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The Relationship Between Perceived Career Barriers and Career Decision Self-Efficacy on the Certainty of Initial Career Choice Among Educational Opportunity Fund Program Students

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THE RELATIONSHIP BETWEEN PERCEIVED CAREER BARRIERS AND
CAREER DECISION SELF-EFFICACY ON THE CERTAINTY OF INITIAL
CAREER CHOICE AMONG EDUCATIONAL OPPORTUNITY FUND PROGRAM
STUDENTS

A DISSERTATION

Submitted to the Faculty of
Montclair State University in partial fulfillment
of the requirements
for the degree of Doctor of Philosophy

by

NICOLE PACHECO PULLIAM

Montclair State University

Upper Montclair, NJ

2014

Dissertation Chair: Dr. Larry D. Burlew

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MONTCLAIR STATE UNIVERSITY
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DISSERTATION APPROVAL

We hereby approve the Dissertation
THE RELATIONSHIP BETWEEN PERCEIVED CAREER BARRIERS AND
CAREER DECISION SELF-EFFICACY ON THE CERTAINTY OF INITIAL
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STUDENTS

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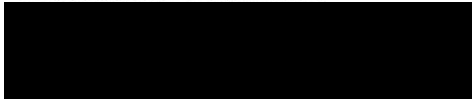
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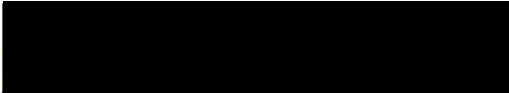
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ABSTRACT

THE RELATIONSHIP BETWEEN PERCEIVED CAREER BARRIERS AND CAREER DECISION SELF-EFFICACY ON THE CERTAINTY OF INITIAL CAREER CHOICE AMONG EDUCATIONAL OPPORTUNITY FUND PROGRAM STUDENTS

by Nicole Pacheco Pulliam

This study was an investigation of the predictive value of perceived career barriers and career decision self-efficacy on the certainty of initial career choice among Educational Opportunity Fund Program (EOF) pre-freshman college students, an under-studied college population with respect to career development (Winograd & Shick Tryon, 2009). The moderating effects of certain cultural characteristics (race, gender and college generational status) on the certainty of initial career choice were also examined. A non-experimental correlational research design was utilized, along with a multiple linear regression analysis, to investigate the predictability of perceived career barriers and career decision self-efficacy, directly and as moderated by the cultural characteristics of gender, race and college generational status on the certainty of initial career choice among pre-freshmen EOF students.

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For many, completing a dissertation represents a measure of intellectual ability—an insurmountable task requiring a certain level of perseverance and tenacity. Although I can most certainly relate to those feelings, this dissertation process has also measured and tested my faith and belief in my loved ones, in God’s plan for me, and most importantly, in myself. During these past four years, I have experienced how it feels to rely on the love, guidance and encouragement of those who truly support me, even when I wasn’t able to offer the same in return. There are many I would like to acknowledge, each playing integral roles in my journey to completing a doctoral degree.

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DEDICATION

This dissertation is dedicated to all of my former and current Opportunity Program students whom I have had the honor of advising throughout my years at both SUNY New Paltz and Ramapo College of New Jersey. Although my direct role has been to guide and advise YOU, you have equally inspired ME to become a better counselor, advisor, mentor and teacher. Despite adversity, my hope is that my achievements help inspire yours, no matter how big or small. To put it bluntly, if this little Latina/Italian, educationally/economically disadvantaged (shout out to Passaic, NJ), first-generation college student, admitted into college through an EOF program, can earn a doctoral degree, SO CAN YOU! I believe in you and, no matter what, don't let anyone (including yourself) doubt your abilities to break those barriers and create your own paths in life. After all, I'll be counting on you to carry that torch and lift up those who will one day need you.

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Chapter One

The Relationship between Perceived Career Barriers and Career Decision Self-Efficacy on the Certainty of Initial Career Choice among Educational Opportunity Fund Program Students

For traditional-age college students, college represents a new experience, adding to their personal, academic, social, and career development. Chickering and Reisser (1993) described this experience as a time for growth and development, involving seven vectors in a model of college student development. Two of those vectors, purpose and identity, include career development because persisting in college and deciding on an academic major contribute to students' future career paths (i.e., purpose) and occupational self-concept (i.e., identity) (Chickering & Reisser, 1993; Super, 1980, 1990). However, traditional-age college students are not a homogenous group. They arrive on campus from different social, economic, educational, family and cultural backgrounds, which impacts many factors related to their success in college, as well as the career choices and opportunities they see for themselves (Brown & Lent, 1996; Gordon & Steele, 2003; Luzzo, 1999; Luzzo & McWhirter, 2001; McWhirter, 1997).

Persisting to graduation is one of the factors clearly linked to ultimate career success. Pascarella and Terenzini (2005) cited comprehensive findings about the ways in which college affected students' career choices and development. Some of their most significant findings were that a) students frequently change their career plans; b) significant occupational status differences between high school and college graduates are sustained over the life span; c) college graduates are less likely to be unemployed than

are high school graduates; d) for reducing unemployment, a college education was more important for non-whites than for whites; and e) maturity of career thinking and planning can be improved through various career development courses. Given the impact college has on students' overall career development, it is helpful for college career counselors and administrators to better understand special factors that may impact college student persistence, such as ultimate career success.

Again, while addressing the special needs of any group of college students, we must realize that not all traditional-aged students enter college with the same educational experiences, the same cultural characteristics, or the same exposure to the world of work. Various contextual factors may impact both their beliefs and feelings about future college experiences and career choices (Duffy & Klingaman, 2009; Gloria & Rodriguez, 2000; Engle, Tinto, & Pell Institute, 2008; Tovar-Murray, Jenifer, Andrusyk, D'Angelo, & King, 2012). For example, students who have been historically underrepresented in higher education (e.g., low income, racial/ethnic minorities, first generation college students) are often faced with unique challenges that may impact their career choices including: a) meager high school preparation; b) low grades within specific subject areas that may be required for specific academic majors and occupations; c) false realities about occupations; and d) uninformed parents or guardians (Burton, 2006; Gordon & Steele, 2003; Lepre, 2007; Ringer & Dodd, 1999). To that end, this study focused on pre-freshman college students within the Educational Opportunity Fund Program (EOF), a special population within colleges and universities who come from financially and educationally disadvantaged backgrounds. In addition, this particular population was

chosen due to its unique demographic makeup, as these students tend to be from racial/ethnic minority groups and the first in their families to attend college. Clearly, more information is needed to understand how diversity impacts college experiences and initial career choices, as there is limited research that addresses such factors.

It is critical to keep in mind that the college experience is evidence of the developmental task of implementing a career choice (Super, 1990); the implementation is being achieved through an educational choice of a major. Thus, one must view career development as a process that unfolds gradually over a lifespan, which supports the idea that career development takes place through developmental stages and tasks based on one's age range (Gottfredson, 1981, 2002; Super, 1980, 1990). Traditional-aged college students (ages 18-22) fall into an *exploratory* stage of career development, characterized by a tentative phase in which choices are narrowed but not finalized (Super, 1990). When considering the traditional-aged college student population, self-awareness and perceptions of career aspirations play a central role in a student's ability to make informed career decisions initially related to choosing a college major (Gottfredson, 1981; Zunker, 2006). With respect to the nature of the exploratory stage of career development, both perceived career barriers and one's level of career decision self-efficacy may directly impact the ways in which students go about making initial career choices. Additionally, certainty about initial career choices may be impacted by various cultural factors, and how these factors interact with perceived career barriers and career decision self-efficacy; thus the focus of my study.

Statement of the Problem

Despite the existing research addressing the importance of career development among college students, perceived career barriers and career decision self-efficacy, there still remains a gap in the literature regarding the relationship between perceived career barriers and career decision self-efficacy on the certainty of initial career choice among special populations of students, such as the EOF population. Moreover, there is limited research about the EOF population in regards to career development overall. This study examined the relationship between perceived career barriers and career decision self-efficacy on the certainty of initial career choice among EOF students. Given the unique demographic makeup of the EOF population, additional cultural characteristics, including demographic information such as race, gender and college generational status were also considered.

The primary research questions for this study were: (1A) To what extent, if any, do perceived career barriers significantly predict certainty of initial career choice among EOF students? and (2A) To what extent, if any, does career decision self-efficacy significantly predict certainty of initial career choice among EOF students? The secondary questions were: (1B) To what extent, if any, do perceived career barriers indirectly, via the moderators of gender, race and college generational status significantly predict certainty of initial career choice among EOF students?, and (2B): To what extent, if any, does career decision self-efficacy indirectly, via the moderators of gender, race and college generational status predict certainty of initial career choice among EOF students?

Background Research

The existence of perceived career barriers and the level of one's career decision self-efficacy may have a meaningful impact on the certainty of initial career choices among college students. Studies suggest that both perceived career barriers and career decision self-efficacy account for the ways by which students participate in career-related interventions, such as seeking counsel and advisement from career counselors and researching well-suited careers that match their values, interests, personality traits and skills (Burton, 2006; Gordon, 1995; Lent, Brown, & Hackett, 1994; Lent et al., 2002; Luzzo & McWhirter, 2001; Pascarella & Terenzini, 2005; Paulsen & Betz, 2004; Quimby & O'Brien, 2004; Swanson & Tokar, 1991; Taylor & Betz, 1983). Likewise, perceived career barriers and career decision self-efficacy may have more of an impact on students with already existing stressors as it relates to the career development process, such as those within EOF programs. This section provides an introduction to the background research relevant to the focus of this study, as well as the theoretical framework guiding the study.

Educational Opportunity Program Students

Understanding the population of focus in this research is important as a starting point for this section. Students admitted to a college through an Educational Opportunity Program (EOP) are from low-income backgrounds who are generally the firsts in their families to attend an institution of higher learning. EOP type programs, such as the *College Discovery Program*, the *SEEK (Search for Education, Elevation, and Knowledge) Program*, *HEOP (Higher Education Opportunity Program)*

(https://www.suny.edu/student/academic_eop.cfm), and *ACT 101* (<http://www.pheaa.org/partner-access/schools/act-101.shtml>) exist throughout many regions; however, the region in which this study took place describes the program as the Educational Opportunity Fund Program (EOF). Therefore, the program will be referred to as EOF throughout the remainder of this study. According to the Engle, Tinto and the Pell Institute for the Study of Opportunity in Higher Education (2008), there were approximately 4.5 million low-income, first-generation students admitted into colleges and universities across the country through EOF and similar access programs, representing 24% of the overall undergraduate population. Historically, low-income, first generation college students have been more likely to leave college within the first year as compared to their counterparts. Time to graduation often extends well beyond the traditional four year plan, with only about 43% of low income, first generation college students earning their undergraduate degrees within a six year time span, as compared to 59% of their counterparts earning their undergraduate degrees within a six year time span (Engle et al., 2008; National Center for Education Statistics, 2012; Titus, 2006). Because we know that all EOF students come from low-income backgrounds and that most are of first generation college student status, these statistics are useful when considering EOF populations. Additionally, students admitted into EOF programs are far more likely to come from racial and ethnic minority groups and enter college academically underprepared, defined as those who test into one or more college remediation courses (Engle et al., 2008; McCabe, 2003; Titus, 2006; Winograd & Shick Tryon, 2009). From

a career development standpoint, these cultural characteristics may have an impact on the certainty of initial career choice.

Several studies have shown that race and ethnicity play significant roles in the existence of perceived career barriers and levels of career decision self-efficacy as they relate to initial career choices (Cardoso & Marques, 2008; Khasawneh, 2010; Luzzo, 1993; 1996; Luzzo & McWhirter, 2001, McWhirter, 1997; Osborn, Howard, & Leierer, 2007; Perrone, Sedlacek, & Alexander, 2001; Trusty, Ng, & Plata, 2000). Furthermore, students who come from lower socioeconomic backgrounds often report numerous career-related barriers including lack of exposure to career opportunities, academic underpreparedness as it relates to certain prerequisites needed for certain careers and a lack of role models in their fields of interest (Luzzo & McWhirter, 2001; Perrone et al., 2001). Lastly, there is a plethora of research reporting additional struggles faced by the first-generation college student population pertaining to both academic struggles and difficulties with making career-related choices (Conley & Hamlin, 2009; Murphy & Hicks, 2006; Owens, Lacey, Rawls, & Holbert-Quince, 2010; Quimby & O'Brien, 2004; Wang & Castaneda-Sound, 2008). To that end, it is important to consider the impacts of perceived career barriers and career decision self-efficacy on the certainty of initial career choices among EOF populations, particularly considering their unique cultural characteristics. Since the EOF population is mostly made up of traditional-age college students (18-22 years old), the next section will address the college experience from that standpoint.

The College Experience

When considering traditional-age college students (18-22 years old), many factors impacting students' overall development have been studied, including influences on college choice, engagement in campus activities, identity development and its impact on student success and college to career transitions (Astin, 1993; Kuh, 2005; Pascarella & Terenzini, 2005; Terenzini et al., 1994; Tinto, 1993). For many traditional-age college students, as noted in Chickering and Reisser's (1993) theory of identity development, the college experience may assist with identity formation, in areas such as developing competence, management of emotions, developing interdependence, mature relationships and integrity, and clarification of purpose. Although this study focused on the career aspect of college student development, it was useful to consider the ways in which other factors may intersect with career choices. Because the population for this study included pre-freshman, that is, students who were participating in a pre-freshman summer bridge program, a brief introduction to the pre-college experience will be discussed next.

Pre-College Experience. As participants in the EOF program, students are required to attend a 6-week residential summer bridge program prior to the start of their first semester, designed to assist students with the successful academic and social transition to the college/university experience. The summer bridge program includes college courses (for credit and remediation), academic support, including a structured tutoring program and programming to meet the psychosocial needs of traditional-aged college students. Given the unique characteristics of the EOF population, the pre-college experience has shown to be successful by helping to ameliorate college transitional

issues, including leaving their families for the first time, developing a sense of independence, and becoming acclimated to campus culture. The summer pre-freshman experience has also been shown to increase academic self-efficacy and overall academic preparedness, resulting in increased self-efficacy and confidence levels regarding the college experience (Dennis, Phinney, & Chuateco, 2005; McCarthy & Kuh, 2006; Suzuki, Amrein-Beardsley, & Perry, 2012; Tinto, 1993). Since many EOF students are the first in their families to attend college, fear of the unknown and lack of self-confidence often exist (Winograd & Shick Tryon, 2009). Certainty of initial career choice before entering college may also be an important factor to consider for this population in particular. Career decision-making for traditional-age college students will be discussed next, followed by an introduction to perceived career barriers and career decision self-efficacy, the two primary variables that were considered for this study.

Career Decision Making and Traditional-Aged College Students

The traditional-age college student population (ages 18-22) falls into an *exploratory* stage of career development, characterized by a tentative phase in which choices are narrowed but not finalized (Super, 1990). During this critical stage, it has been noted as important for individuals to participate in activities that will allow them to engage in self-awareness processes and gathering of occupational information. Additionally, crystallizing occupational preferences via in-depth career information gathering and self-awareness as it pertains to career choice are important for this stage, leading ultimately to congruent career choices (Super, 1990). Self-awareness may be particularly helpful when examining the existence of perceived career barriers. Similarly,

gaining knowledge about ways by which students can go about researching occupations can play a role in increasing career decision self-efficacy (Betz, 2004; Foltz & Luzzo, 1998; Gloria & Hird, 1999; Luzzo, 1996; McWhirter, 1997; Paulsen & Betz, 2004). To that end, gaining understanding about the relationship between perceived career barriers and career decision self-efficacy on the certainty of initial career choice for EOF pre-freshman may be important when considering how this population may move through the career developmental stages.

