Percentages from Pseudo $R^2$ of Multinomial Logistic Regression Analyses*

<table>
<thead>
<tr>
<th></th>
<th>Short-term postsecondary plans</th>
<th>Long-term postsecondary plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceptions of barriers</td>
<td>38.0</td>
<td>28.0</td>
</tr>
<tr>
<td>Perceived social support</td>
<td>15.0</td>
<td>13.0</td>
</tr>
<tr>
<td>Career decision-making self-efficacy</td>
<td>22.0</td>
<td>23.0</td>
</tr>
</tbody>
</table>
Summary

The data analysis was completed to examine the influence of perceived barriers, perceived social support, and career decision-making self-efficacy on high school juniors’ and seniors’ postsecondary plans. Results of the data analysis indicated significant influence of friend-based social support on short-term plans when choosing 4-year college/university compared to job/workforce-no college or undecided or other. Friend-based social support also had significant influence on long-term plans when choosing college/university student or graduate rather than undecided or other. In regard to career decision-making self-efficacy, results indicated that high confidence in occupational information-related tasks had significant influence on short-term plans when choosing 4-year college or university versus undecided or other; additionally, occupational information had a significant influence on long-term postsecondary plans when choosing college/university student or graduate rather than undecided or other. High confidence in planning-related tasks had significant influence on long-term postsecondary plans when choosing college/university student or graduate versus job/workforce no college. In consideration of barriers, the influence of support system-related barriers had significant influence on short-term plans when choosing undecided or other versus 4-year college or university. The influence of marriage barriers was significant when choosing undecided or other versus 4-year college or university. In addition, the influence of support system barriers on long-term plans was significant when choosing undecided or other versus college/university student or graduate. In examination of the final research question, results showed that perceptions of barriers presented the greatest proportion of variability in students’ postsecondary plans.
CHAPTER V: DISCUSSION

Introduction

The purpose of this study was to examine the influence of perceived barriers, perceived social support, and career decision-making self-efficacy on high school juniors’ and seniors’ postsecondary plans. This study was grounded in social cognitive career theory (SCCT) with significance given to factors that may be present in high school students’ pursuit college and career planning. Furthermore, the analysis methods applied to this study examined whether perceived support systems, perceived barriers, and self-efficacy in completing college and career planning tasks had differing levels of influence on short-term and long-term postsecondary plans.

Juniors and seniors from two high schools made up the sample of 124 participants with more seniors (n = 80, 64.5%) than juniors (n = 44, 35.5%) completing the survey. The majority of participants (n = 104, 83.9%) reported plans to pursue higher education after high school graduation. The analysis revealed varying effects of the predictors’ influence on postsecondary plans. This chapter will present a summary of the results, limitations, implications of the study, and suggestions for future research.

Summary of Results and Related Hypotheses

The overarching research question in this study was: how do perceptions of barriers, perceptions of social support, and career decision-making self-efficacy influence high school juniors’ and seniors’ postsecondary plans? The main research question was separated into four research questions with null hypotheses that individually examined each predictor’s influence on
the postsecondary plans of this study’s participants. The primary analyses were factor analysis, cluster analysis, and multinomial logistic regression. An additional analysis was conducted for research question 1 to determine any influence of perceived barriers on postsecondary plans.

**Null Hypotheses 1A-1B**

Null hypothesis 1A stated: based on responses to the MPB, no distinct groups exist among students as determined by a cluster analysis. Null hypothesis 1B stated: differences in postsecondary plans of identified clusters do not exist. The cluster analysis generated support for null hypothesis 1A in that no distinguishable groups of students were formed based on their perceptions of barriers. A multinomial logistic regression was conducted using components that emerged from the factor analysis as predictors of postsecondary plans. Results showed statistical significance in perceptions of support system barriers when deciding short-term postsecondary plans \((p = .036)\) and long-term postsecondary plans \((p = .020)\). Higher perceptions of support system barriers resulted in participants being undecided or choosing other plans compared to enrollment at a 4-year college or university or viewing themselves as a college student or graduate within 3 to 5 years.

The marriage barriers component consisted of one item (“Being married”), which correspondingly was the only marriage-related variable included in the instrument. The mean for this item was 1.49 (SD = .841) which translates as an overall low perception of barrier based on participants’ responses. However, the logistic regression analysis revealed statistical significance \((p = .036)\) in perceptions of a marriage barrier and its influence on being undecided or choosing other postsecondary plans compared to plans of 4-year college of university enrollment.
Implication. Results suggest that high perceptions of barriers related to support systems and marriage likely result in participants being undecided or choosing other plans versus college enrollment. High perceptions of barriers with support systems also reflected lack of perceived confidence from others (“others don’t think I can do it”). Thus, challenges with interpersonal relationships can cause uncertainty in postsecondary planning for high school students. If students do not feel supported, or if they perceive that important people in their lives do not have confidence in them, they may not choose to attend college.

These results indicate the importance of school counselors’ awareness of how interpersonal relationships can affect students’ choices. It is important for school counselors to help students examine how they feel about their relationships and further examine how these perceptions may be hindering them from pursuing their goals. Additionally, collaboration with families could be essential to supporting students in postsecondary planning. School counselors should consider involving students’ families in postsecondary education information sessions to explain the benefits of achieving additional training and education beyond high school. Implementing programs and activities that focus on resilience in college and career planning could be vital in helping students overcome barriers related to support systems and marriage.