Certainty of Career Choice

As previously stated, the career decision-making process involves specific developmental tasks that involves exploration of occupations, narrowing down career choices and making congruent career decisions to fit one's values, interests, personality traits and skills (Philips & Blustein, 1994; Super, 1990). This process, according to Donald Super (1990) is considered highly developmental in nature and part of the natural career development process for traditional aged college students. Given the developmental nature of the career choice process, one must bear in mind that career decisions are fluid and can, therefore, change throughout a student's tenure in college (Burton, 2006; Philips & Blustein, 1994; Super, 1990; Zunker, 2006). Because we know that career decisions are often shaped by both internal (e.g., self-concept, self-esteem, self-efficacy) and external (e.g., exposure to occupations, lack of educational/occupational training) factors, one's level of certainty regarding a career choice can shift quite easily as they are exposed to more educational and work-related experiences (Alika, 2012; Galles & Lenz, 2013; Tomlinson & Fassinger, 2003). To that

end, this study will focus on the certainty of participants' initial career choices during their pre-freshman experience.

Perceived Barriers to Career Decision Making

Perceived career barriers are described as events or conditions, either within the person or the environment, that make career development difficult (Howard et al., 2010; Lent et al., 1994; Rivera, Blumberg, Chen, Ponterotta, & Flores, 2007; Swanson & Woitke, 1997, p.446) and are considered to be strong motivating factors to the career development process. These perceived barriers influence an individual's ability to move beyond a goal-selection stage and can play a role in one's inability to turn those goals into actions (Albert & Luzzo, 1999). Perceived career barriers can stem from lack of opportunities to make informed career decisions, economic needs, educational limitations, lack of familial support, or other considerations pertaining to race and/or gender expectations as they relate to career choices. For example, a student may perceive his or her race or ethnicity to be a barrier to achieving career goals if he or she has never met anyone from his or her race or ethnicity in that particular career field of interest. Perceived career barriers are considered major influencers in the career development of students, as they may hinder their abilities to make congruent career choices and may, ultimately, lead to uninformed career foreclosures and unclear initial career choices (Albert & Luzzo, 1999). To that end, career counselors may want to consider the existence of career barriers when working with college student populations, while taking into account the interrelatedness of cultural characteristics.

Career Decision Self-Efficacy

Career decision self-efficacy has been considered a significant factor in the career development of college students for many years (Betz, 2004; Chung, 2002; Conklin, Dahling, & Garcia, 2013; Foltz & Luzzo, 1998; Gloria & Hird, 1999; Grier-Reed & Ganuza, 2012; Quimby & O'Brien, 2004; Taylor & Betz, 1983). Grounded in Bandura's concept of self-efficacy, career decision self-efficacy refers to an individual's belief that he or she can successfully complete tasks necessary to making career decisions (Taylor & Betz, 1983). Moreover, students with lower levels of career decision self-efficacy often make initial career choices primarily based on parent expectations or job and salary outlook without considering career congruence with their skills, interests, personality traits, or abilities, which lends to the need for further investigation into the certainty of career choices (Alika, 2012; Betz, 2004; Keller & Whiston, 2008; Kniveton, 2004; Wang & Castaneda-Sound, 2008). Furthermore, students with lower levels of career decision-making self-efficacy often exhibit feelings of depression, stress, and anxiety as a result of unclear goals and plans regarding their careers post-graduation and tend to have negative perceptions about their overall self-efficacy and self-esteem (Lent & Hackett, 1987; Robbins, 1985; Wang, Zhang, & Shao, 2010).

Cultural Considerations

Because we know that college students are not a homogenous group, it may be important to consider the influences of certain cultural characteristics. In addition to the relationships between perceived career barriers and career decision self-efficacy on the certainty of initial career choice, this study examined the impacts of cultural

characteristics on the certainty of initial career choice variables. Particular emphasis was placed on race, gender and college generational status. These factors may be important to consider, as supported by the literature, indicating gender and race to be major influencers on the existence of perceived barriers to career decision-making and on levels of career decision self-efficacy (Luzzo, 1993; 1996; Luzzo & McWhirter, 2001, McWhirter, 1997; Perrone et al., 2001; Trusty et al., 2000). What is missing from the literature, however, is specific information on the ways in which these cultural characteristics might moderate between perceived career barriers and certainty of initial career choice and between career decision self-efficacy and certainty of initial career choice. In addition, there is limited research on special college populations such as the EOF student population (Winograd & Shick Tryon, 2009). In the following section, the theoretical framework, Social Cognitive Career Theory (SCCT) will be discussed, as it served as the theoretical underpinning for this dissertation study.

Theoretical Framework

Social Cognitive Career Theory (SCCT) provides a useful framework for understanding the effects of self-efficacy on initial career choice and was used to frame this study (Albert & Luzzo, 1999; Lent, 2005; Lent et al., 1994, 2002; Luzzo, 1996; McWhirter, 1997). Grounded in Bandura's (1986) Social Cognitive Theory which addresses cognitive, self-regulatory, and motivational processes, SCCT describes specific mediators for learning experiences which can, in turn, influence career behaviors, including making initial career choices. In general, SCCT refers to influences among individuals, their behavior, and their environments and how these factors ultimately

shape thoughts and behavior. In addition, SCCT attempts to explain the development of career interests and choices (Albert & Luzzo, 1999). From a SCCT perspective, the three factors that shape career development are *self-efficacy*, *outcome expectations*, and *personal goals*. According to Lent, Brown, and Hackett (1994), self-efficacy refers to an individual's belief that he or she can complete a specific task successfully. Outcome expectations describe an individual's personal beliefs about the expectations or outcomes of his or her behaviors. Consequently, levels of self-efficacy and the outcome expectations individuals possess directly impact the personal goals they set (Albert & Luzzo, 1999; Bandura, 1986; Lent et al., 1994, 2002). Research supporting SCCT has postulated that these cognitive and contextual factors directly impact career choices and actions (Lent et al., 1994).

Purpose of the Study

The purpose of this study was to identify the relationships and interactions between perceived barriers and career decision self-efficacy on the initial career choices among students in an Educational Opportunity Fund Program (EOF) at a large northeastern public university. This study provided more information about EOF students and aspects of their career development before officially beginning their college careers, with particular emphasis on the certainty of initial career choice. This study also examined the impact of certain cultural characteristics (race, gender and college generational status) on the certainty of initial career choice.

Significance of the Study

In this study, I focused on the career choice aspect of the career development process among a specific population of pre-freshman college students, with a particular emphasis on the relationship between perceived career barriers and career decision self-efficacy on the certainty of initial career choice, that is, the level of certainty one has about his or her career choice when first entering college. I was particularly interested in identifying the influence that certain cultural characteristics have on perceived career barriers, career decision self-efficacy and the certainty of initial career choice, such as race, gender and college generational status. Since the research investigating EOF populations seemed to be limited, a need existed for further research on this unique population. As previously mentioned, there has been some emphasis on the academic persistence of EOF students, yet very little focused on their overall career development (Winograd & Shick Tryon, 2009).

Because of these limitations, it is important to consider the literature addressing the specific characteristics among EOF populations, including the career influences of race and ethnicity, socioeconomic status, and college generational status. Existing within this set of literature are the recommendations for further research with students who possess such characteristics. For example, in a study testing for the effects of race and ethnicity on career decision-making using approximately 2,700 incoming freshman participants, there was statistical significance between race and ethnicity and career-related behaviors (Perrone et al., 2001). Similarly, additional studies focusing on African American and Latino student populations specifically cited strong correlations between

race and ethnicity and their impacts on career-related decisions, noting the strongest effects on career decision self-efficacy and perceived career barriers (Corkin, Arbona, Coleman, & Ramirez, 2008; Grier-Reed, Skaar, & Conkel-Ziebell, 2009; Guerra & Braungart-Rieker, 1999; Tovar-Murray et al., 2012).

In another study pertaining to the intersection of race, gender, and SES as it relates to postsecondary educational and career-related choices (Trusty et al., 2000), a relationship existed among all three variables. Results indicated that race and ethnicity have a greater impact on college major and career choices among males from lower SES and the weakest impact on college major and career choices for females from higher SES backgrounds. Lower SES appeared to heighten the effects of race and ethnicity while higher SES diminished these effects. Blustein (cited in Trusty et al., 2000) addressed the need for continuous research in the areas of SES, gender, and race and ethnicity and supported a more comprehensive approach to career counseling, incorporating the simultaneous effects of all three variables.

Lastly, the first generation student population tends to have lower levels of self-efficacy and struggle with goal setting and engagement in the college experience. According to Conley and Hamlin (2009), “the dilemmas that first-generation college students face are profound and complex, for they are often ‘caught between two worlds’ with no obvious way to reconcile this polarized existence” (p.48). Research supports the idea that student persistence in college is primarily affected by student engagement and sense of belonging; however, students are less likely to become engaged in campus activities if they do not feel congruent with their environments (Owens et al., 2010;

Stuber, 2011). Because we know that engagement in the career development process has been linked to overall student engagement and persistence in college, the career needs of first generation college students needs more attention from researchers.

The results of this study were significant because they not only added to the already existing literature addressing unique college populations, but they can also assist career counselors and administrators in working with the EOF student population on career-related interventions. Although a significant amount of research exists addressing perceived career barriers and career decision self-efficacy of college students, there is little to no research addressing their relationships as it relates to the certainty of initial career choice. Moreover, the existing studies fail to address the intersection of cultural characteristics (race and ethnicity, gender, college generational status,) among a special population of students who are both educationally and economically disadvantaged. Lastly, this study addressed the certainty of initial career choice, prior to entering college. Therefore, this study may enrich the literature by nature of the variables that were studied.

Definition of Terms

Academically underprepared. A term used to describe those who test into one or more college remediation courses (McCabe, 2003).

Career development. A term that describes “the lifelong psychological and behavioral processes as well contextual influences shaping one’s career over the life span” (Niles & Harris-Bowlsbey, 2005, p. 12).

Career decision self-efficacy. A term that describes an individual's belief that he or she can successfully complete tasks necessary to making career decisions (Taylor & Betz, 1983).

Certainty of initial career choice. For the purpose of this study, a term referring to the level of certainty one has about his or her career choice when first entering college.

College generational status. A term used to describe whether a college student is a first-generation college student (parent(s) did not attend college) or non-first-generation college student (Hertel, 2002).

Cultural Characteristics. For the purpose of this study, this term will be used to describe race and ethnicity, gender, and college generational status.

Educational Opportunity Fund Program (EOF). A state-wide college access program created by law to ensure meaningful access to higher education for those who come from backgrounds of economic and educational disadvantage (<http://www.nj.gov/highereducation/EOF/>).

Ethnicity. A term that refers to a person's identification with a particular cultural group to which he or she is usually biologically related (Cameron & Wycoff, 1998).

First generation college students. Students whose parents did not attend a postsecondary institution (Wang & Castaneda-Sound, 2008). For the purpose of this study, guardians will also be considered.

Gender. For the purpose of this study, *gender* refers to one's self-identified biological sex. Participants will be given the choice of identifying as either male, female, transgender, or other.

Occupation. A term used to describe a craft, trade, profession, or other means of earning a living. (<http://www.bls.gov/ooh/about/glossary.htm#O>).

Perceived career barriers. Events or conditions, either within the person or the environment, that make career development difficult (Swanson & Woitke, 1997).

Race. For the purpose of this study, *race* refers to one's self-identified "category of persons who are related by a common heredity or ancestry and who are perceived and responded to in terms of external features or traits" (Wilkinson, 1993; p. 19).

Racial minority. A term used throughout this study to describe those who are not members of the dominant culture, due to their racial, ethnic, or cultural backgrounds, including the following groups: African American/Black, Hispanic/Latino, Asian, Native American (<http://www.cdc.gov/minorityhealth/populations/REMP/definitions.html>).

Self-efficacy. A term that describes an individual's belief that he or she can complete a specific task successfully (Bandura, 1997).

Social Cognitive Career Theory (SCCT). A theoretical framework that focuses on cognitive variables such as self-efficacy, outcome expectations, and personal goals and their interactions with persons and their environments including race and ethnicity, gender, social supports, and perceived barriers and their impacts on career development (Lent et al., 1994).

Socioeconomic status. A term used to describe a combination of education, income, and occupation. It is commonly conceptualized as the social standing or class of an individual or group (<http://www.apa.org/pi/ses/resources/publications/factsheet-education.pdf>). For the purpose of this study, it is primarily used to refer to low-income.

Organization of the Dissertation Study

This study is presented in five chapters. Chapter 1 includes an introduction and background of the literature pertaining to the EOF student population, perceived career barriers, career decision self-efficacy, and some of the unique cultural characteristics that may impact initial career choice among the EOF population through the SCCT theoretical framework. Also included is a statement of purpose and possible significance of the study and a definition of key terms. Chapter 2 includes an in-depth review of the literature of the key concepts that were examined. Chapter 3 includes the methodology that will be used, research questions, description of the sample population, and the study instruments. Chapter 4 includes a presentation of findings. Lastly, Chapter 5 reviews the interpretation of findings and implications for career counselors, college administrators and counselor educators.

Chapter Two

Introduction

The initial career choices and the overall career development of college students remain important factors when considering student engagement and persistence in college (Pascarella & Terenzini, 2005; Tinto, 1993). Career professionals are tasked with helping students make informed career decisions based on academic and career interests, skills, and personality traits through self-appraisal while serving as a resource for occupational and labor market information and providing them with opportunities for career exposure through internships and other experiential activities. Furthermore, as college demographics shift and the number of historically underrepresented racial and ethnic minorities continue to increase, career practitioners must consider the socio-cultural factors that may impact initial career choice (Duffy & Klingaman, 2009; Engle et al, 2008; Tovar-Murray et al., 2012).

However, little research examines special college populations like EOF students, and how certain career and cultural characteristics relate to their ability to feel certain about their initial career decisions. This study addressed the certainty of initial career decision-making in relation to the impact of career decision self-efficacy and perceived barriers among students admitted into an EOF program, a college access program that consists primarily of students from racial and ethnic minority groups who are mostly first-generation college students and who are all from low socioeconomic backgrounds (Betz, 1994; Betz & Hackett, 1983; Engle et al., 2008; Hackett & Betz, 1981; Lent et al., 1994; Swanson & Woitke, 1997; Winograd & Schick Tryon, 2009).

The purpose of this literature review is to (a) provide the theoretical framework to the study; (b) highlight the significance of career development among college students through an historical overview of career development interventions, along with an understanding of career self-efficacy and perceived career barriers; (c) examine the unique needs of EOF (EOF) students; and (d) address the unique cultural characteristics that may impact career decision-making.

Historical Context of Career Development

Career development describes “the lifelong psychological and behavioral processes as well as contextual influences shaping one’s career over the life span” (Niles & Harris-Bowlsbey, 2005, p 12). For the purpose of this study, the career development process will encompass an individual’s career decisions, career patterns, and the ways in which they integrate life roles and values expression into those decisions, including social and cultural characteristics. *Career development interventions*, therefore, refer to activities that assist individuals with the management of career development tasks (Niles & Harris-Bowlsbey, 2005; Spokane, 1991).

Interest in vocational interventions in the United States during the early part of the 20th century increased as a result of the economic shift from agriculture to the booming of the industrial and manufacturing industries. With increased occupational choices and change in the nature of occupational choices, interventions related to occupational decisions came about. Continuing into the 1920s, occupational choice interventions as well as job-placement services played an integral role in the history of career

development in the United States (Herr & Shahnasarian; 2001; Niles & Harris-Bowlsbey, 2005; Pope, 2000; Savickas, 1994, 1999).