Null Hypothesis 2A

Null hypothesis 2A stated: school-based social support will have no significant influence on postsecondary plans. Results from the analysis did not provide sufficient evidence that higher perceived school-based social support had significant influence on short-term postsecondary plans. Also, results from the analysis revealed school-based social support had no statistically significant influence on long-term postsecondary plans.
Implication. School-based social support was not found to be a significant predictor of postsecondary plans. However, there are studies that have examined and demonstrated the significance of support from school sources and its influence on students. For example, one study found that teacher-based social support can be a significant predictor of academic engagement for minority students at risk for behavioral referral to special education (Decker, Dona, & Christenson, 2007). Specifically regarding school counseling, additional studies have shown how guidance and support from school counselors correlate with postsecondary enrollment and attainment (Belasco, 2013; Bryan, Moore-Thomas, Day-Vines, & Holcomb-McCoy, 2011; Hines & Lemons, 2011). One consideration for this study is that the sample was skewed toward students with highly educated parents, which may significantly contribute to the majority of the sample planning to attend college. While school-based social support was not a significant predictor, descriptive statistics showed that students had overall moderate to high perceptions of school-based social support.

Null Hypothesis 2B

Null hypothesis 2B stated: family-based social support will have no significant influence on postsecondary plans. While the multinomial logistic regression analysis demonstrated that high perceptions of family-based social support resulted in participants more likely choosing 4-year college or university versus undecided or other plans, the results were not statistically significant. Therefore, there was support for the null.

Implication. Even though findings were not statistically significant, there is some evidence that support from family can contribute to students’ pursuit of postsecondary education. One previous study showed that a positive correlation between family support and college
enrollment exists (Grieve, 2009). Descriptive statistics of the measurement assessing family-based social support resulted in overall perceptions of moderate to high social support from family. Regarding the results of the presented study, it was mentioned that the sample was skewed toward students with highly educated parents and students whose short-term and long-term plans mostly included college. One concept discussed within SCCT is access to career role models, which can affect an individual’s career development. Additionally, vicarious and observational learning allows individuals to observe the successful experiences of those around them and use their behaviors as guides in developing a career. So although the results were not statistically significant, an implication for school counselors is advocacy for school-family and school-community partnerships, which may be essential to students’ pursuit of postsecondary education.

**Null Hypothesis 2C**

Null hypothesis 2C stated: friend-based social support will have no significant influence on postsecondary plans. Examination of the null using a multinomial logistic regression resulted in statistically significant influence of friend-based social support, as measured by the MSPSS, on short-term postsecondary plans \( (p = .007) \) and long-term postsecondary plans \( (p = .013) \). Results revealed that when participants perceived higher levels of social support from friends, they were more likely to plan to enroll in a 4-year college or university upon high school graduation versus plans to work and not enroll in college, be undecided about their plans, or choose other postsecondary plans. Thus, the role of support from friends is a significant predictor in students’ choice to enroll in postsecondary education.
Implication. High perceptions of social support from friends resulted in the likelihood of students attending a 4-year college or university upon high school graduation. This finding is supported by previous studies that produced significant results validating the role of peer influence on postsecondary plans (Grieve, 2009; Holland, 2011). The implication for this finding is recognition from school counselors of the importance of peer support and influence in encouraging high school students’ decisions to attend college after high school. Therefore, culture-building activities considerate of positive peer support and attitudes around postsecondary education attainment could be useful in helping students solidify their college-going plans (Holland & Farmer-Hinton, 2009). Examples of culture-building activities may include forming peer support groups based on postsecondary interests and encouraging schoolwide college preparation activities in which students are allowed to collectively engage in college and career planning.

Null Hypothesis 3A

Null hypothesis 3A stated: self-appraisal will have no significant influence on postsecondary plans. The multinomial logistic regression revealed support for the null in that high confidence in self-appraisal tasks did not significantly influence short-term or long-term postsecondary plans.

Implication. Flores, Ojeda, Huang, Gee, and Lee (2006) previously studied problem solving appraisal and career decision-making self-efficacy as predictors of educational goals. Results from the study yielded support for both factors (with career decision-making self-efficacy being one of the most important) as significant in determining educational goals. However, problem-solving appraisal was not measured similarly as self-appraisal in the CDSE-
Also, this study largely focused on cultural influences. No further studies were found that respectively examined self-appraisal as a predictor of postsecondary plans.

**Null Hypothesis 3B**

Null hypothesis 3B stated: occupational informational will have no significant influence on postsecondary plans. The multinomial logistic regression analysis showed occupational information as a statistically significant predictor of short-term postsecondary plans \((p = .002)\) and long-term postsecondary plans \((p = .042)\). Results revealed that high confidence in tasks related to occupational information resulted in students more likely planning to enroll in a 4-year college or university within 6 months of high school graduation, as well as viewing themselves as a college/university student or graduate within 3 to 5 years compared to being undecided or choosing other postsecondary plans.

Occupational information-related tasks, as examined by the CDSE-SF, measured participants’ ability to access and gather information about occupations of interest. The results showed that when students have high confidence in gathering information about careers of interest, including learning salary information and speaking with someone already in employed in the field, they were more likely to plan to attend a 4-year college or university and view themselves a future college graduates.

**Implication.** The results of the study suggest high confidence in tasks related to occupational information and planning can influence students’ plans for college enrollment while decreasing the chances of students being undecided about their post-high school plans. Furthermore, results suggest that when students are confident in their ability to find information about colleges and careers, they are more likely to plan to attend college and, moreover, view
themselves as future college graduates. Additionally, the results showed that when students exhibit confidence in tasks related to college and career planning, they are more likely to consider plans for college enrollment as opposed to plans to enter the workforce upon high school graduation.