Frank Parsons, considered to be the father of vocational guidance, helped shape the history of career development within the field of counseling in particular. In 1908, Frank Parsons formed the Bureau of Vocational Guidance, geared toward helping young people make career decisions. Parsons' contributions to the career guidance movement have been quite significant, as noted by his major work, *Choosing a Vocation*, in which he outlined the following framework for career decision-making:

1. Develop a clear understanding of self, aptitudes, abilities, interests, resources, limitations, and other qualities.
2. Develop knowledge of the requirements and conditions of success, advantages and disadvantages, compensation, opportunities, and prospects in different lines or work.
3. Use true reasoning on the relations of these two groups of facts. (Parsons, 2005, p.5)

Parsons' framework to career decision-making incorporated both social and economical shifts (e.g., urbanization, child labor, immigration, growing division of labor) in the United States and aided in the job placement of young workers based on aptitudes, skills, and interests (Niles & Harris-Bowlsbey, 2005, Zunker, 2006). Frank Parsons' framework, now known as the Parsonian approach, helped form the *trait-and-factor* approach to career development interventions (self-knowledge, occupational knowledge, decision-making skills). The basic philosophy of the trait-and-factor approach is:

1. As a result of one's self-characteristics, each person is best suited for a specific type of job.
2. People in different occupations have different self-characteristics.
3. Occupational choice is a single, point-in-time event.
4. Career development is primarily a cognitive process based on rational decision-making.
5. Occupational adjustment depends on the "occupational fit" between worker and work demands. (Niles & Harris-Bowlsbey, 2005, p. 15)

In addition to the influential work of Frank Parsons, there were several other prominent contributors to the development of career interventions in the early 20th century, including publications citing the significance of career placement, testing, and occupational fit based on skills, interests, and personality traits and the establishment of organizations such as the National Vocational Guidance Association, now known as the National Career Development Association and the U.S. Department of Labor.

Publications such as *The Vocational Guidance Newsletter*, the *Vocational Guidance Bulletin*, and the *Dictionary of Occupational Titles* which listed, defined, and coded approximately 18,000 job titles are all considered to be some of the leading influencers of career development interventions. By the early 1940s, the use of testing and placement services increased as a result of World War II and the implementation of the G.I. Bill (Herr & Shahnasarian, 2001; Pope, 2000, 2011; Savickas, Pope, & Niles, 2011.)

During the early 1950s, career development interventions began to evolve and shift from a one point in time ideology to an expanded idea that career development took

place throughout the lifespan, making the need for appropriate interventions even more significant. One of the primary contributors to this shift was Donald E. Super when he performed the first longitudinal study of career patterns and development (Niles & Harris-Bowlsbey, 2005; Super, 1951). Super (1951) refined and created the new definition of vocational guidance to be “the process of helping a person to develop and accept an integrated and adequate picture of himself and of his role in the world of work, to test this concept against reality, and to convert into reality, with satisfaction to himself and to society” (p. 89). Donald Super’s approach to career development helped to highlight the impact of economical and sociological factors on the career development process throughout the lifespan.

Several professional organizations were formed during the 1940s and 1950s that supported the study of career development including the American Psychological Association via the creation of the Division of Counseling and Guidance, later renamed Counseling Psychology and the American Personnel and Guidance Association, which was formed as a result of the merger between the National Vocational Guidance Association, the American College Personnel Association, the National Association of Guidance Supervisors and Counselor Trainers, and the Student Personnel Association of Teacher Education in 1951. In addition, the *American School Counselor Association* was created in 1953 and focused their efforts on the career development of school-aged youth. In 1985, the National Vocational Guidance Association changed its name to the National Career Development Association (NCDA) and established a clear set of policies and competency statements to support career practitioners. The NCDA still remains one of

the primary organizations supporting career counseling practitioners who work within private practice, secondary, and post-secondary settings (Herr & Shahnasarian, 2001; Pope, 2008; Savickas et al., 2011; Niles & Harris-Bowlsbey, 2005).

Career Development in College

The role of college career centers has evolved historically since the early 20th century. Despite the various roles that many career counselors and advisors currently play in the development of college students, the primary goal of career services began as a means for job placement, rather than a focus on career decision-making based on skills, values, and interests. By the late 1800s, the number of employment agencies grew considerably, and colleges and universities began to follow suit by establishing placement offices of their own to assist students with job placement upon graduation. Influenced by Frank Parsons's vocational guidance movement, several placement offices were established at colleges and universities across the country. Although placement offices did, in fact, focus their efforts on skill-building interventions such as resume writing and interviewing, they fell short on career counseling and development interventions relating to self-appraisal, educational and occupational exploration, and career planning as it related to other life roles and cultural characteristics (Herr, 2001; Niles & Harris-Bowlsbey, 2005; Parsons, 2005; Pope, 2000).

A shift in career services within higher education settings began in the late 1950s and early 1960s, when many of the career interventions that took place within the counseling center moved into the placement offices. This allowed for a more comprehensive approach to career interventions, allowing career professionals to work

with students from a developmental perspective, rather than solely providing services beneficial for one point in time. Several studies have been conducted to assess the ways career centers currently function (e.g., Herr & Shahnasarian, 2001, Niles & Harris-Bowlsbey, 2005; Whiteley, Mahaffey, & Geer, 1987). Five approaches to the delivery of career-related interventions include:

1. Macrocenter approach: broad range of services, including career and personal counseling, testing, and special functions such as training and consultation with some advising services offered
2. Counseling orientation approach: similar to macrocenters except with fewer career services
3. General-level service approach: broader functions, more services to more students than a conventional counseling center
4. Career planning and placement approach: career-oriented services with minimal counseling and other functions
5. Minimal service approach: characterized by providing minimal services in all areas.

(Niles & Harris-Bowlsbey, 2005, p. 350)

It has become clear that the college student population can benefit greatly from intentional, proactive interventions from career practitioners who can help them make better informed decisions regarding academic major and career decisions as they relate to their values, interests, personality traits, and skills. Researchers beginning as early as the 1980s have cited studies where students have identified the need for assistance in the

following areas: a) knowing more about themselves; b) identifying career goals; c) becoming more certain of their career plans; d) exploring career options; e) educational planning; and f) learning job-search skills (Reilly & Healy, 1989; Niles & Harris-Bowlsbey, 2005). Interventions including self-appraisal activities, opportunities for career exposure, and skill-building workshops and training sessions pertaining to job search strategies and interviewing techniques can all help move students further along in their career development processes. Furthermore, career interventions can help students with identifying possible barriers to career decision-making as they relate to cultural characteristics that may affect their career development process. Such interventions are common across the various types of service centers, as described earlier.

Career-related interventions should begin early in a student's tenure in college, preferably during their first year. A majority of first-time freshmen lack clear career and occupational goals regardless of whether they have chosen an academic major. Researchers (e.g., Burton, 2006; Gordon, 1995) have shown that only 8% of students who have declared a college major have a clear sense of understanding of their major as it relates to occupational and career goals. It is estimated that between 20% and 50% of incoming college students are undecided about their career interests and lack the career maturity needed to make clear and well-informed academic and occupational decisions. As a result, about 50% to 70% of first-time freshmen will change academic majors. Most incoming freshman lack the necessary knowledge about occupations and are unaware of their skills, values, and personality traits as they relate to their initial career choices. Over the past few decades, it has become evident that first year college students have

exhibited higher levels of anxiety related to career decision-making (Gordon & Steele, 2003; Lepre, 2007).

This issue is even greater for students who have not been exposed to career interventions during their K-12 years and for those who are the first in their families to attend college, such as those admitted into EOF Programs. As highlighted in several studies, key factors that can impact anxiety regarding initial career choice include a) meager high school preparation; b) low grades within specific subject areas that may be required for specific academic majors and occupations; c) false realities about occupations; and d) uninformed parents or guardians (Burton, 2006; Gordon & Steele, 2003; Lepre, 2007; Ringer & Dodd, 1999). Gardner (as cited in Burton, 2006) noted that advising should be more connected to an early, intrusive career planning process to increase the chances of a more informed major selection earlier in their college tenure. Keene (as cited in Lepre, 2007) reported that students who struggle with making initial career decisions often exhibit lower grade point averages, and are less motivated to get involved in campus activities.

Educational Opportunity Program Students

Opportunity programs exist in many colleges and universities across the country, providing access to higher education to students who have shown exceptional academic potential yet lack the academic preparedness necessary to gain admission into post-secondary institutions. Such college access programs consist primarily of students deemed historically underrepresented in higher education, that is, students who are members of racial and ethnic minority groups who are economically disadvantaged

(<http://www.nj.gov/highereducation/EOF/>). Additionally, the majority of opportunity program students are the firsts in their families to attend college. This population faces unique stressors as they relate to college transitions, adding to the already existing natural stressors faced by the college student population as a whole. To mitigate these stressors, counselors and administrators who work within opportunity programs help to provide academic, personal and financial support throughout a student's college tenure (Engle et al., 2008; Winograd & Shick Tryon, 2009).

For example, in one large Northeastern state, approximately 32,000 low-income students were admitted into college through the EOF Program from Fall 2000-2008, with 41% of the population made up of African Americans, 31% of Hispanic or Puerto Rican descent, 13% White, 8% Asian, and 7% identified as other (www.nj.gov/highereducation/EOF). Within that group, 68% were female and 32% male. According to the state eligibility requirements scale for admission into an EOF program for the 2012-2013 academic year, maximum household incomes ranged based on the number in the household. For example, for a one person household, annual household income could not exceed \$21,780, two person household, \$29,420, three person household, \$37,060 and so forth (www.nj.gov/highereducation/EOF).

Students admitted into an EOF program are required to attend a 6-week residential summer bridge program prior to the start of their first semester, designed to assist students with the successful academic and social transition to the college/university experience. The summer bridge program includes college courses (for credit and remediation), academic support, including a structured tutoring program, and

programming to meet the psychosocial needs of traditional aged college students. The pre-college experience has shown to be successful by helping to ameliorate college transitional issues, including leaving their families for the first time, developing a sense of independence, and becoming acclimated to campus culture.

As already suggested, college students tend to struggle during their first year in college in the areas of academic coursework, a newfound independence if living on campus, and decision-making pertaining to college major and career choices (Pascarella & Terenzini, 2005; Tinto, 1993). Initial career choices in particular can cause many students anxiety when challenged with the task of self-exploration as it pertains to skills, interests, values, and personality traits and make a well-informed connection to occupations. Considering the influences that race and ethnicity and socioeconomic status can have on career decision-making, it is important for counselors and administrators to provide appropriate career-related interventions that take these cultural characteristics into account. A significant amount of research already exists relating to the cultural impacts on career decision-making, including race and ethnicity, college generational status and SES, although very little looks at the impact on the certainty of initial career decisions.

Certainty of Career Choice

For traditional age college students, the process of making clear and congruent career choices is considered part of a normal developmental process (Super, 1990). Chickering and Reisser's seven vectors of college student development (1993) highlighted the developmental task of "developing a purpose", noting the importance of

developing a clear vocational goal and making a meaningful commitment to specific interests and activities (Sumari, Louis, & Sin, 2009). In Donald Super's (1990) five stages of career development, the career choice process takes place during the exploration stage, a stage described as a time when career choices are tentatively made, yet not finalized. Super's model of career development focuses heavily on the idea that one's self-concept as it pertains to career development can change over time and develops as a result of life experiences. Therefore, career development and one's vocational identity is considered fluid throughout the life-span (Super, 1990).

Career choice has been a widely researched topic within the fields of counseling and vocational psychology and is considered to be one of the most significant developmental tasks for college students (Amundson, Borgen, Iaquinta, Butterfield, & Koert, 2010; Dik, Sargent, & Steger, 2008; Galles & Lenz, 20013; Niles & Harris-Bowlsbey, 2005). A common thread among much of the existing research is the idea that career choice is shaped by both internal and external factors, and is based upon life experiences at a given point in time (Forbus, Newbold, & Mehta, 2011; Galles & Lenz, 2013; Super, 1990). Determining levels of career certainty for pre-freshman college students may be of particular interest to counselors and administrators, as it can ultimately effect whether or not someone will solidify a college major that may lead to that specific occupation (Astin, 1993; Gordon & Steele, 2003; Ringer & Dodd, 1999). Because we know that traditional age college students tend to be at a developmental stage where they are still working to crystallize their career interests and overall self-concept, they may base their initial decisions, that is, decisions during their pre-freshman

experiences, on limited life and work experiences (Chickering & Reisser, 1993; Super, 1990; Suzuki, Amrein-Beardsley, & Perry, 2012). Moreover, one's level of certainty regarding a particular career choice can be negatively impacted by dysfunctional career thoughts and their overall vocational identity. Lastly, it is important to keep in mind that, the more certain someone is about making congruent career choices, the better the chances will be for overall career satisfaction and productivity in tasks related to educational and work-related tasks leading to that career choice (Tracey, 2010).

Studies have suggested that certainty of career choice may be related to developing career maturity, that is, the maturation of attitudes related to making career decisions (Luzzo, 1993). Savickas (1984) described career maturity as the ability to make well-informed and appropriate decisions regarding careers. Overall, those with a greater sense of career maturity are much more likely to participate in career-related tasks and match their values, interests, personality traits and skills to an occupation (Luzzo, 1993). In a study (Farrell & Horvath, 1999) examining factors related to certainty of career choice among undergraduate students ($N=110$), career maturity, along with other factors related to self-concept and self-efficacy, was directly correlated with certainty of career choice. Because we know that career maturity and career decision self-efficacy have been linked in other studies (Betz, 2004; Betz & Taylor, 2006; Chung, 2002), this particular study is noteworthy. In another study (Tracey, 2010) investigating the correlation of self-efficacy and career choice certainty among adolescents and adults ($N=2145$), results yielded a strong correlation between levels of self-efficacy and certainty of career choice. Although there are a few existing studies focused on certainty

of career choice, it is clear that additional research is needed to fully comprehend factors that may influence career certainty. As previously mentioned, this study will focus on certainty of participants' initial career choice, prior to beginning their first college semester.

Perceived Career Barriers

Within a social cognitive career theory framework, perceived career barriers are described as events or conditions, either within the person or the environment, that make career development difficult (Lent et al., 1994; Swanson & Woitke, 1997) and are considered to be a strong motivating factor to the career development process. Brown and Lent (1996) believed that despite an individual's level of career decision self-efficacy, outcome expectations, and interests that are congruent with those expectations, he or she may still avoid selecting a particular career if she/he perceives that there are barriers related to those goals and interests. These perceived barriers influence an individual's ability to move beyond a goal-selection stage and can play a role in one's inability to turn those goals into actions (Albert & Luzzo, 1999).

Such barriers can derive from both internal (intrapersonal) and external (environmental) factors. For example, an internal barrier can refer to a Latina female student who has low self-efficacy as it relates to becoming a doctor, whereas an example of an external barrier might be based on a situation when the Latina female student faced discrimination as a result of her ethnicity. Albert and Luzzo (1999) argued that some individuals are not afforded the opportunity to make initial career choices under favorable conditions as a result of financial need, educational limitations, lack of family support, or

other considerations such as race and ethnicity and gender. For some, the perception of career barriers results in the foreclosure of certain career choices as they may be perceived as unattainable.

Swanson and Tokar's initial investigations of career barriers focused on the career development of women in particular, citing that women face substantially greater perceived barriers than their male counterparts due largely to fears of discrimination based on gender and life and career role conflicts (Swanson et al, 1996; Swanson & Woitke, 1997). Since then, research on career barriers has been extended from a gender focus to a focus on the role that race and ethnicity play in the formation of perceived career barriers. Darrell Luzzo's study (1993) investigated ethnic differences in college students (N=375) as they related to perceptions of barriers to career development at a large California state university. This study showed significant ethnic differences among various racial and ethnic groups including African-American, Latino, Caucasian, Filipino, and Asian-American participants, with the most significant differences in perceived barriers among African-Americans and Caucasians in categories of racial discrimination, financial problems, and study skills concerns. Results cited African Americans as having the highest amount of perceived barriers amongst all racial and ethnic groups. Also worth mentioning was the analysis of social class via the use of the Duncan Index, a social class measurement used in many other studies of career development. Preliminary results revealed a noteworthy social class difference between ethnic groups, specifically between Latino and Caucasian participants.

In a follow up study, Luzzo (1996) examined the relationship between perceived career barriers, career decision-making attitudes, knowledge of career decision-making principles, and the career decision self-efficacy of first and second year college students (N=188) at a Midwestern community college. Participants varied in race and ethnicity (Caucasians, African-Americans, Latinos, Asian-Americans) although the majority were of Caucasian descent. Research findings indicated that perception of career barriers may not play a significant role in the overall career development of all students; however, there was clear evidence that suggested the significant relationship between perceived career barriers and career decision self-efficacy, in that, higher levels of perceived barriers were correlated with lower levels of career decision self-efficacy. Although this study was helpful in emphasizing the significance of perceived career barriers to other aspects of career development, it lacked in differentiating cultural differences throughout the study.

Another notable study (McWhirter, 1997) investigated ethnic and gender differences in perceived educational and career barriers using a sample of Mexican-American and Euro-American high school juniors and seniors (N=1139). Barriers investigated included ethnic and sex discrimination, financial problems, family attitudes, perceived lack of ability, lack of fit, and lack of interest. Although this study did not specifically focus on college students, the results still highlight useful information that can be used by college career counselors. Results were consistent with the investigator's hypothesis, revealing that females perceived a greater number of career barriers over their male counterparts while the Mexican-American participants anticipated more career

barriers than their Euro-American counterparts. McWhirter (1997) stressed the influential nature of perceived career barriers to career choice and the overall career development process.

In an effort to expand upon already existing research, Luzzo and McWhirter (2001) conducted another study on the sex and ethnic differences in the perception of educational and career barriers and levels of coping efficacy with undergraduate first year students (N=286) at a small southern university. Similar to previous studies, women and ethnic minorities anticipated more perceived career barriers and lower self-efficacy for coping with such barriers in comparison to their male and Euro-American counterparts. Socioeconomic status was also self-reported by participants, of which 80% of participants reported as middle-class. As revealed in previous studies, the most significant barriers for ethnic minorities were related to the perception that they would experience negative comments about their ethnicity and discrimination as a result of their race or ethnicity. Similarly, female participants cited the most critical barriers they anticipated were related to discrimination based on their sex and having a harder time getting hired than their male counterparts (Luzzo & McWhirter, 2001).

Lent et al. (2002) utilized a qualitative methodology to examine the perceived influences on college students' selection and implementation of career choices from two different universities by two semi-independent research teams (Site 1, N=19; Site 2, N=12). One site was a large state university near a metropolitan area and the second was a small technical college near an inner-city area, consisting primarily of students from lower SES backgrounds, many who were first-generation college students. Interviews

focused on factors affecting career choice, supports and barriers to pursuing career choices, and coping strategies used to manage those barriers. Although there were relatively few participants who reported feelings of discouragement toward their career pursuits, there were reports of perceptions of barriers as related to financial concerns, which was the most prevalent, personal difficulties (college adjustment, depression, and time management issues), academic ability concerns, negative family influences, role conflicts, and negative school or work experiences. Similarly, results also indicated that ability concerns and negative experiences regarding work conditions played a role in foreclosed career choices (Lent et al., 2002). These findings coincide with those of Swanson and Tokar (1991) who initiated the investigation of perceived career barriers.

Career Decision Self-Efficacy

Over the past several years, there has been significant research done on the influence of career decision self-efficacy and career development among college students, in relation to self-awareness, career maturity, vocational identity, and career indecision (Betz, 2004; Chung, 2002; Foltz & Luzzo, 1998; Gianakos, 1996; Gloria & Hird, 1999; Grier-Reed & Ganuza, 2012; Gushue, Clarke, Pantzer, & Scanlan, 2006; Lease & Dahlbeck, 2009; Mau, 2004; Paulson & Betz, 2004; Quimby & O'Brien, 2004; Sandler, 2000, Wang & Castaneda-Sound, 2008). Career decision self-efficacy derives from Albert Bandura's concept of self-efficacy, described as "the belief in one's ability to successfully perform a specific task," and has been linked to initiations of behaviors, persistence despite obstacles, and successful performance" (Quimby & O'Brien, 2004, p.

324). Self-efficacy theory in general has aided in the understanding of student difficulties pertaining to both personal and career development (Paulsen & Betz, 2004).

Originating from Taylor and Betz (1983), career decision self-efficacy refers to the level of confidence students possess about their self-efficacy, or belief in, their abilities to properly gather educational and occupational information and participate in goal-planning activities (Sandler, 2000). Researchers (e.g., Betz, 2004; Foltz & Luzzo, 1998; Gibbons & Shoffner, 2004) have explored and identified a strong connection between career decision self-efficacy and the level of student engagement in career-related activities including seeking out career advisement, participation in career-related programs and events, and the participation in experiential activities such as internships and fieldwork opportunities.

Several studies have explored and revealed a strong correlation between career decision self-efficacy and overall involvement in career-related interventions (Betz, 2004; Chung, 2002; Foltz & Luzzo, 1998; Gianakos, 1996; Gloria & Hird, 1999; Gushue, Clarke, Pantzer, & Scanlan, 2006; Lease & Dahlbeck, 2009; Mau, 2004; Paulson & Betz, 2004; Quimby & O'Brien, 2004; Sandler, 2000, Wang & Castaneda-Sound, 2008). Taylor and Betz (1983) introduced the concept of career decision self-efficacy in their original study where they investigated the career indecision of 346 college students. Since then, numerous studies investigating the significance of career decision self-efficacy on career choice and engagement in career-related behaviors have been conducted.

In a 1993 study conducted with 233 undergraduate students (Luzzo, 1993), a significant relationship was discovered between career decision self-efficacy and career decision attitudes. This study was central in supporting the idea that career decision self-efficacy significantly impacted the career decision-making process. Since then, additional studies emphasizing the relationship between career decision self-efficacy and career choice as it relates to the influence of cultural characteristics have also been investigated. Gloria and Hird (1999) examined the differences in career decision self-efficacy, trait anxiety, and ethnic identity of 687 undergraduate students. Results showed that racial and ethnic minority students exhibited lower levels of self-efficacy as it related to initial career choice as compared to their counterparts. Additionally, students from racial and ethnic minority groups exhibited higher levels of trait anxiety when compared to their White peer counterparts. Quimby and O'Brien (2004) investigated the predictors of student and career decision self-efficacy among 354 nontraditional-aged female college students. Results indicated that perceived barriers and social support significantly impacted career decision self-efficacy, with social support having the greatest influence. Based on the findings, one can hypothesize that the unique characteristics of nontraditional-aged female college students (number of children, age, marital status, work status, income) were related to career decision self-efficacy.

Career decision self-efficacy continues to be cited throughout the literature as one of the most significant factors influencing career choice, attitudes and behaviors regarding career-related interventions, and its relation to overall college student development (Betz, 1994; Hackett & Betz, 1981; Lent et al, 1994, 2002; Niles & Harris-

Bowlsbey, 2005; Zunker, 2006). Further research investigating the interrelatedness of cultural characteristics and career decision self-efficacy is still needed. Consequently, the social cognitive career theory framework (SCCT) will be used to investigate the relationship between perceived career barriers and career decision self-efficacy on the initial career choice among students in EOF students. In an effort to provide a thorough background of SCCT, the theoretical underpinnings of the framework will be discussed next.

Theoretical Framework

In order to better understand how the concepts in my study interact, the SCCT theoretical model is being used to frame the work in this study. In order to provide a clearer understanding of SCCT, the following section will include an overview of Bandura's Social Cognitive Theory (SCT), self-efficacy, and SCCT.

Foundation for SCCT: Social Cognitive Theory

Albert Bandura's (1986) social cognitive theory, developed from social learning theory (Bandura, 1977, 1997), is considered to be one of the most well-known theoretical frameworks within career counseling. Social cognitive theory (SCT) is based on the idea that people's ideas and behaviors are shaped by observing and learning from others, that is, the environment impacts learned behaviors. The SCT framework is often applied to research within the realms of education, counseling, and psychology and posits that actions are often influenced by the observation of rewarded behaviors in particular (Bandura, 1977, 1986; Rowan-Kenyon, Swan, & Shoffner, 2012). It is the belief that behaviors will most likely be repeated if the outcomes are seen to be positively rewarded.

Although learned behaviors are a main focus of social cognitive theory, the key principle of SCT lies within the context of cognition, that is, the way one thinks or interprets what is observed, therefore resulting in changed behavior (Bandura, 1977; 1986).

Self-Efficacy. Self-efficacy describes an individual's belief that he or she can complete a specific task successfully (Bandura, 1977). According to Bandura, self-efficacy greatly impacts the ways by which individuals go about facing their goals and any challenges that may be brought about by such actions. The concept of self-efficacy serves as the core of social cognitive theory in that, levels of self-efficacy can be impacted by observable external situations, which can heavily influence expectations of outcomes (Bandura, 1977, 1986). Bandura suggested that an individual's level of self-efficacy regarding a particular task can influence how he or she will either approach or avoid the completion of that task. Therefore, high self-efficacy as it relates to a particular task can lead to a motivated and positive approach to completion rather than low self-efficacy that will lead to avoidance behavior (Bandura, 1977; 1986).

Bandura identified four core influences on self-efficacy: a) performance accomplishments (later known as enactive mastery experiences); b) vicarious experiences; c) verbal persuasion and social influence, and d) physiological and emotional arousal (Bandura, 1986; 1997). Perhaps one of the most influential sources of self-efficacy beliefs is performance accomplishments. Because this source is based on one's own experiences, an individual's self-efficacy is directly shaped by his or her accomplishments and failures when completing specific tasks. Simply put, positive

accomplishments can lead to higher self-efficacy while failures can lead to lower self-efficacy toward that given task (Bandura, 1986; 1997).

Vicarious experiences describe how one's self-efficacy expectations can be influenced by the experiences of others. As proposed by social learning theory, cognition and actions are shaped by the observation of external factors, including the accomplishments and failures of others. Bandura (1997) proposed that in order to self-appraise abilities, social comparison is often necessary and influential. Verbal and social persuasion is another important source of self-efficacy that can be influential during times of discouragement. The encouraging words from others regarding one's overall abilities, especially as they relate to particular tasks, can help to mitigate any negative self-beliefs one might possess. Lastly, physiological and physical arousal describes the influence of an individual's physiological state on self-efficacy beliefs. For example, increased stress and anxiety levels can result in the failure to complete a given task or avoidance behavior (Bandura, 1986; 1997).

Social Cognitive Career Theory. Social cognitive career theory (SCCT) was introduced by Lent, Brown, and Hackett (1994) and served to bridge a connection between several already existing theories that focus on cognitive processes. The underlying premise and constructs of SCCT are rooted in social cognitive theory (Bandura, 1986), which include cognitive and motivational processes. The major goals of SCCT are to identify factors that shape learning experiences and, therefore, influence career decisions. In addition, SCCT attempts to understand the interrelatedness of values, skills, and interests and how they specifically influence growth as it relates to career

choices. Furthermore, personal agency is highlighted as a major construct of SCCT, which serves as a mediator for how and why an individual chooses to work toward a behavior, such as career decision-making (Lent et al., 1994, 2002; Zunker, 2006).

In Social Cognitive Career Theory, Lent, Brown, and Hackett (1994, 2002) support the idea that the following three variables influence career development: a) self-efficacy, b) outcome expectations, and c) personal goals. Most significantly, SCCT focuses on how these variables interact with other contextual factors including race and ethnicity, gender, social supports, and perceived barriers, all important factors to be considered in this study. Because of the inclusive nature of this theory, it is useful when exploring how individuals go about forming initial career choices and how they make decisions about their level of engagement with career-related interventions (Lent et al., 1994, 2002; Lent, 2005). The key constructs of SCCT (self-efficacy, outcome expectations, and personal goals) are considered to be three primary influencers on career development.

Self-Efficacy describes a set of beliefs regarding the completion of a particular task and is developed by four types of learning experiences: “1) personal performance accomplishments, 2) vicarious learning, 3) social persuasion, and 4) psychological states and reactions” (Lent et al., 1994, p. 380). Self-efficacy is increased when a specific task is accomplished and decreased when that particular task fails to get accomplished.

Outcome expectations describe an individual’s belief, often based on faulty perceptions, regarding the outcome of a particular experience. Lastly, personal goals are considered

to be the most influential constructs, as they help to maintain behaviors toward career development (Zunker, 2006).

The social cognitive career theory framework has helped career practitioners understand the interrelatedness of career-related interests, occupational choice, and levels of engagement as they relate to the participation in career-related interventions (Lent et al, 1994, 2002). SCCT suggests that career choices are directly influenced by self-efficacy and outcome expectations, while perceptions of career barriers moderate the relationship between interests and career choice. According to Lent et al. (1994, 2002), career interests lead to personal goals, personal goals lead to career choices, and career choices lead to behaviors. Because SCCT takes into consideration the contextual influences of constructs such as race and ethnicity, gender, and other environmental variables, a large body of research exists utilizing the framework and makes it a useful and effective framework when exploring the career development of students within Educational Opportunity Programs. This research will be addressed in the following section.

Cultural Characteristics Influencing Career Choice

Career-related interventions, including counseling and advisement, must consider the variety of cultural characteristics that may impact the career development process. Initial career choice can often be influenced by a number of cultural characteristics including race or ethnicity, gender, or socioeconomic status (Byars-Winston & Fouad, 2005; Trusty et al., 2000). For college students, another important factor in the career decision-making process is college generational status, that is, whether or not students are

of first-generation college student status. This study will focus on the following three cultural characteristics as they relate to career decision self-efficacy, perceived career barriers, and initial career choice: a) race and ethnicity; b) gender; c) college generational status. In addition, SES will also be discussed since all EOF students are from low-income backgrounds. These variables were chosen intentionally because each has been shown repeatedly to impact overall career development and decision-making in particular. Often, this group is referred to as students who have been historically underrepresented in higher education (Engle et al., 2008; Dockery & McKelvey, 2013; Schaeffer, Akos, & Barrow, 2010).

Race and Ethnicity

The continuous shift in college demographics makes it necessary that career counselors and college administrators fully understand and embrace the unique intersections of race, ethnicity and career development, in order to ensure effective career-related interventions. Within the past several years, the interplay of racial and ethnic identity and career development has been explored to assess the impacts of ethnic identity in relation to skills, interests, and values (Lepre, 2007; Luzzo, 1993; Luzzo & McWhirter, 2001; McWhirter, 1997; Osborn et al., 2007; Perrone et al., 2001; Trusty et al., 2000). Similarly, additional research has included a thorough investigation of career-related theoretical frameworks and interventions and their appropriateness for members of racial and ethnic minority groups (Hackett & Byars, 1996; Lent et al., 1994).

Perhaps one of the most significant relationships between ethnicity and career development lies in the theoretical context of self-concept. According to Super, an

individual's self-concept helps to shape one's initial career choices. A clearly defined self-concept is correlated with career maturity, that is, the ability to make well-informed career choices (Super, 1990). In a study conducted using approximately 2,400 first-year college students at a large mid-Atlantic university, a high correlation was shown between levels of ethnic identity development and career maturity for students from racial and ethnic minority groups while showing little to no correlation for students who identified as White (Duffy & Klingaman, 2009). In another study testing for the effects of race and ethnicity on career decision-making using approximately 2,700 incoming freshman participants, there was great statistical significance between race and ethnicity and career-related behaviors (Perrone et al., 2001). Similarly, additional studies focusing on African American and Latino student populations specifically cited strong correlations between race and ethnicity and their impacts on career-related decisions, noting the strongest effects on career decision self-efficacy and perceived career barriers (Corkin et al., 2008; Grier-Reed et al., 2009; Guerra & Braungart-Rieker, 1999; Tovar-Murray et al., 2012).