Gushue, Clarke, Pantzer, and Scanlan (2006) utilized total scale scores of the CDSE-SF and a Career Search Activities index to examine how career search activities and vocational identity influenced the outcome variables of career decision-making self-efficacy and perceptions of barriers. Researchers found that career education may have a significant influence on career decision-making self-efficacy of Latino high school students. Other studies have highlighted the importance of career exploration in building high school students’ self-efficacy (Brown, Darden, Shelton, & Dipoto, 1999) as well as the importance of external influences in career exploration (Domene, Shapka, & Keating, 2006).

This information is essential to the school counselor’s role in implementing delivery services related to college and career planning. Providing students with college and career guidance, as well as opportunities to engage in tasks related to college and career exploration, could be essential in supporting students’ aspirations for postsecondary education. Career interest inventories and career assessments, followed by in-depth exploration of colleges and careers, could be an important factor in students’ decision to attend college.

Additionally, high confidence in occupational information-related tasks involved students being able to speak with someone employed in an occupation of interest. Through indirect services, school counselors can build community partnerships that lead to internship and apprenticeship opportunities for students. Also, college and career day activities, where
professionals are invited to interact with students and answer questions related to college majors and careers of interest, could be impactful for building career decision self-efficacy and influencing postsecondary plans. Results from a study by Hutchins and Akos (2012) indicated that students in geographically limited locations report challenges in accessing work-based learning experiences. Therefore, considering geographic limitation as a contextual factor, the implication provided from this analysis could be valuable for school counselors working in rural areas.

Null Hypothesis 3C

Null hypothesis 3C stated: goal selection will have no significant influence on postsecondary planning. Results from the multinomial logistic regression using goal selection as a predictor of short-term and long-term postsecondary plans yielded no statistically significant influence. Although the analysis showed that high confidence in goal selection resulted in participants more likely planning to attend a 4-year college or university versus entering the job-workforce with no intention of enrolling in college, the findings were not statistically significant. Likewise, participants appeared more likely to view themselves as a college/university student or graduate within 3 to 5 years versus being undecided or choosing other plans; however, the findings for this area also were not statistically significant. Thus, there is support for the null.

Implication. Goal selection, as measured by the CDSE-SF, involves individuals being able to match their skills to occupations and create a plan for pursuing that career. Even though findings in this area were not statistically significant, the results presented for occupational information highlight the importance of students’ knowledge about various careers. Occupational information involves understanding and finding information about occupations of
interest. So while tasks within goal selection were not a significant predictor, results indicated that confidence in learning about potential careers provide some influence on plans to pursue postsecondary education.

**Null Hypothesis 3D**

Null hypothesis 3D stated: planning will have no significant influence on postsecondary planning. Results from the multinomial logistic regression examined planning as a significant predictor ($p = .037$) of short-term postsecondary plans. Higher confidence in tasks related to college and career planning (e.g. managing the job interview process, building a resume, and successfully completing chosen college major) resulted in participants more likely planning for college enrollment upon high school graduation versus planning to obtain a job with no intentions of going to college.

**Implication.** Radcliffe and Bos (2013) presented research-based strategies helpful to building college and career readiness in high school students. These strategies resulted from a seven-year implementation of college and career readiness activities with adolescents and high school students. One strategy included planning school-related goals that focused on college readiness; this task also included creating 10 to 20 year life goals. Therefore, there is support for tasks related to planning in supporting students’ college and career awareness. School counselors should consider implementing college planning activities to help students build confidence in pursuing postsecondary education.

**Null Hypothesis 3E**

Null hypothesis 3E stated: problem solving will have no significant influence on postsecondary planning. Results from the multinomial logistic regression showed no statistically
significant influence of problem solving on short-term or long-term postsecondary plans. Therefore, there is support for the null.

**Implication.** Although one study was found that examined the role of problem-solving appraisal as a predictor of educational goals (Flores, Ojeda, Huang, Gee, & Lee, 2006), no studies were found that examined problem solving (as measured by CDSE-SF) as a predictor of postsecondary plans. However, results in this current study indicated that a presence of certain barriers may affect students’ postsecondary planning. Therefore, activities and skills that highlight problem solving relative to overcoming barriers in career and college planning could be beneficial for students.

**Null Hypothesis 4**

Null hypothesis 4 stated: there will be no statistically significant difference in the proportion of variability explained by three factors including perceptions of barriers, perceived social support, and career decision self-efficacy. This null hypothesis was examined by comparing the Nagelkerke pseudo $R^2$ from the results of the multinomial logistic regression analyses from research questions 2 and 3, as well as the additional analysis. Perceptions of barriers accounted for 38% variability of short-term postsecondary plans and 28% variability of long-term postsecondary plans. Therefore, perceptions of barriers resulted in greater variability in participants’ postsecondary plans.

**Implication.** Results of this null hypothesis demonstrate that perceptions of barriers may still adversely affect students’ postsecondary planning, even when perceived social support and career decision-making self-efficacy are high. This aligns with SCCT’s position on how perceived barriers can impact the career development process. Therefore, it is important for
schools to find opportunities to involve students in problem solving, focusing on how to deal with challenges that may threaten their postsecondary aspirations. Additionally, guiding students and families toward resources might provide some support in overcoming barriers that may hinder postsecondary planning.

**Summary of Implications**

Because the data showed that support system barriers had a significant influence on students’ postsecondary plans, it is imperative for school counselors to consider how students’ interpersonal relationships may affect their decisions to attend college. Involving families in postsecondary planning, such as postsecondary information sessions, could be beneficial for students who perceive barriers with personal relationships. Further, implementation of activities that guide students in building resilience to overcome barriers could additionally be useful.

The data showed evidence for friend-based social support as a significant predictor of students’ short-term and long-term plans to attend college. School counselors should consider culture-building activities that encourage positive peer influence around postsecondary education attainment. Specific suggestions include peer support groups and schoolwide college preparation programs. Results also showed that high confidence in occupational information and planning related tasks resulted in students more likely choosing college as a short-term and long-term postsecondary plan. Because of this, school counselors should consider implementing research-based college and career planning activities, including events such as college and career days. School counselors should also provide students with opportunities to interact with individuals employed in occupations of interest. Implementation of college and career assessments could support students’ career development and engagement in postsecondary planning.
Limitations

There are limitations within this study. Sample size \( (n = 124) \) should be considered when interpreting the results. The non-response rate was high considering the sampling frame of juniors and seniors enrolled in participating high schools compared to the total number of participants in the study. There were steps taken to increase the number of participants in the study. For School A, reminder emails were sent to all enrolled juniors and seniors during the third and fourth weeks of the study. The contact person for School B contacted teachers for assistance in soliciting more students for the study. Timing also possibly contributed to the high non-response rate for each school. The survey was open mid-April 2016 through mid-May 2016, which corresponded with the end of the academic school year. Both schools reported testing schedules and end-of-school-year activities as conflicts in administering the survey and soliciting participation from students. Also, this study required signed parental consent from minor students. Approximately 16% \( (n = 28) \) of students who responded to the survey were exited after reporting they had not received parental consent. The contact persons for School A and School B both reported low return of parental consent forms from juniors and seniors age 17 and under.

Results may only be generalizable to the reported demographics of participants. The demographics of the sample largely consisted of students whose parents are highly educated. It is reported in the descriptive statistics that 59.70% of the participants in the sample have parents with bachelor’s degrees are higher. This is not reflective of the national average and could contribute to the high percentage of students in the sample with plans to obtain a college degree. Thus, the sample may not accurately represent the population examined in this study.
An additional limitation involves instrumentation. One item from the MPB appeared to be multidimensional and was therefore eliminated from the analysis. One dimension of the principal component analysis revealed marriage as a barrier. However, there was only one marriage-related item on the instrument. Thus, besides “being married,” it was difficult to determine other marriage-related barriers. The CDSE-SF was used to assess career decision-making tasks. The principal component analysis did not yield factors that aligned with the five sub-scales of the instrument. The research hypotheses for research question 3 were designed based on the instrument’s sub-scales. Because those sub-scales and variables did not materialize in the principal component analysis, this could have had some effect on the results and should be considered in interpretation.

**Suggestions for Future Research**

For future considerations, studies examining the collective influence of peer support and perceptions of barriers could be useful in supporting high school students with postsecondary planning. Future research should also examine school counseling interventions and strategies significant in helping students overcome barriers to increase confidence in postsecondary planning. In addition, limitations with the sample demographics present a need for more research examining the variables with first generation college students and perhaps a more culturally diverse sample. Lastly, limitations with assessments suggest a need for additional measurements that succinctly capture barriers high school students may face in college and career planning. More research may be essential in discovering factors associated with students’ career decision-making self-efficacy, which could lead to the development of instruments more suitable for high school students.
Conclusion

Presentation of this study concluded with a discussion of the results, implications, limitations, and suggestions for future research. The purpose of this study was to investigate the influence of perceived barriers, perceived social support, and career decision-making self-efficacy on high school juniors’ and seniors’ postsecondary plans. Results of the study suggest there is evidence of influence of perceived barriers, perceived social support, and career decision-making self-efficacy on postsecondary plans. However, these predictors vary in their influence, with perceptions of barriers presenting the greatest proportion of variability in postsecondary plans.

Regarding perceptions of barriers, results showed that support system barriers had significant influence on students being undecided or choosing other short-term postsecondary plans versus college, and support system barriers similarly affected long-term postsecondary plans. Marriage barriers had significant influence on students’ short-term postsecondary plans when being undecided or choosing other plans compared to going to college. Also, in terms of social support, results showed that friend-based social support was a significant predictor in students’ short-term and long-term plans to attend college versus choosing to enter the workforce, being undecided, or choosing other plans. In addition, examination of students’ career decision-making self-efficacy revealed that students with high confidence in occupational information and planning were more likely to choose college as their postsecondary plan. The sample consists mostly of students who have college aspirations and who have highly educated parents. Therefore, due to the unique characteristics of the sample, interpretation of the results should be done with consideration.
Implications of the study focused on ideas and interventions for school counselors, including college and career planning activities aligned with direct and indirect service implementation. Because friend-based social support was a significant predictor, it was suggested that school counselors implement culture building activities conducive to encouraging positive peer influence, such as peer support groups and schoolwide college preparation programs. Also, in helping students overcome barriers involving interpersonal relationships, it was suggested that school counselors consider involving students’ families in postsecondary education information sessions. School counselors should also consider implementing resilience-building activities to help students when facing challenges during the college and career planning process. Suggestions for future research include further investigation of the three predictors’ impact on the postsecondary plans of first generation college students. In addition, discovery of school counseling interventions and activities focused on building skills to overcome barriers could be further useful for helping students engage in postsecondary planning.


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APPENDICES
APPENDIX A: EMAIL FROM DEVELOPER
Denise Gilstrap <dgilstra@go.olemiss.edu>

to ellenmow

Hello Dr. McWhirter,

I hope this email finds you well. I am a doctoral candidate at the University of Mississippi, and I am currently in the process of searching for instruments for my study. I've read much of your work and I'm excited to reach out to you. I am interested in the Perceptions of Barriers/Perceptions of Educational Barriers Scales. I wanted to see if you could direct me towards information (if available) regarding these scales, including purchase and administration information. I hope you don’t mind me reaching out, and I appreciate any information you can give.