In addition to the linkage between racial and ethnic identity development and career development, there is a considerable amount of research citing the connection between acculturation and career-related concerns for members of racial and ethnic minority groups, including issues surrounding career decision self-efficacy and career choice. Acculturation describes the process by which individuals change behaviors, values, and attitudes as they adapt and function in a new culture or environment (Rivera, Chen, Flores, Blumberg, & Ponterotto, 2007). As it relates to career development, acculturation can affect the perceptions of and behaviors toward certain career-related

activities, ultimately impacting the types of career paths people are willing to pursue. For Latino students in particular, levels of acculturation have a direct impact on both educational and career-related choices (Flores & O'Brien, 2002). In two different studies conducted with Latino high school students, for example, results showed that those with higher levels of acculturation to Anglo culture had greater academic and career aspirations, including goals to attend post-secondary schooling and goals of obtaining more prestigious careers (Flores & O'Brien, 2002; McWhirter, Hackett, & Bandalos, 1998; Rivera et al., 2007).

Studies focusing on African American and Asian students are also prevalent in the literature. Research exploring the relationship between race and ethnicity and issues pertaining to career decision self-efficacy, perceived career barriers and career choice has resulted in similar findings for all members of racial and ethnic minority groups. For African American students in particular, fears of racial discrimination had a direct impact on perceived career barriers, although not as much correlation with difficulties in making career choices (Constantine, Wallace, & Kindaichi, 2005). For Asian American students, levels of acculturation and ethnic identity had a direct correlation to career decisions and overall career maturity (Duffy & Klingaman, 2009).

It is evident that race and ethnicity are important cultural characteristics that need to be considered when working with students from racial and ethnic minority groups in particular. Career counselors and other college personnel must consider the interplay of identities on the overall career development process. Particular attention should be placed on the ways by which students within these groups go about making career

decisions. Levels of career decision self-efficacy and perceived barriers have been continuously linked to career choice for this group specifically (Betz, 1994; Hackett & Betz, 1981; Luzzo & McWhirter, 2001). Therefore, career-related interventions addressing the unique concerns brought about by issues surrounding racism, acculturation, and racial and ethnic identity formation must be considered. For the purpose of this study, the variable of race will primarily be considered.

Low Income, First Generation College Students

Educational Opportunity Programs are comprised of students from low-income backgrounds who are generally the first in their families to attend an institution of higher learning. In order to fully understand the career decision-making process for this unique population, one must first comprehend the unique constraints on college success for students who are admitted through college access programs like Educational Opportunity Programs. According to the Engle, Tinto and the Pell Institute for the Study of Opportunity in Higher Education (2008), there were approximately 4.5 million low-income, first-generation students enrolled in colleges and universities across the country, representing 24% of the overall undergraduate population. Historically, this population has been more likely to leave college within the first year as compared to their counterparts. Moreover, time to graduation often extends well beyond the traditional four year plan, with only about 43% of low income, first generation college students earning their undergraduate degrees within a six year time span (Engle et al., 2008; Titus, 2006).

Although the majority of first generation college students usually come from racial and ethnic minority backgrounds, they may also come from households that are not

considered low-income. For the purpose of this study, low-income, first generation college students will be discussed primarily. Research addressing the unique needs of first-generation college students has often cited several high risk factors impacting the college experience, including increased anxiety and stress as part of the normal college-going process. Moreover, this group often faces additional cultural, social and academic changes (Forbus, Newbold, & Mehta, 2011). For example, first generation college students often face a sense of “culture shock”, since they are unfamiliar with basic college information about basic support services and academic rigor. Since this information is often passed down from immediate family members (e.g., parents or guardians), first generation college students often lack the familial support and guidance, which may add to “culture shock” (McCarron & Inkelas, 2006). As a result, first generation college students often exhibit low self-efficacy as it pertains to both academic and career-related tasks, lower career aspirations, self-doubt and lower self-esteem (Guerra & Braungart-Rieker, 1999; Hertel, 2002; Titus, 2006). Parental involvement and encouragement has specifically been cited as the most critical factors influencing the college experience for first generation college students, however, the level of involvement from parents is often limited due to their unfamiliarity with the college process (Forbus et al., 2011; Guerra & Braungart-Rieker, 1999).

Overall, first generation college students are said to lack the preparation and knowledge needed to thrive in a college environment naturally, are often less academically prepared and require intentional guidance and advisement to help shape their academic and career aspirations (Engle et al., 2008); Hertel, 2002; Titus, 2006;

Winograd & Shick Tryon, 2009). Given these unique challenges, college generational status may serve as a moderator between other cultural variables and overall career decision making.

As previously mentioned, students admitted into Educational Opportunity Programs are far more likely to come from racial and ethnic minority groups and enter college academically underprepared for the rigors of college course work in the content areas of reading, writing, math and science (Engle et al., 2008; Titus, 2006; Winograd & Shick Tryon, 2009). These students tend to have greater obligations outside of school, including part-time or full-time employment and family responsibilities. Consequently, this group is often less engaged in the college experience and may, therefore, be less likely to seek assistance with career goals and planning. This may be problematic since this population is more likely to have lower levels of career decision self-efficacy and perceive a greater number of barriers as they relate to academic and career choices. To that end, it is important that counselors and administrators proactively engage these students with interventions related to academic, social, and career-related planning (Engle et al., 2008).

Moreover, low income, first-generation college students are said to lack the social capital needed to build meaningful relationships with faculty, staff and peers who do not come from similar backgrounds. “According to social capital theory, networks of relationships can aid students in managing an otherwise unfamiliar environment by providing students with valuable information, guidance, and emotional support” (Stuber, 2011; Moschetti & Hudley, 2008, p. 26). In a study conducted by Stanton-Salazar (as

cited in Moschetti & Hudley, 2008), meaningful relationships with peers, faculty, and staff were critical to enhancing feelings of connectedness to educational environments for ethnic minorities from low SES backgrounds specifically. Given the importance of social support for this population, intentional efforts should be implemented to engage this population.

To that end, one way to mitigate the aforementioned limitations on college success is to foster student engagement. Career-related interventions have been shown to promote growth and development in students while providing them with a sense of meaning and purpose. In addition, involvement in career-related activities can help to further enhance self-appraisal and skills-development while providing avenues for students to build meaningful relationships with counselors, administrators, and employers (Astin, 1993; Burton, 2006; Gordon, 1995). Examples of evidence-based practices for promoting the success of low-income, first-generation college students include intrusive and intentional advising and interventions during a student's first year in college, which helps students to feel connected to and supported by the college as a whole. Career counseling and advising is considered to be an instrumental part of the student engagement process, particularly for this student population (Astin, 1993; Burton, 2006; Pascarella & Terenzini, 2005).

Summary

This chapter provided an historical overview of career-related interventions and addressed the importance of the career development process among college students. A thorough review of EOF along with a review of cultural characteristics that influence the

career development of college students was provided. Additionally, the theoretical framework of Social Cognitive Career Theory (SCCT) was discussed coupled with the constructs of perceived career barriers and career decision self-efficacy.

The unique stressors faced by students in EOF programs may make them a vulnerable population in relation to potential struggles related to perceived career barriers, career decision self-efficacy and initial career choice. Despite the amount of empirical research addressing these concerns in college populations in general, further research addressing the interplay of cultural characteristics (race, gender, socioeconomic status, college generational status) in regards to the relationship between career decision self-efficacy, perceived career barriers, and initial career choice is needed specifically related to EOF students. This study may provide additional insight into these relationships and may suggest implications for career counselors, college administrators and counselor educators.

Chapter Three

Methodology

The purpose of this study was to examine the predictive value of perceived career barriers and career decision self-efficacy as well as the predictive value of perceived career barriers and career decision self-efficacy as moderated by the cultural characteristics of gender, race and college generational status on the certainty of initial career choice among EOF pre-freshmen college students. Researchers have suggested that both perceived career barriers and career decision self-efficacy effect the ways in which students participate in career-related interventions that may help crystallize their initial career choices (Betz, 2004; Burton, 2006; Gordon, 1995; Lent et al., 1994, 2002; Luzzo & McWhirter, 2001; Paulsen & Betz, 2004; Swanson & Tokar, 1991). Additionally, certain cultural characteristics, such as gender, race and college generational status, have been shown to impact perceived career barriers, career decision self-efficacy, and certainty of initial career choice (Luzzo, 1993,1996; McWhirter, 1997; Perrone et al., 2001; Tovar-Murray et al., 2011). An overview of this study's research methodology is included in this chapter, with specific emphasis on the research design, sample, data collection, and data analysis.

Research Design

This study utilized a non-experimental correlational research design, along with a hierarchical multiple linear regression analysis, to investigate the predictability of perceived career barriers and career decision self-efficacy, directly and as moderated by the cultural characteristics of gender, race and college generational status on the certainty

of initial career choice among pre-freshmen EOF students. Correlational research has played a significant role within the fields of education and counseling and can provide practitioners with an understanding of relationships between multiple variables (Salkind, 2010). Similarly, designs that are quantitative in nature are said to be useful when assessing the existence and delineating characteristics of particular trends (Heppner, Wampold, & Kivilighan, 2008; Salkind, 2010; Sheperis, Daniels, & Young, 2010). For example, within the counseling profession, we are often interested in the frequency of counseling-related phenomena. Studying such phenomena provides practitioners the necessary information to effectively plan and implement counseling interventions that can be used with various populations (Heppner et al., 2008; Sheperis et al., 2010). Furthermore, the use of hierarchical multiple linear regression allows researchers to study the predictability of two or more variables, while testing for the predictive nature of multiple predictor variables on one criterion variable (Vogt, 2007).

Perhaps one of the most well-known types of quantitative research is the use of surveys, designed to characterize the occurrence of behaviors (Heppner et al., 2008; McMillan & Schumacher, 2009; Sheperis et al., 2010; Vogt, 2007). Hackett and Betz (1981), as cited in Heppner et al. (2008) considered survey research to be one of the oldest and most widely used methodologies in the social sciences, with roots traced back to ancient Egypt and England in the eighteenth century. Today, survey use still remains one of the most commonly used research designs, as evidenced by the significant amount of survey studies cited in counseling-related journals. The primary goal of survey research is to emphasize the nature or frequency of a specific variable via self-reports to

identify facts, opinions, attitudes, and behaviors, and to evaluate relationships among these variables (Heppner et al., 2008).

The use of survey research within college populations has made a noteworthy impact on the understanding of college students' problems since the early years of the counseling profession. Numerous studies using a survey-based needs assessment approach have been conducted to continuously investigate the common issues of college students as college demographics continue to shift. Survey research has allowed counselors and practitioners to gain a better frame of reference when implementing counseling-related interventions for college students (Heppner et al., 2008; Sheperis et al., 2010).

Research Questions

The research questions for this study were derived from the literature on social cognitive career theory, with respect to career decision self-efficacy and perceived career barriers. In addition, the research questions were also drawn from the literature addressing the demographic concerns unique to EOF students. The primary research questions for this study were: (1A) To what extent, if any, do perceived career barriers significantly predict certainty of initial career choice among EOF students? and (2A) To what extent, if any, does career decision self-efficacy significantly predict certainty of initial career choice among EOF students? The secondary questions were: (1B) To what extent, if any, do perceived career barriers indirectly, via the moderators of gender, race and ethnicity and college generational status, significantly predict certainty of initial career choice among EOF students?, and (2B): To what extent, if any, does career

decision self-efficacy indirectly, via the moderators of gender, race and ethnicity and college generational status predict certainty of initial career choice among EOF students?

Research Hypotheses

Using these questions, the following directional hypotheses were tested:

Hypothesis 1A. Perceived career barriers, as measured by the *Perceived Barriers Scale* (Luzzo & McWhirter, 2001; McWhirter, 1997) will significantly predict certainty of initial career choice, as measured by a Likert-type question on the demographic form, among EOF pre-freshmen college students.

Hypothesis 2A. Career self-efficacy, as measured by the *Career Decision Self-Efficacy Scale-SF* (Betz, Klein, & Taylor, 1996; Betz & Taylor, 2006), will significantly predict certainty of initial career choice, as measured by a Likert-type question on the demographic form, among EOF pre-freshmen college students.

Hypothesis 1B. The variables of gender, race and college generational status will moderate between perceived career barriers and certainty of initial career choice, among EOF pre-freshmen college students.

Hypothesis 2B. The variables of gender, race and college generational status will moderate between career decision self-efficacy and certainty of initial career choice, among EOF pre-freshmen college students.

Procedures

Sample

The goal of this study was to examine the relationship between perceived career barriers and career decision self-efficacy on the certainty of initial career choice among

EOF students. To achieve this, a population of EOF pre-freshman students (N=106) participating in a summer bridge program at a northeastern university was asked to participate in this study. All participants were scheduled to be fully matriculated into the university in the fall upon successful completion of the summer bridge program.

Although a sample of EOF students at one institution was used, data results may be applicable to EOF program students at other colleges and universities across the region. Within the state where the study took place, approximately 32,000 low-income students were admitted into colleges through the EOF program from Fall 2000-2008, with 41% of the population made up of African Americans, 31% of Hispanic or Puerto Rican descent, 13% White, 8% Asian, and 7% identified as other. Within that group, 68% were female and 32% were male (<http://www.nj.gov/highereducation/EOF/>).

While there were 120 students in the EOF program used for the purpose of this study, only 107 were 18 years of age or older and able to provide informed consent and available for the study. One participant's responses were unusable due to missing data. Therefore, the final study sample consisted of 106 participants. Descriptive statistics for this study's sample population is included next (see Table 1).

Table 1

Study Sample Descriptive Statistics (N = 106)

	Categories	Frequency	%
Gender	Female	68	64.2
	Male	38	35.8
Race	Hispanic	50	47.2
	African American	40	37.7
	Asian	8	7.5

	White	5	4.7
	Other	2	1.9
	American Indian	1	.9
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College Generational Status			
	First generation college student	74	69.8
	Not a first generation college student	32	30.2

Supplemental Descriptive Data

Supplemental descriptive data was collected on the demographic questionnaire that may help contextualize additional factors that could shape the career decision-making process for pre-freshman EOF students. For this purpose, participants were asked to answer questions on a) parents’ country of origin; b) participant country of origin; c) highest household education level; d) parent(s) involvement with career choice; e) cultural impact on career choice; and f) additional factors influencing career choice see Table 2). This supplemental data may also be helpful when considering recommendations for future research.

Table 2

Supplemental Study Sample Descriptive Statistics (N=106)

	Categories	Frequency	%
Parent(s) Country of Origin	United States	38	36
	Outside of United States	68	64
Participant Country of Origin	United States	85	85
	Outside of United States	21	20
Highest Household Education Level	Less than High School	3	.03
	High School	45	42
	Some College	8	.07
	College	24	23
	Graduate/Professional School	5	.05

	Unknown	21	20
<hr/>			
Parent Involvement in Career Choice			
	Yes	47	44
	No	59	56
<hr/>			
Cultural Influence on Career Choice			
	Yes	27	25
	No	79	75
<hr/>			
Other Career Choice Influencers			
	Family	55	52
	Friends	31	29
	Counselor	21	20
	TV/Media	40	38
	Teacher	25	24
	Other	32	30

Note: Participants were asked to choose all career choice influencers that apply.