Thank you for your time.

Best regards,

Denise Gilstrap

Ellen McWhirter
<ellenmow@uoregon.edu>

to me

Hi Denise,

I have attached the version from the JCP article, of which I have moved to only using the "Likelihood" scale. I also attached the most recent ways that I have used the scale ("PEB Chavez 4 and 5") but I do not have psychometric data for these. The variations reflect how I have changed some items in my work with Latino adolescents to reduce redundancy and to include the most relevant items, and also to assess current rather than anticipated barriers.

If you wish to use one of these versions of the measure, what I ask of you is your agreement to cite the measure appropriately and to send me a brief psychometric summary of the measures in your sample, and a summary of your sample demographics. If you agree to those things then you will have my permission to use the measure. Not so pricey!

Best wishes to you in your dissertation!

Ellen
APPENDIX B: BACKGROUND QUESTIONNAIRE
Please answer the following questions.

1. Please identify your gender:

   - Male
   - Female
   - Transgender

2. Please enter your age.

3. Please identify your race/ethnicity.

   - Asian
   - Black or African American
   - White
   - American Indian or Native American
   - Hispanic or Latino
   - Pacific Islander or Alaska Native
   - Multiracial
   - Other

4. What is your current classification for the 2015-2016 academic school year?

   - Junior (Class of 2017)
   - Senior (Class of 2016)

5. What is your parent(s) highest level of education received?

   Parent/Guardian 1:

   - Some high school
   - High School
   - Some college
   - Technical training
   - College graduate
   - Some graduate school
   - Graduate or professional degree
   - Unsure
   - Not applicable
Parent/Guardian 2:

- Some high school
- High School
- Some college
- Technical training
- College graduate
- Some graduate school
- Graduate or professional degree
- Unsure
- Not applicable

6. Please identify whether you receive free lunch, reduced lunch, or neither.

- I am eligible to receive free lunch.
- I am eligible to receive reduced lunch
- I am not eligible for free or reduced lunch.
APPENDIX C: POSTSECONDARY PLANS ITEM
Please identify what you currently plan to do immediately (within 6 months) after graduation from high school.

Note: If you plan to go to college and work after high school, then choose college as your postsecondary plan. For example: if you plan to go to junior/community college and work a job after high school, then select “junior/community college”. If you plan to go to a 4-year college/university and work a job after high school, then select “4-year college/university”.

- **Junior/Community college**: I plan to enroll in a junior college or community college after I graduate from high school.
- **4 year college/university**: I plan to enroll in a college or university after I graduate from high school.
- **Job/workforce**: I plan to get a job and enter the workforce after I graduate from high school.
- **Undecided**: I am currently undecided about my plans after I graduate from high school.
- **Other**: I currently have plans other than attending a college/university or getting a job after I graduate from high school.

Please identify where you see yourself within 3 to 5 years after high school graduation.

Note: If you see yourself enrolled in college/university and working while you are enrolled within 3 to 5 years after high school graduation, then select “college/university student” as your postsecondary plan.

- **College/university student**: Within 3 to 5 years after high school graduation, I see myself enrolled in a college/university.
- **College/university graduate**: College/university student: Within 3 to 5 years after high school graduation, I see myself enrolled in a college/university.
- **Job/workforce-no college**: Within 3 to 5 years after high school graduation, I see myself with a job/career that requires no college degree/postsecondary education.
- **Graduate/professional school**: Within 3 to 5 years after high school graduation, I see myself enrolled in a graduate or professional degree program (e.g. master’s degree, PhD, MBA, medical school, law school, etc.).
- **Undecided/Other**: I am currently undecided or have other plans for where I see myself within 3 to 5 years after high school graduation. Specify your plans below.
APPENDIX D: MY PERCEPTIONS OF BARRIERS SCALE
Below you will find a list of potential barriers that you or someone else might encounter in obtaining further education training after high school. For each potential barrier in the list, please circle the responses that best fit you.

Identify how likely it is that each of the following items will be a barrier for you in obtaining further education training after high school?

A = Not at all likely to be a barrier  B = Might be a barrier  C = Probably will be a barrier  D = Definitely likely to be a barrier

<table>
<thead>
<tr>
<th></th>
<th>NOT AT ALL Likely</th>
<th>Definitely Likely</th>
<th></th>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Not enough money</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<tr>
<td>2. Not smart enough</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<tr>
<td>3. Not confident enough</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<tr>
<td>4. Friends don't support my plans</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<tr>
<td>5. Having to work while going to school</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<tr>
<td>6. Not fitting in at new school or program</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<td>7. Takes too long to finish the training</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<td>8. Being married</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<tr>
<td>9. Teachers don't support my plans</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<td></td>
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<tr>
<td>10. Not being interested in classes or training</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<tr>
<td>11. Not being prepared enough</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<td>12. Family responsibilities</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td></td>
<td></td>
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<td>13. Lack of motivation</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<td>14. Not talented enough</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<tr>
<td>15. Pressure from boy/girlfriend</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<tr>
<td>16. Sex discrimination (being treated differently because of your gender)</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<td></td>
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<tr>
<td>17. Racial discrimination (being treated differently because of your race)</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<td>18. Pregnancy/having children</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<tr>
<td>19. Not knowing what kind of school or training I want</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<tr>
<td>20. None of my friends are doing what I'm doing</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<tr>
<td>21. Not being able to get into the program I want</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<td>22. Parents don't support my plans</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<tr>
<td>23. School too stressful</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<tr>
<td>24. Not wanting to move away</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<td></td>
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<tr>
<td>25. School program very expensive</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<tr>
<td>26. The schooling/training I want not available here</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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<td>27. Others don't think</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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</tbody>
</table>
APPENDIX E: MULTIDIMENSIONAL SCALE OF PERCEIVED SOCIAL SUPPORT
Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet & Farley, 1988)

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

<table>
<thead>
<tr>
<th>Circle the &quot;1&quot; if you</th>
<th>Very Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circle the &quot;2&quot; if you</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>Circle the &quot;3&quot; if you</td>
<td>Mildly Disagree</td>
</tr>
<tr>
<td>Circle the &quot;4&quot; if you</td>
<td>Neutral</td>
</tr>
<tr>
<td>Circle the &quot;5&quot; if you</td>
<td>Mildly Agree</td>
</tr>
<tr>
<td>Circle the &quot;6&quot; if you</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>Circle the &quot;7&quot; if you</td>
<td>Very Strongly Agree</td>
</tr>
</tbody>
</table>

1. There is an adult at school (e.g. teacher, coach, counselor, principal) who is around when I am in need.  
   1 2 3 4 5 6 7 Fam

2. There is an adult at school with whom I can share my joys and sorrows.  
   1 2 3 4 5 6 7 Sch

3. My family really tries to help me.  
   1 2 3 4 5 6 7 Sch

4. I get the emotional help and support I need from my family.  
   1 2 3 4 5 6 7 Sch

5. I have an adult at school who is a real source of comfort to me.  
   1 2 3 4 5 6 7 Sch

6. My friends really try to help me.  
   1 2 3 4 5 6 7 Sch

7. I can count on my friends when things go wrong.  
   1 2 3 4 5 6 7 Sch

8. I can talk about my problems with my family.  
   1 2 3 4 5 6 7 Sch

9. I have friends with whom I can share my joys and sorrows.  
   1 2 3 4 5 6 7 Sch

10. There is an adult at school who cares about my feelings.  
    1 2 3 4 5 6 7 Sch

11. My family is willing to help me make decisions.  
    1 2 3 4 5 6 7 Sch

12. I can talk about my problems with my friends.  
    1 2 3 4 5 6 7 Sch

The items tended to divide into factor groups relating to the source of the social support, namely family (Fam), friends (Fri), or school (Sch).
APPENDIX F: CAREER DECISION SELF-EFFICACY SCALE (CDSE-SF)
<table>
<thead>
<tr>
<th>No Confidence at All</th>
<th>Very Little Confidence</th>
<th>Moderate Confidence</th>
<th>Much Confidence</th>
<th>Complete Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**How Much Confidence Do You Have That You Could:**

1. Use the internet to find information about occupations that interest you.
2. Select one major from a list of potential majors you are considering.
3. Make a plan of your goals for the next five years.
4. Determine the steps to take if you are having academic trouble in an aspect of your chosen major.
5. Accurately assess your abilities.
6. Select one occupation from a list of possible occupations you are considering.
7. Determine the steps you need to successfully complete your chosen major.
8. Persistently work at getting a job or career goal even when you get frustrated.
9. Do you know what your ideal job would be.
10. Find out the employment trends for an occupation in the next decade.
11. Choose a career that will fit your preferred lifestyle.
12. Prepare a good resume.
13. Change majors if you did not like your first choice.
15. Find out about the average yearly earnings of people in an occupation.
APPENDIX G: PARENT CONSENT
Consent for Your Child to Participate in Research

Study Title: The Influence of Perceived Barriers, Perceived Social Support, and Career Decision-Making Self-Efficacy on High School Juniors’ and Seniors’ Postsecondary Plans.

Investigator
Denise Gilstrap, M.S.
Department of Leadership and Counselor Education
117 Guyton Hall
University of Mississippi
(662) 915-7069
dagilstr@go.olemiss.edu

Faculty Sponsor
Dr. Suzanne Dugger
Department of Leadership and Counselor Education
139 Guyton Hall
University of Mississippi
(662) 915-7069
smdugger@olemiss.edu

The purpose of this study

We want to know what your child hopes to do after high school. We also want to understand how various factors may influence these plans.

What your child will do for this study

Your child will be asked to complete a survey consisting of four questionnaires:
- The demographics questionnaire asks about your child’s race, gender, age, grade level, parent(s) educational level, and eligibility for free/reduced lunch. Your child will be asked to identify what he or she plans to do after high school graduation.
- The Perceptions of Barriers questionnaire asks about potential barriers your child might encounter in pursuing education or training beyond high school.
- The Perceived Social Support survey will ask questions about your child’s perceptions of social support from three sources: family, friends, and school.
- Lastly, the Career Decision Self-Efficacy Scale will ask questions about your child’s belief in his or her ability to successfully complete tasks in making career decisions.

Time required for this study

This study involves answering questions on a computer survey during a class at school. It will take about 20-30 minutes to complete.

Possible risks from participation

There are no anticipated risks to your child from participating in the study.

Benefits from participation
Taking part in this research study may not benefit your child personally, but we may learn information that may help schools support students in pursuing postsecondary plans. Your child might experience satisfaction from contributing to educational research knowledge.

**Incentives**

Your child’s name will be entered into a drawing for $20 Walmart and Target gift cards for completing the survey. Your child’s name will also be entered into a drawing for submitting his or her parental consent forms to the teacher prior to the day of the study.

**Confidentiality**

All information in the study will be collected from your child anonymously: it will not be possible for anyone, even the researchers, to associate your child with his or her responses.

**Right to Withdraw**

Your child does not have to participate, and there is no penalty if he or she refuses. If your child starts the study and decides that he or she does not want to finish, he or she can just tell the teacher and close the web browser. Whether or not your child participates or withdraws will not affect your child’s current or future relationship with the school and it will not cause you to lose any benefits to which you are entitled.