The research site was a public university in the Northeast consisting of a total of 18,382 students (14,432 undergraduates, 3,950 graduate students). The U.S. News & World Report has consistently ranked the university in the top tier of Northern Regional Universities. In 2012, *Diverse Issues in Higher Education* named the university a “Top Degree Producer” in its ranking of institutions that confer the most degrees to minority students. Furthermore, the *Hispanic Outlook in Higher Education Magazine* has placed the university on its list of “Top 100 Colleges for Hispanics” for 14 years in a row. During the 2012-2013 academic year, undergraduate enrollment was 61% female and 39% male. Ethnicity statistics were as follows: White 54%, Hispanic 25%, African American 10%, Asian 6%, International 3%, and two or more races 3%. These specific statistics are useful when discussing university-wide support for career-related interventions for EOF students in particular. The university’s EOF program consists of approximately 500 undergraduate students, enrolling approximately 120 first-year students annually (<http://nces.ed.gov/>).

Instrumentation

The purpose of this study was to investigate the relationship between perceived career barriers and career decision self-efficacy on the certainty of initial career choice among the Educational Opportunity Fund Program (EOF) student population. Pre-freshman EOF students participating in a six-week summer bridge program at a Northeastern university were the specific target population, so as to allow for proper investigation of initial career choices prior to beginning their college tenure. In order to assess certainty of career choice, a question was included in the demographic questionnaire that was similar to an interview question career counselors would use with clients to assess certainty of career choice. Additionally, two survey instruments were utilized to test for perceived career barriers and career decision self-efficacy.

Surveys. Two survey instruments were used for the purpose of this study: the *Perceived Barriers Scale* (Luzzo & McWhirter, 2001; McWhirter, 1997; McWhirter et al., 1998) and the *Career Decision Self-Efficacy Scale-Short Form* (Betz & Taylor, 2006; Taylor & Betz, 1983). The shortened version of the Career Decision Self-Efficacy Scale was chosen over the original due to the shortened length of questions, taking into consideration that the participants were asked to complete both surveys in one sitting. In addition, a brief demographic questionnaire that was developed for this study was utilized. Permission was granted for the use of the survey instruments by both respective authors.

Perceived Barriers Scale. The *Perceived Barriers Scale* (McWhirter, 1997) was developed to examine the role that perceived barriers play in the career decision-making

process. The measure was revised twice as described below. The original scale consisted of 24 items. Eight of these items addressed respondents' anticipated discrimination based on ethnicity and gender (e.g., "In my future career, I will probably...experience discrimination because of my gender," and "be treated differently because of my ethnic/racial background"); 9 items addressed perceived barriers that might affect one's pursuit of postsecondary education (e.g., "Money problems are...currently a barrier to my educational aspirations"); 5 items related to perceived barriers if the respondent attended college (e.g., financial or family related problems); and 2 items addressed the overall perceptions of barriers along with confidence in one's ability to overcome barriers, although they were removed from the revised version (Luzzo & McWhirter, 2001; McWhirter, 1997).

The original scale was modified in 2001, specifically with respect to the Educational Barriers subscale to allow scale use for those students who were already in college, rather than the original subscale that was geared toward high school students. For the purpose of this study, the revised version of the scale will be utilized. Likert-type item responses range from strongly agree (5) to strongly disagree (1). The instrument is divided into two different categories (items 1-11 for career-related barriers, items 12-32 measuring educational barriers). Total scores are determined by summing the responses after performing reverse scoring on the negatively worded responses. Higher scores indicate a higher perception of barriers. The scale obtained a Cronbach's alpha of .90, with alpha coefficients of .86 and .88 for both subscales. There is a test-retest reliability of .78 over a two month time span, yielding a stability coefficient of .72 and .68 for the

two subscales (Kenny, Blustein, Chaves, Grossman, & Gallagher, 2003; Luzzo & McWhirter, 2001; McWhirter et al., 1998). Although the primary focus of this study was on the career-related barriers portion of the scale, participants were asked to complete both parts of the survey instrument.

Additional studies exist supporting the Perceived Barriers Scale throughout the literature. For example, in a study examining the extent to which perceived career barriers and perceived parental support predicted career certainty and career indecision in a sample of African American adolescents (Constantine, Wallace & Kindaichi, 2005), the Perceived Barriers Scale was used to determine and measure the existence of perceived barriers. In a similar study (Flores & O'Brien, 2002), investigating aspects of career development for Mexican-American adolescents, perceived career barriers were measured using the Perceived Barriers Scale. In both studies, an internal consistency coefficient of .91 was noted, along with a Cronbach's alpha of .81.

Career Decision Self-Efficacy Scale-SF. The *Career Decision Self-Efficacy Scale-Short Form (CDSE-SF)*: Betz & Taylor, 2006; Taylor & Betz, 1983) was developed to assess how successfully an individual can complete the necessary tasks to career decision-making by considering the role of self-efficacy expectations. The CDSE-SF, consisting of 25 items is a shortened version of the original *Career Decision Self-Efficacy Scale*, which consisted of 50 items (Taylor & Betz, 1983). The shortened version contains five subscales, including:

1. Self-Appraisal-How confident are you about accurately assessing your abilities?

2. Occupational Information-How confident are you that you could find out information about specific occupations?
3. Goal-Selection-How confident are you about choosing a career that will fit your preferred lifestyle, personality traits, and skill level?
4. Planning-How confident are you that you could make a plan for your specified goals?
5. Problem Solving-How confident are you that you could change occupations if you were not satisfied with your career choice?

Participants select from a 5-level confidence continuum, ranging from *no confidence at all* (1) to *complete confidence* (5) (Betz & Klein, 1996). The CDSE-SF yields six scores; subscale scores for the five components of career decision self-efficacy and a total score. Total summed scores range from 25 to 125, with higher scores indicating greater levels of career decision-making self-efficacy. CDSE-SF response values for the five items for each scale are summed and then divided by 5. Scores for the CDSE-SF are calculated by summing the response values for the 25 items and then divided by 25. Scores are interpreted relative to their prediction of approach versus avoidance behavior. High self-efficacy or confidence predicts approach behavior, while low self-efficacy predicts avoidance behavior. Therefore confidence scores are interpreted relative to the original response continuum. Scale scores are interpreted using the following criteria: 3.5 or above (good confidence), 2.5 to 3.5 (moderate confidence), 1.0 to 2.5 (low confidence). According to the authors (Betz & Taylor, 2006), scale scores of 3.5 or above are predictive of a willingness to approach or try the behavior in question,

while scores below 3.0 suggest confidence inadequate for approach behavior. Career-related interventions are suggested for those scoring in the low to moderate ranges (Betz & Taylor, 2006).

Both versions of the CDSE have been reported to be highly reliable. In the original normative sample of 346 students from a large state university and a private liberal arts college, internal consistency reliability coefficients (alpha) ranged from .86 to .89 for the subscales and .97 for the total score (Taylor & Betz, 1983). Other researchers have reported comparable levels of internal consistency. Luzzo (1993) reported a total scale alpha of .93. The internal consistency reliability of the short form ranged from .73 (Self-Appraisal) to .83 (Goal Selection) for the 5-item subscales and .94 for the 25-item total score (Betz et al., 1996). In a subsequent study, short form reliabilities ranged from .69 (Problem Solving) to .83 (Goal Selection) for the subscales and .93 for the total score (Betz & Klein, 1997).

The internal consistency reliability of the short form ranged from .73 (Self-Appraisal) to .83 (Goal Selection) for the 5-item subscales and .94 for the 25-item total score (Betz et al., 1996). In 2006 the authors implemented a minor revision to the CDSE. To keep up with technological changes, the item "Use the internet to find information about occupations that interest you" was examined as a possible replacement for the original item "Find information in the library about occupations you are interested in." In Hartman and Betz (2007) item total correlations for the new and original items were .54 and .50, respectively; and Cronbach's alpha for the CDSE-SF including the new item was .96. There is also evidence for test-retest reliability (stability). Luzzo (1993), as cited in

Betz and Taylor (2006) reported a six-week test-retest coefficient of .83 for the CDSE total score.

Additional research supporting the validity of the CDSE-SF also exists within the literature, comparing the CDSE-SF to other scales measuring similar constructs. With respect to concurrent validity, the results of two studies (Betz & Taylor, 2006; Taylor & Betz, 1983) showed high correlations between scores on the CDSE-SF and measures of career indecision, citing correlations between the CDSE-SF and the Career Decision Scale (Osipow, Carney, & Barak, 1976) and the Career Maturity Inventory (Betz & Luzzo, 1996). Taking into consideration the construct validity of the CDSE-SF, Taylor and Betz (1983) noted that the CDSE-SF correlated significantly with the Certainty, Indecision, and Goal Selection subscales of the Career Decision Scale (CDS) and total CDSE-SF and CDS scores. Furthermore, Betz et al. (1996) found significant correlations between the CDSE-SF and Career Indecision subscale on the CDS. Betz and Klein (1997) found that CDSE-SF scores were the best predictor of career indecision in a model including both efficacy and outcome expectations. As cited in Betz and Taylor (2006), the CDSE-SF was shown to be significantly related to scales from Krumboltz's Career Beliefs Inventory (CBI).

Certainty of Career Choice and Demographic Questionnaire (Form). The demographic questionnaire was an important component of this research because it provided 1) information about the cultural characteristics significant to the study, and 2) the means to ascertain a level of certainty of initial career choice among this EOF student population. The demographic questionnaire asked participants to indicate information

within the following areas: (a) gender, (b) college generational status, (c) race, (d) parents' country of origin, (e) student country of origin, (f) number of people in their household, (g) highest household educational level, and (h) parent(s) or guardian(s) occupations. Although there were certain parts of the demographic questionnaire that asked questions not directly pertaining to this study's particular research questions, the researcher decided to include such questions for possible future research.

Certainty of Career Choice. Because we know that traditional-age college students (ages 18-22) fall into an exploratory stage of career development (Super, 1990), it is important to assess levels of certainty regarding career choice at an early stage. For the purpose of this study, a population of pre-freshman participating in a summer bridge program prior to college matriculation was utilized. Assessing level of certainty may assist career counselors in helping students to crystallize their career choices, in order to ensure informed and congruent academic major and career choices.

While there was no particular standardized instrument to measure certainty of career choice, career counselors do use an interview format to assess the degree of certainty. The question on the demographic form to serve this purpose was: Please rate the certainty of your current career choice. Participants were asked to circle the best option from the following Likert-type response: 1) I am sure, 2) I have somewhat of an idea, and 3) No idea (see Table 1). While this method may be viewed as a limitation of the study, it was a viable method for allowing EOF students to self-report their sense of certainty of their initial career choices.

Data Collection

This study investigated the EOF student population prior to entering college, who had already been admitted into the university. Therefore, permission was first requested and granted by the Director of the EOF Program at a large Northeastern university to conduct the specified research utilizing students participating in their 6-week pre-freshman summer bridge program, running from June-August, 2013. The researcher conducted data collection during one of their weekly meeting sessions where all students were scheduled to be in attendance. This allowed the researcher to introduce herself appropriately, explain the study and administer all study documents (demographic questionnaire and two survey instruments), with informed consent, during one session. Participation was voluntary and remained anonymous. Students were informed about the purpose of the researcher's visitation to their meeting beforehand by the Director of EOF.

EOF pre-freshman were asked to complete, with informed consent, the following: 1) a demographic questionnaire including questions in the following areas: a) gender, b) college generational status, c) race, d) parents' country of origin, e) student country of origin, f) number of people in their household, g) highest household educational level, and h) parent(s) or guardian(s) occupations; 2) the Perceived Barriers Scale consisting of 32 questions, measuring the existence of perceived barriers related to career and educational barriers; and 3) the Career Decision Self-Efficacy Scale-Short Form consisting of 25 questions, measuring beliefs about successfully completing tasks necessary to making career decisions. The surveys were completed in paper format and took approximately 10-15 minutes to complete. Additional time was allotted by the EOF

staff to allow for a proper introduction of PI, of the study, the review of informed consent and collection of the survey. Because of this, there was a total estimated time frame of 30-35 minutes. Participation was voluntary; participants could have stopped the survey at any time or could have chosen not to complete the surveys at all. Alternative instructions were planned for those who might have chosen not to participate; however, all students present, over the age of 18 provided consent. The Director of the program provided alternative instructions to those who were under the age of 18, since they were not allowed to participate in this study.

At the beginning of the session, the researcher introduced herself and the purpose of the study. Students were provided with the informed consent, told that participation is voluntary, and informed that they may stop participating at any point if they so choose. The demographic questionnaire and two survey instruments (*Perceived Barriers Scale* and the *Career Decision Self-Efficacy Scale-Short Form*) were then passed out to all consenting students who were at least 18 years of age and the researcher reminded participants that they should not place their names on the surveys.

Data Analysis

Once the data were collected, they were transferred into SPSS 20.0. All data was cleaned and any participants' data with missing values was discarded. Before performing a hierarchical multiple regression analysis to test for moderation (Baron & Kenny, 1986; Frazier, Tix, & Barron, 2004), statistical analyses were conducted to gather descriptive information on the sample. The scales were computed and analyses was run for

descriptive information on all variables. Statistical tests were conducted to test for and address any violations of assumptions for hierarchical multiple regression (Polit, 2010).

This study utilized a hierarchical multiple linear regression in accordance with the moderation model proposed by Baron and colleagues (Baron & Kenny, 1986; Frazier et al., 2004). Prior to conducting moderation, the predictor variables of perceived career barriers and career decision self-efficacy were standardized (i.e., computed to *z*-scores), and the moderating variables of gender, race and college generation status were dummy coded so that male = 0 and female = 1; Hispanic = 0 and African American = 1, and so on; and first generation college student = 0 and second generation or more college student = 1. Interaction terms to test for moderation were then computed with the standardized predictor variables of perceived career barriers and career decision self-efficacy and each of the cultural characteristics of gender, race and college generation status.

Hierarchical multiple linear regression analyses were conducted in accordance with moderation for each research question, with the criterion variable of certainty of initial career choice. The standardized predictor variable (perceived career barriers or career decision self-efficacy) was entered on the first step of the hierarchical multiple linear regression model. The dummy-coded cultural characteristic variables of gender, race and college generation status were entered on the second step of the hierarchical multiple linear regression model. The interaction terms of the predictor and moderating variables were entered at the third step of the hierarchical multiple linear regression model. For the hierarchical multiple linear regression to test research question 1, the interaction terms were perceived career barriers X gender, perceived career barriers X

race and the perceived career barriers X generational college status. For the hierarchical multiple linear regression to test research question 2, the interaction terms were career self-efficacy X gender, career self-efficacy X race and career self-efficacy X generational college status.

Significance for the direct effects of perceived career barriers, career decision self-efficacy and the cultural characteristics variables for the interaction terms were determined by the overall hierarchical multiple linear regression model, as determined by the F -value and F_{change} -value at each step (or model) and corresponding p -value. Furthermore, the amount of variance in the criterion variable of certainty of initial career choice explained by the predictor and interaction variables were examined by the R^2 value and the change in the R^2 value at each step of the hierarchical multiple linear regression: R^2 acted as an indicator of effect size (Frazier et al., 2004). The significance of univariate effects for each variable (including interaction terms) were determined by the standardized beta weight, t -value, and corresponding p -value (Baron & Kenny, 1986; Frazier et al., 2004).

Chapter Four

Introduction

The purpose of this study was to investigate the predictive value of perceived career barriers and career decision self-efficacy on the certainty of initial career choice among EOF pre-freshmen college students. Additionally, this study investigated the cultural characteristics of gender, race and college generational status as moderating variables to the levels of certainty of initial career choice among EOF pre-freshman college students. The significance of both perceived career barriers and career decision self-efficacy on the overall career decision-making process has been evident throughout the literature (Albert & Luzzo, 1999; Conklin, Dahling, & Garcia, 2013; Grier-Reed & Ganuza, 2012; Howard et al., 2010; Lent et al., 2002; Luzzo, 1996; Luzzo & McWhirter, 2001; McWhirter, 1997; Rivera et al., 2007). Research has also supported the idea that career choice can be directly impacted by an individual's gender, race/ethnicity and college generational status. Because unique programs such as EOF are comprised primarily of students deemed historically underrepresented in post-secondary education, it was important to consider the aforementioned cultural variables. Lastly, although there is some existing research investigating the predictive value of perceived career barriers and career decision self-efficacy, while considering cultural variables, very little exists about specialized programs such as EOF.

Perceived career barriers were measured by the *Perceived Barriers Scale* (Luzzo & McWhirter, 2001; McWhirter, 1997; McWhirter et al., 1998) and career decision self-efficacy was measured by the *Career Decision Self-Efficacy Scale-Short Form* (Betz &

Taylor, 2006; Taylor & Betz, 1983). Certainty of initial career choice was measured by a question using a Likert-type scale that was included on the demographic questionnaire. Descriptive information was collected on the demographic questionnaire pertaining to gender, college generational status and race.

This chapter summarizes the results of the data analysis used to answer the following research questions: (1A) To what extent, if any, do perceived career barriers significantly predict certainty of initial career choice among EOF students? and (2A) To what extent, if any, does career decision self-efficacy significantly predict certainty of initial career choice among EOF students? The secondary questions were: (1B) To what extent, if any, do perceived career barriers indirectly, via the moderators of gender, race and college generational status significantly predict certainty of initial career choice among EOF students?, and (2B): To what extent, if any, does career decision self-efficacy indirectly, via the moderators of gender, race and college generational status predict certainty of initial career choice among EOF students?

In this chapter, I first summarize the demographics of the sample population, then review the tests used to collect the data from participants. Next, I provide an overview of the preliminary analyses used to test for skewness and kurtosis of study variables to account for normal distribution, along with a test for the assumption of lack of multicollinearity. Hypothesis testing for the four hypotheses presented in Chapter 3 is addressed. A linear regression analysis was used to measure the predictive power of each independent variable (perceived career barriers and career decision self-efficacy) and a hierarchical multiple linear regression was used to measure the predictive power of each

independent variable on the second step, including the additional independent variables (gender, race, college generational status).

Sample

This study surveyed 106 EOF pre-freshman college students participating in a summer bridge program at a Northeastern university. Out of the 106 participants, 64% were female and 36% male, with 47% identifying as Hispanic, 38% African American, 7.5% Asian, 4.7% White, 1.9% Other, and 0.9% American Indian. As it pertained to college generational status, 70% were first generation college students and 30% were not first generation college students.

Results

Preliminary Analyses

Prior to conducting statistical tests for hypothesis testing, descriptive statistics were computed for the study variables, testing for both skewness and kurtosis values (see Table 3). Skewness refers to the asymmetry or symmetry of the distribution of scores around the mean; in other words, skewness determines whether scores show a normal distribution. If the majority of scores fall on one extreme side of the distribution, the scale shows skewness. A skewness value $> +/- 2.00$ indicates significant skewness (Argyrous, 2011). Kurtosis is a measure of “peakedness” of the distribution of scores and is very sensitive to values of scores around the mean and in the tails of the distribution. A negative kurtosis value indicates that the scores of distribution are sharply peaked, whereas a positive kurtosis score indicates a flat distribution of scores (Argyrous, 2011). The kurtosis significance value is computed by dividing the kurtosis value by the kurtosis

value standard error (SE). If the kurtosis significance value is greater than or equal to 3.00, there is evidence of kurtosis (Argyrous, 2011). In regard to the assumption of normality, the variables displayed normality based on skewness values being less than 2.00 and kurtosis values being less than 3.00.

To test for the assumption of lack of multicollinearity between the predictor variables of perceived career barriers and career decision self-efficacy, a Pearson bivariate correlation and Variance Inflation Factor (VIF) was conducted. The Pearson bivariate correlation was significant, $r(106) = .20, p = .046$, but not at the level of multicollinearity, as evidenced by a VIF value of 1.00. To that end, there were no evident issues as it pertained to the independent variables used, therefore, decreasing the standard errors of the coefficients.

Participants in this study were asked to complete an anonymous 70-item survey with three parts: 1) a demographic questionnaire; 2) the *Perceived Barriers Scale* measuring the existence of perceived barriers related to career and educational barriers; and 3) the *Career Decision Self-Efficacy Scale-SF*, measuring beliefs about successfully completing tasks necessary to making career decisions. The *Perceived Barriers Scale* (McWhirter, 1997) is a 32-item scale that examined the role that perceived barriers play in the career decision-making process. Likert-type item responses ranged from strongly agree (5) to strongly disagree (1). Total scores were determined by summing the responses after performing reverse scoring on the negatively worded responses. Higher scores indicated a higher perception of barriers. Perceived Barriers Scale scores in this study ranged from a low of 1 to a high of 44 (see Table 3); ($M=28.53, SD=8.66$).

Descriptive statistics were computed to categorize levels of perceived barriers by gender and college generational status. Race was not included since the majority of the sample (95.2%) was non-White, minority status, thus unable to produce statistically significant results. In order to determine levels, scores were summed, then categorized within ranges (low, moderate, high), based on percentiles (25th percentile, 50th percentile, 75th percentile). The mean scores and percentile ranges were determined for each cultural variable (see Appendix E). By gender, females (N=68) ($M=27.00$, 50th percentile) and males (N=38) ($M=31.30$, 50th percentile). By college generational status, first generation college students (N=74) ($M=28.65$, 50th percentile) and non first generation college students (N=32) ($M=28.25$, 50th percentile). Based on these statistics, the overall EOF population in this study seemed to have a moderate level (50th percentile) of perceived barriers.

The *Career Decision Self-Efficacy Scale-Short Form (CDSE-SF)*: Betz & Taylor, 2006; Taylor & Betz, 1983) is a 25-item scale that assessed how successfully an individual could complete the necessary tasks to career decision-making by considering the role of self-efficacy expectations. Participants selected from a 5-level confidence continuum, ranging from *no confidence at all* (1) to *complete confidence* (5). CDSE-SF scores were calculated by summing the response values for the 25 items. CDSE-SF scores for this study ranged from a low of 45 to a high of 125 (see Table 3) ($M=94.38$; $SD=17.31$). Scores were then divided by 25, resulting in a score range of 3.28-4.28 (moderate to good confidence). Scale scores were interpreted using the following

criteria: 3.5 or above (good confidence), 2.5 to 3.5 (moderate confidence), 1.0 to 2.5 (low confidence) (Betz & Taylor, 2006).

Descriptive statistics were computed to categorize levels of career decision self-efficacy by gender and college generational status. Race was not included since the majority of the sample (95.2%) was non-White, minority status, thus unable to produce statistically significant results. In order to determine levels, scores were summed, then categorized within ranges (low, moderate, high), based on percentiles (25th percentile, 50th percentile, 75th percentile). The mean scores and percentile ranges were determined for each cultural variable (see Appendix E). By gender, females (N=68) ($M=93.50$, 50th percentile) and males (N=38) ($M=96.00$, 50th percentile). By college generational status, first generation college students (N=74) ($M=94.10$, 50th percentile) and non first generation college students (N=32) ($M=95.00$, 50th percentile). Based on these statistics, the overall EOF population in this study seemed to have a moderate level of career decision self-efficacy (i.e., moderate confidence level).

Certainty of Career Choice was measured using a Likert-type question on the demographic questionnaire. Participants were asked to circle the best option from the following Likert-type response: 1) I am sure, 2) I have somewhat of an idea, and 3) No idea to the following statement: Please rate the certainty of your current career choice (see Table 3) ($M=2.30$, $SD=.76$). Results indicated 48.1% reported being sure about their current career choice, 34% reported having somewhat of an idea, and 17.9% reported having no idea.

Table 3

Descriptive Statistics of Study Variables (N = 106)

	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>Sk</i>	<i>K</i>	<i>A</i>
Certainty of Career Choice ^a	106	2.30	.76	1.00	3.00	-.57	-1.04	N/A
Perceived Career Barriers ^b	106	28.53	8.66	1.00	44.00	-.33	.18	.89
Career Decision Self-Efficacy ^c	106	94.38	17.31	45.00	125.00	-.03	-.50	.94

Note. *M* = Mean, *SD* = Standard Deviation, *Min* = Minimum Score, *Max* = Maximum Score, *Sk* = Skewness, *K* = Kurtosis. ^a A higher score denotes higher career certainty. ^b A higher score denotes fewer perceived barriers. ^c A higher score denotes higher career decision self-efficacy

Hypothesis Testing

Hypothesis 1A. Perceived career barriers, as measured by the Perceived Barriers Scale (Luzzo & McWhirter, 2001; McWhirter, 1997) will significantly predict certainty of initial career choice, as measured by a Likert-type question on the demographic form, among EOF pre-freshmen college students. A linear regression was conducted to test this hypothesis (see Table 4). Based on the results from the linear regression, perceived career barriers did not significantly predict certainty of initial career choice, $F(1, 104) = .032, p = .858$. Based on the R^2 of .000, perceived career barriers explained 0.00% of the variance in the variable of certainty of initial career choice.

Table 4

Linear Regression: Perceived Career Barriers Predicting Certainty of Initial Career Choice (N = 106)

	<i>B</i>	<i>T</i>	<i>R</i>	<i>SEE</i>	<i>R</i> ²	<i>P</i>
Full Model			.018	.76	.000	.858
Perceived Career Barriers	.018	.179				.858

Note. $F(1, 104) = .032, p = .858$

Hypothesis 1B. The variables of gender, race, and college generational status will moderate between perceived career barriers and certainty of initial career choice, among EOF pre-freshmen college students. A multiple linear regression was conducted, with the variables of gender, race, and college generational status entered on the first step of the regression model, followed by the variable of perceived career barriers. The interactions of perceived career barriers and gender, perceived career barriers and race, and perceived career barriers and college generation status were entered on the third and last step of the regression model (see Table 5).

As indicated in Table 5, the only significant model was the third model, $F_{\text{change}}(3, 98) = 5.02, p = .003$, which, based on the R^2_{change} value of .129, which contributed 12.9% of the variance of the dependent variable of certainty of initial career choice. When examining univariate effects, there were two significant predictors. Perceived career barriers significantly predicted certainty of career choice, $\beta(106) = .32, t(1, 105) = 2.34, p = .021$, although perceived career barriers did not necessarily predict certainty of initial career choice without testing for moderating effects of the cultural variables. Based on the coding of variables, the lower the perceived career barriers, the higher the certainty of career choice. The only other significant predictor in the third model was the interaction of perceived career barriers and college generation status, $\beta(106) = -.41, t(1, 105) = -3.51, p = .001$. Based on the coding of college generation status, being a first generation college student and having high perceived career barriers predicted lower levels of certainty of career choice.

Table 5

Multiple Linear Regression: Gender, Race, and College Generation Status, Perceived Career Barriers, and Interaction Terms Predicting Certainty of Career Choice (N = 106)

	β	T	R	SEE	R^2	R^2_{change}	P
<i>Model 1</i>			.18	.76	.031	.031	.358
Gender	.10	1.00					.321
Race	-.11	-1.14					.258
College Generation Status	.10	1.06					.292
<i>Model 2</i>			.18	.76	.031	.000	.907
Gender	.10	.98					.329
Race	-.11	-1.22					.260
College Generation Status	.10	1.05					.294
Perceived Career Barriers	-.01	-.06					.949
<i>Model 3</i>			.40	.72	.160	.129	.009
Gender	.12	1.19					.236
Race	-.17	-1.77					.080
College Generation Status	.13	1.33					.188
<i>Perceived Career Barriers</i>	<i>.32</i>	<i>2.34</i>					<i>.021</i>
Gender by Perceived Career Barriers	-.18	-1.44					.154
Race by Perceived Career Barriers	.11	1.11					.272
<i>College Generation Status by Perceived Career Barriers</i>	<i>-.41</i>	<i>-3.51</i>					<i>.001</i>

Note. Model 1: $F_{change}(3, 102) = 1.09, p = .358$; Model 2: $F_{change}(1, 101) = .004, p = .949$; Model 3: $F_{change}(3, 98) = 5.02, p = .003$. Significant results in italics.

Hypothesis 2A. Career self-efficacy, as measured by the Career Decision Self-Efficacy Scale-SF (Betz & Taylor, 2006; Taylor & Betz, 1983), will significantly predict certainty of initial career choice, as measured by a Likert-type question on the demographic form, among EOF pre-freshmen college students. A linear regression was conducted to test this hypothesis (see Table 6). Based on the results from the linear regression, career decision self-efficacy did significantly predict certainty of initial career

choice, $F(1, 103) = 7.61, p = .007$. Based on the R^2 value of .069, career decision self-efficacy explained 6.9% of the variance in the variable of career certainty.

Table 6

Linear Regression: Career Decision Self-Efficacy Predicting Certainty of Initial Career Choice (N = 106)

	B	T	R	SEE	R ²	P
Full Model			.262	.74	.069	.007
Career Decision Self-Efficacy	.26	2.76				.007

Note. $F(1, 103) = 7.61, p = .007$

Hypothesis 2B. The variables of gender, race, and college generational status will moderate between career decision self-efficacy and certainty of initial career choice, among EOF pre-freshmen college students. A multiple linear regression was conducted, with the variables of gender, race, and college generation status entered on the first step of the regression model, followed by the variable of career decision self-efficacy. The interactions of career decision self-efficacy and gender, career decision self-efficacy and race, and career decision self-efficacy and college generation status were entered on the third and last step of the regression model (see Table 7).

As displayed in Table 7, the only significant model was the second model, where gender, race, college generation status, and career decision self-efficacy predicted certainty of career choice, $F_{\text{change}}(1, 100) = 7.79, p = .006$. Based on the R^2_{change} value of .071, this model explained 7.1% of the variance in the dependent variable of certainty of career choice. When examining univariate effects, the only significant predictor in the second model was career decision self-efficacy, $\beta(106) = .27, t(1, 105) = 2.79, p = .006$.

Table 7

Multiple Linear Regression: Gender, Race, and College Generation Status, Career Decision Self-Efficacy, and Interaction Terms Predicting Certainty of Initial Career Choice (N = 106)

	B	T	R	SEE	R ²	R ² _{change}	P
<i>Model 1</i>			.166	.76	.027	.027	.419
Gender	.09	.91					.366
Race	-.10	-1.00					.318
College Generation Status	.11	1.09					.279
<i>Model 2</i>			.313	.73	.098	.071	.006
Gender	.07	.72					.471
Race	-.13	-1.31					.195
College Generation Status	.10	1.04					.300
<i>Career Decision Self-Efficacy</i>	.27	2.79					.006
<i>Model 3</i>			.352	.74	.124	.026	.376
Gender	-.70	-1.31					.193
Race	-.25	-.46					.650
College Generation Status	.53	.92					.358
Career Decision Self-Efficacy	.21	1.34					.183
Gender by Career Decision Self-Efficacy	.80	1.45					.150
Race by Career Decision Self-Efficacy	.09	.16					.874
College Generation Status by Career Decision Self-Efficacy	-.43	-.74					.464

Note. Model 1: $F_{\text{change}}(3, 101) = .52, p = .419$; Model 2: $F_{\text{change}}(1, 100) = 7.79, p = .006$; Model 3: $F_{\text{change}}(3, 97) = .95, p = .418$. Significant results in italics.