**IRB Approval**

This study has been reviewed by The University of Mississippi’s Institutional Review Board (IRB). The IRB has determined that this study fulfills the human research subject protections obligations required by state and federal law and University policies. If you have any questions or concerns regarding your rights or your child’s rights as a research participant, please contact the IRB at (662) 915-7482 or irb@olemiss.edu.

Please ask the researcher if there is anything that is not clear or if you need more information. When all your questions have been answered, then decide if you want your child to be in the study or not.

**Statement of Consent**

I have read the above information. I have been given an unsigned copy of this form. I have had an opportunity to ask questions, and I have received answers. I consent to allow my child to participate.
NOTE TO PARTICIPANTS: DO NOT SIGN THIS FORM
IF THE IRB APPROVAL STAMP ON THE FIRST PAGE HAS EXPIRED
APPENDIX H: SURVEY ADMINISTRATION SCRIPT
SURVEY ADMINISTRATION SCRIPT

[To begin, have the link to the survey accessible on all computer screens. Bookmarking the link to the survey may make it easier to pull up for each class. Also, be sure you have consent forms from participating students.]

[A paper copy of each instrument is attached for your review. Students may have questions or need clarification of the Likert-scale responses. Please explain this to students as needed.]

Please read the following information to the class. The survey will take students about 20 to 30 minutes to complete.

Good (morning or afternoon). You have been invited to take a survey as part of a research study designed by Denise Gilstrap, a doctoral student at The University of Mississippi, who is working under the supervision of Dr. Suzanne Dugger. This study has been reviewed by The University of Mississippi’s Institutional Review Board. The purpose of this study is to collect information about the influence of perceived barriers, perceived social support, and career decision-making self-efficacy on high school juniors’ and seniors’ postsecondary plans.

Let’s talk more about each of these terms to make sure you understand what they mean. Perceived barriers are the challenges you think you will face while making plans for what you would like to do after high school graduation. Perceived social support is how you feel about the support you receive from adults at school, your family, and your friends. Career decision-making self-efficacy is your belief in your ability to successfully complete tasks related to making college and career plans. With this information, we hope to help schools support students in college and career planning. Therefore, your participation is appreciated.

In order to be eligible to participate in this study, your consent forms must be submitted to your teacher. If you are under the age of 18, you must have parental consent to complete this survey. Participation is voluntary, and you can stop taking the survey at any time and skip any questions you would prefer not to answer. If you decide to participate, your name will be entered into a drawing for $20 Walmart and Target gift cards for completing the survey. Your name will also be entered into a drawing for submitting your consent form to the teacher prior to the day of the study.

This study involves answering questions on a computer survey. It will take about 20-30 minutes to complete. There are no right or wrong answers on this survey. Your responses are all based on your personal beliefs and feelings, so answer as honestly as you can. Your answers are anonymous and confidential, which means that the researchers will not know who you are or how you answered the questions.

Thank you for your participation in this survey.
If you have questions about the instructions on the screen, raise your hand and I will come help you. You may now begin by reading the prompt on the screen and selecting “I agree”.

When the student has finished the survey, make sure they close out of the browser to ensure they do not complete the survey a second time.
VITA

Denise A. Gilstrap

EDUCATION

The University of Mississippi
Doctor of Philosophy in Counselor Education & Supervision
- CACREP Accredited Program in Counselor Education and Supervision
- Cognate Area: Play Therapy
- Honors/Awards: Outstanding Doctoral Student-2016; Dissertation Fellowship-Spring 2016; ACES Emerging Leader-2015; Phi Kappa Phi Honor Society Inductee-2014

Texas A &M University- Commerce
Master of Science in Counseling
- CACREP Accredited Program in Counseling
- Specialization: School Counseling
- Honors: Chi Sigma Iota, Epsilon Tau Chapter

Texas Woman’s University
Master of Arts in Teaching
- Specialization: English, Language Arts, and Reading

Bachelor of Arts in English
- Minor: Mass Communications

LICENSURE/CERTIFICATION

School Counselor Licensure
- Licensed School Counselor EC-12 • TX License #1277256

Teacher Certification
- Special Education EC-12 • TX License #1277256
- English Language Arts Reading 4-8 • TX License #1277256
- Special Education Mild/Moderate 1-12 • LA License Level 1 #532065
- English Language Arts 4-8 • LA License Level 1 #532065
- Early Interventionist Birth-Five • LA License Level 1 #532065
GRADUATE TEACHING EXPERIENCE

Graduate Teaching Assistant  
The University of Mississippi
- COUN 690  Counseling Skills  
- COUN 643  Group Procedures  
- COUN 674  Diagnostic Systems in Counseling  
- COUN 605  Research in Counseling  
- COUN 688  Organization & Administration: School Counseling  
- COUN 601  Life Span Development (online)  
- COUN 694  Bibliotherapy (online)  
- COUN 680  Career Counseling  

Fall 2013

Online Instructor Training  
The University of Mississippi
- COUN 690  Counseling Skills  
- COUN 643  Group Procedures  
- COUN 674  Diagnostic Systems in Counseling  
- COUN 605  Research in Counseling  
- COUN 688  Organization & Administration: School Counseling  
- COUN 601  Life Span Development (online)  
- COUN 694  Bibliotherapy (online)  
- COUN 680  Career Counseling  
- COUN 605  Research in Counseling  
- COUN 688  Organization & Administration: School Counseling  
- COUN 601  Life Span Development (online)  
- COUN 694  Bibliotherapy (online)  
- COUN 680  Career Counseling  

Fall 2013

Description: Completed 6 week training through the University of Mississippi Office of eLearning in pedagogical methods of online learning as well as online course design and development using Blackboard.

Learning Management System Proficiencies: Blackboard and Adobe Connect

Course Development  
The University of Mississippi
- COUN 690  Counseling Skills  
- COUN 643  Group Procedures  
- COUN 674  Diagnostic Systems in Counseling  
- COUN 605  Research in Counseling  
- COUN 688  Organization & Administration: School Counseling  
- COUN 601  Life Span Development (online)  
- COUN 694  Bibliotherapy (online)  
- COUN 680  Career Counseling  

Fall 2013

- Developed presentations, experiential activities, student materials, and exams aligned with the following DSM 5 sections: Neurodevelopmental Disorders, Depressive and Anxiety Disorders, Somatic Symptom and Related Disorders, and Disruptive, Impulse-Control, and Conduct Disorders

Life Span Development  

- Assisted with online course development for Blackboard. Created learning modules and organized online assessments

Winter 2015

Guest Lecturing  
The University of Mississippi
- COUN 694  Counseling Skills  
- COUN 643  Group Procedures  
- COUN 674  Diagnostic Systems in Counseling  
- COUN 605  Research in Counseling  
- COUN 688  Organization & Administration: School Counseling  
- COUN 601  Life Span Development (online)  
- COUN 694  Bibliotherapy (online)  
- COUN 680  Career Counseling  

Fall 2013

- Developed and presented lecture to undergraduate course EDHE 305: Transfer Student Experience for non-traditional and transfer students attending a satellite campus

Neurodevelopmental Disorders  

- Developed and presented lecture to master’s level counseling course COUN 674: Diagnostic Systems in Counseling

Summer 2015

SUPERVISION

School Counseling Internship  

- COUN 690  Counseling Skills  
- COUN 643  Group Procedures  
- COUN 674  Diagnostic Systems in Counseling  
- COUN 605  Research in Counseling  
- COUN 688  Organization & Administration: School Counseling  
- COUN 601  Life Span Development (online)  
- COUN 694  Bibliotherapy (online)  
- COUN 680  Career Counseling  

2014-2015

- Provided triadic and group supervision to master’s level interns in school counseling using a combined Integrated Developmental Model & Discrimination Model approach

- Reviewed video recorded sessions

- Provided students constructive feedback on basic counseling skills and techniques

- Evaluated interns using the Basic Counseling Skills and Professional Counseling Performance scales

- Received supervision of supervision sessions from clinical faculty

Counseling Practicum  

- COUN 690  Counseling Skills  
- COUN 643  Group Procedures  
- COUN 674  Diagnostic Systems in Counseling  
- COUN 605  Research in Counseling  
- COUN 688  Organization & Administration: School Counseling  
- COUN 601  Life Span Development (online)  
- COUN 694  Bibliotherapy (online)  
- COUN 680  Career Counseling  

2013-2015

- Provided individual and group supervision to master’s level students in clinical mental health counseling using a combined Integrated Developmental Model & Discrimination Model approach

- Reviewed video recorded sessions

- Provided students constructive feedback on basic counseling skills and techniques

- Evaluated interns using the Basic Counseling Skills and Professional Counseling Performance scales

- Received supervision of supervision sessions from clinical faculty
ADDITIONAL GRADUATE-LEVEL EXPERIENCE

Graduate Assistantships
University of Mississippi

- Graduate Assistant for Counselor Education
  January 2015-December 2015
- College Counselor for UM-DeSoto Campus
  August 2014- December 2014
- Student Advocate for Office of the Dean of Students
  August 2013-August 2014

University Committees
University of Mississippi

- Search Committee for the Assistant Dean of Students-Greek Life
  2014-2015
- Student Intervention Team
  2013-2014
- Search Committee for the Dean of Students/Assistant Vice-Chancellor of Student Affairs
  2013-2014

Department Committees
Department of Leadership & Counselor Education, University of Mississippi

- Search Committee for Program Coordinator/Associate/Full Professor
  2014-2015
- Search Committee for Assistant/Associate Professor
  2013-2014

Service Activities
University of Mississippi

- Site Supervisor Training Module Development
  Spring 2015
- CPCE Workshop
  Spring 2015
- New PhD Student Mentor
  2014-2015
- Master’s Program Information Session, Department Representative
  Fall 2014

RESEARCH

Research Interests

- Evidence-Based School Counseling
- Urban Education and Multicultural Counseling
- Behavioral Interventions
- Play Therapy
- Career Counseling
- Family Therapy

Publications


Research Assistant
Glass Frog Solutions

- Position Summary: Participated in mixed-methods data collection for Clarksdale (MS) Dollars & Sense Program; assisted with community data collection; assisted with qualitative interviewing of participating high school students; attended project trainings and meetings; prepared materials for distribution. Fall 2014-Spring 2015
CONFERENCE PRESENTATIONS

Presentations

National

- Dugger, S., & Gilstrap, D. (2016, July). Locked out after being locked up: Understanding and addressing the career development needs of inmates and ex-offenders. Workshop to be presented at the National Career Development Association Global Conference, Chicago, IL.


Regional


State


PROFESSIONAL MEMBERSHIPS

Professional Associations

National

- American Counseling Association 2009-present
- American School Counseling Association 2013-present
- Association for Counselor Education and Supervision 2015-present
- Association for Play Therapy 2015-present

Regional

- Southern Association for Counselor Education and Supervision 2013-present

State

- Mississippi Counseling Association 2014-present
- Mississippi Association for Play Therapy 2016-present

Honor Societies

- Chi Sigma Iota International Counseling Honor Society 2009-present
- Phi Kappa Phi Honor Society 2014-present