Chapter Five

Introduction

It is evident that the initial career choices and overall career development of college students play integral roles in student engagement and persistence (Pascarella & Terenzini, 2005; Tinto, 1993). The career choice process is an essential and typical developmental task for traditional age college students that aids with the identification of meaning and purpose and overall self-exploration (Chickering & Reisser, 1993; Super, 1990). Studies suggest that both perceived career barriers and career decision self-efficacy account for the ways by which traditional-age college students participate in career-related interventions, such as counseling and advising sessions from career counselors and researching well-suited careers that match their values, interests, personality traits, and skills (Burton, 2006; Gordon, 1995; Lent et al., 1994, 2002; Luzzo & McWhirter, 2001; Pascarella & Terenzini, 2005; Paulsen & Betz, 2004; Quimby & O'Brien, 2004; Swanson & Tokar, 1991; Taylor & Betz, 1983). Certainty of career choice can have a vital impact on the crystallization of career decisions and has been linked to overall career congruence and satisfaction (Farrell & Horvath, 1999; Galles & Lenz, 2013; Tracey, 2010). Furthermore, cultural characteristics can have a significant impact on career decision-making. As college demographics shift and the number of historically underrepresented racial and ethnic minority students continue to increase, it is important to study the ways in which these cultural characteristics affect the overall career decision-making process (Duffy & Klingaman, 2009; Engle et al, 2008; Tovar-Murray et al., 2012).

Very little empirical research exists addressing the relationship between perceived career barriers and career decision self-efficacy on the certainty of initial career choice among students in specialized programs such as EOF, comprised primarily of students from low-income, racial and ethnic minority backgrounds who tend to be first generation college students. EOF students represent a growing population that should be further investigated. According to Engle, Tinto and the Pell Institute (2008), there were approximately 4.5 million low-income, first-generation students enrolled in colleges and universities across the country in college access programs similar to EOF, representing 24% of the overall undergraduate population, with an expectation that this population will continue to grow. These statistics warrant additional examination and verification, including the unique career development needs of this population.

The purpose of this study was to investigate the predictive value of perceived career barriers and career decision self-efficacy on the certainty of initial career choice among EOF pre-freshmen college students. Additionally, this study tested for the moderating effects of gender, race and college generational status to the certainty of initial career choice among EOF pre-freshman college students. A total of 106 EOF pre-freshman college students participated in this study and were asked to provide data on perceived career barriers, career decision self-efficacy and their level of certainty regarding their initial career choices. Participants in this study were asked to complete an anonymous 70-item survey with three parts: 1) a demographic questionnaire; 2) the *Perceived Barriers Scale* measuring the existence of perceived barriers related to career and educational barriers; and 3) the *Career Decision Self-Efficacy Scale-SF*, measuring

beliefs about successfully completing tasks necessary to making career decisions. This chapter summarizes the results of the study, including non-significant findings and limitations of the study. Lastly, implications for practice and future research will be discussed.

The primary research questions examined in this study were: (1A) To what extent, if any, do perceived career barriers significantly predict certainty of initial career choice among EOF students? and (2A) To what extent, if any, does career decision self-efficacy significantly predict certainty of initial career choice among EOF students? The secondary research questions were: (1B) To what extent, if any, do perceived career barriers indirectly, via the moderators of gender, race and college generational status significantly predict certainty of initial career choice among EOF students?, and (2B): To what extent, if any, does career decision self-efficacy indirectly, via the moderators of gender, race and college generational status predict certainty of initial career choice among EOF students? A linear regression analysis was used to measure the predictive power of each independent variable (perceived career barriers and career decision self-efficacy) and a hierarchical multiple linear regression was used to measure the predictive power of each independent variable on the second step, including the additional independent variables (gender, race, college generational status). Results from the data presented in chapter four will be summarized next.

Discussion

This study surveyed 106 EOF pre-freshman college students participating in a summer bridge program at a Northeastern university. Out of the 106 participants, 64%

were female and 36% male, with 47% identifying as Hispanic, 38% African American, 7.5% Asian, 4.7% White, 1.9% Other, and 0.9% American Indian. As it pertained to college generational status, 70% were first generation college students and 30% were not first generation college students. These statistics were comparable to those in similar EOF programs across the region and country (Engle et al., 2008; U.S. Department of Education, 2012; Winograd & Schick Tryon, 2009).

Supplemental Descriptive Data Results

Additional descriptive data was collected on the demographic questionnaire to help support study findings. Based on the results, almost half of the participants (42%) came from households where a high school diploma or trade school certificate was listed as the highest education level. Furthermore, the majority of participants (68%) were children of immigrants, although most were United States citizens (85%) themselves. Interestingly enough, merely over half of participants (56%) considered their parent(s) an integral part of their career decision-making process. Next, participants were asked to indicate whether they considered their cultural background influential to their career choices. Based on the results, 79% of participants did not consider their cultural background to be an influential factor. Lastly, data was collected to determine additional factors that have helped influence career choices. Factors were chosen in the following sequential order:

1. Family
2. Television/media
3. Other (experiences, career research, interests and passion)

4. Friends
5. Teachers
6. Counselors.

This supplemental data may be particularly meaningful to researchers who are interested in investigating additional influencers on career choice in the future. Results will also be mentioned in the future research section of this chapter.

Perceived Career Barriers and Certainty of Initial Career Choice

This study used a linear regression to test the predictive value of perceived career barriers and the certainty of initial career choice of EOF pre-freshman college students. Based on the results from the linear regression, perceived career barriers did not significantly predict certainty of initial career choice. Despite the existing research supporting the significance of perceived career barriers on the career decision-making process (Howard et al., 2010; Lent et al., 2002; Luzzo & McWhirter, 2001; McWhirter, 1997; Rivera et al., 2007; Swanson et al, 1996; Swanson & Woitke, 1997), data collected from this study failed to show a significant relationship between perceived career barriers and the initial career choice among EOF pre-freshman college students.

These results seem to contradict the literature suggesting a strong relationship between the two variables. For example, in McWhirter's initial study (1997) measuring perceived barriers using adolescents (N=1139), perceived career barriers significantly predicted initial career interests and choices. Similarly, Luzzo and McWhirter's study (2001) measuring the existence of perceived barriers for undergraduate students (N=286), showed evidence supporting the predictive value of perceived barriers on career choice.

In a qualitative study exploring career choice barriers at two different universities (N=31) (Lent et al., 2002), themes surrounding choice impediments based on financial concerns, personal concerns (problems adjusting to college, depression, time management, perceived ability) and social/family concerns were mentioned in moderate frequency. Furthermore, concerns about educational requirements and negative school/work experiences were cited as barriers, although in low frequency. This implies that perceived career barriers did, in fact, relate to career choices although the significance was not strong in this study.

Although the data in this study seem to contradict other studies, the results must be interpreted with caution because of a smaller sample size and the fact that the students were pre-entry freshman. In considering the developmental stages traditional age college students fall into (e.g., exploration stage of career development), it is very likely that they may be making initial career decisions based on limited information and experiences (Super, 1990). Without having some exposure to classroom work and the college environment in general, they may not have the exposure that undergraduates have on which to realize what is entailed in that initial career choice. Therefore, these participants may be making initial career choices based on limited exposure to the knowledge and skills needed for certain jobs that undergraduate students with classroom and college experience may be using to assess initial career choice.

Next, a hierarchical multiple linear regression was conducted to test for the moderating effects of cultural characteristics (race, gender, and college generational status) on perceived career barriers to the initial career choice of EOF pre-freshman

college students. Prior research suggests that these cultural characteristics in particular have a direct impact on the existence of perceived career barriers and, in turn, could directly affect career choice (Albert & Luzzo, 1999; Lent et al., 2002; Luzzo & McWhirter, 2001; McWhirter, 1997). When examining these moderating effects, perceived career barriers did significantly predict certainty of career choice, $\beta(106) = .32$, $t(1, 105) = 2.34$, $p = .021$. These results showed that, when considering the moderating effects of certain cultural characteristics, the lower the perceived career barriers, the higher the certainty of career choice. The most significant results pertained to the moderating effects of college generational status, $\beta(106) = -.41$, $t(1, 105) = -3.51$, $p = .001$. These results indicated that being a first generation college student and having high perceived career barriers predicted lower levels of certainty of career choice.

Results regarding race and gender were inconsistent with the literature. For example, in McWhirter's pivotal study (1997) measuring perceived barriers to education and careers amongst Mexican-American and Euro-American students (N=1139), female participants anticipated more barriers than their male counterparts. Moreover, there were significant differences with respect to race, in that, the Mexican-American participants anticipated more barriers than their Euro-American peers. In Luzzo and McWhirter's (2002) follow-up study measuring perceived barriers among undergraduate students (N=286), it was reported that ethnic minorities exhibited more perceived barriers than their European American counterparts. Results from this study also conflict with seminal research on Social Cognitive Career Theory, which postulated that the role of perceived barriers did significantly impact overall career choice, especially when considering

certain cultural characteristics (Brown & Lent, 1996; Lent et al., 1994, 2002; Luzzo, 1996). Lastly, in a meta-analysis of race and ethnicity differences in career choice, Fouad and Byars-Winston (2005) concluded that (a) race and ethnicity differences do not greatly affect career choice but (b) that there are differences in the perception of career barriers with respect to race and ethnicity.

Career Decision Self-Efficacy and Certainty of Initial Career Choice

A linear regression was conducted to measure whether or not career decision self-efficacy would significantly predict certainty of initial career choice. Based on the results from the linear regression, career decision self-efficacy did significantly predict certainty of initial career choice, $F(1, 103) = 7.61, p = .007$. Based on the R^2 value of .069, career decision self-efficacy explained 6.9% of the variance in the variable of career certainty. Results were consistent with supporting literature. Throughout the literature, the positive relationships between career decision self-efficacy and career choice were quite clear (Betz, 1994, 2004; Betz & Taylor, 2006; Conklin et al., 2013; Foltz & Luzzo, 1998; Grier-Reed & Ganuza, 2012; Lent & Hackett, 1987; Taylor & Betz, 1983).

A hierarchical multiple linear regression was conducted to test for the moderating effects of cultural characteristics (race, gender, and college generational status) on career decision self-efficacy to the initial career choice of EOF pre-freshman college students. Results revealed that the cultural characteristics did moderate between career decision self-efficacy and certainty of initial career choice when all three characteristics were tested together in the second model of the regression, where race, gender and college generation status, and career decision self-efficacy predicted certainty of career choice,

$F_{\text{change}}(1, 100) = 7.79, p = .006$. Based on the R^2_{change} value of .071, this model explained 7.1% of the variance in the dependent variable of certainty of career choice. When examining univariate effects, the only significant predictor in the second model was career decision self-efficacy, $\beta(106) = .27, t(1, 105) = 2.79, p = .006$. Therefore, race and gender did not moderate without the interaction of college generational status. Since there were, in fact, moderating effects when all three characteristics were measured together, however, it was evident that race and gender played some role, although results were not significant enough to show up when tested individually. Results from this study seem to conflict with other empirical studies that addressed similar questions. For example, in a study examining career decision self-efficacy among traditional-aged college students (N=687) from a mid-sized university (Gloria & Hird, 1999), racial and ethnic variables did serve as predictors of career decision self-efficacy. Additionally, there were significant differences in levels of career decision self-efficacy between racial and ethnic minority students and non-minority students. In another study exploring the relationships between the social cognitive variables of career decision self-efficacy, perceived career barriers and the outcome variables of vocational identity and choice (Gushue, Clarke, Pantzer, & Scanlan, 2006) using a sample of urban Latino high school students (N=128), results indicated a clear relationship between levels of career decision self-efficacy and vocational identity and career choice. Results of the aforementioned study are particularly important to cite, as the demographic makeup is similar to that of this study. Although the study utilized a sample of high school students, results may still be somewhat generalizable to this dissertation study, since pre-freshman college students

were used in this study. Additional studies exist that conflict with this study's overall findings (Chung, 2002; Gianakos, 1996; Lopez & Ann-Yi, 2006; Mau, 2004). Despite the conflicting literature, very little research exists examining all three cultural characteristics (race, gender, college generational status) simultaneously.

Therefore, with respect to the EOF pre-freshman college population, it is evident that the career decision-making process for this specialized population is affected by their unique multiple minority makeup. Again, as most EOF students are first generation college students, further attention to the existence of perceived career barriers among EOF students is recommended. Likewise, since we know that career decision self-efficacy has also proven to be of significance in this study, especially when factoring in cultural characteristics, correlations can be made about the significance for EOF populations and other minority populations on college campuses.

Non-Significant Findings

With regard to perceived career barriers, this study failed to identify any significant relationships between perceived career barriers and certainty of initial career choice among EOF pre-freshman college students. When considering the moderating effects of certain cultural characteristics, there were some interactions when testing all three cultural variables at once (race, gender, college generational status); however, when measured individually, the only significant variable when testing for the predictive value of perceived career barriers to certainty of initial career choice was college generational status. One reason this may have occurred with this particular sample population may have to do with participants' understanding of their own gender and racial identity

development. Since many of the questions on the Perceived Barriers Scale asked specific questions dealing with discrimination based on either gender or race, this pre-freshman sample of students may still be unclear as to the repercussions that may be faced in the workplace as a result of gender and race. Similarly, their lack of experience in the workplace may speak to their lack of understanding regarding discrimination.

With respect to career decision self-efficacy, although results from this study did show career decision self-efficacy to be a significant predictor to certainty of initial career choice, there was not much significance when factoring in cultural variables individually. In other words, race did not moderate between career decision self-efficacy and certainty of initial career choice, gender did not moderate between career decision self-efficacy and certainty of initial career choice nor did college generational status alone. However, when all three variables were tested simultaneously, cultural characteristics did show some moderation between career decision self-efficacy and certainty of initial career choice.

Limitations

Several limitations may have impacted the overall results of this study. First, the sample population used was limited to one university within the Northeast region of the United States. Although the demographics of the university were comparable to that of similar studies, results may have varied if the researcher would have considered opening up the study to other EOF programs in the region. Because of this, results may not be generalizable to other colleges and universities. Nevertheless, this study should serve as

a helpful starting point for researchers interested in the career decision-making process of EOF students in general.

Second, the size of the sample and sampling method (i.e., convenience) may have impacted the data. As previously stated, this study was limited to only one EOF program rather than including other EOF programs in the local region; on the other hand, these participants were gaining the same experience because they were in the same EOF program. Additionally, a portion of the sample population was unable to be used for a few reasons. First, there were a few participants who were unable to participate in this study due to their age (under 18), since this study was limited to adults over the age of 18. In addition, some participants were not in attendance during the study due to conflicting schedules. Still, the survey methods yielded a sample size that allowed for enough statistical power.

Third, based on the non-significant findings regarding perceived career barriers, it was evident that some of the questions on the *Perceived Barriers Scale* (McWhirter, 1997) may have been too complex for pre-freshman college students. Specifically, participants may have struggled with questions addressing workplace discrimination based on race and gender due to a lack of experience in the workplace. Although this scale was created for and initially used on high school and college students, participants may have lacked a clear understanding about these questions in particular, as evidenced by data that conflicted with other studies on perceived career barriers. Therefore, lack of comprehension of scale content may have skewed the data.

Lastly, the lack of an assessment tool that was longer and standardized to effectively measure certainty of initial career choice may have impacted the results of this study. Since there was only one question measuring certainty of initial career choice, using a Likert-type response question on the demographic questionnaire, this may not have been a distinct enough measure to address certainty of initial career choice. Since there was no existing measure to assess certainty of career choice, the researcher used a general question that might have been asked during a typical career counseling session with a student to gather data.

Implications for Practice

This study is about the *implementation* developmental task, via an educational choice, in Super's (1990) exploration stage of career development. More specifically, it focused on a special minority population, EOF students, in the pre-enrollment stage of their college careers. Therefore, suggestions for implications for practice center on the career development needs of these students, as well as other similar minority populations.

Results from this study potentially have implications for any educational/counseling professional who is in a position to help enhance the career development within special populations of college students, such as EOF students. Additionally, results may inform counselor educators with their curriculum development for student affairs courses or in courses related to diversity issues in career development models. Although these results cannot be generalized because of the limited sample and sample size, the findings may provide insight into working with non-EOF populations who may have similar demographic characteristics, such as racial and ethnic minority

students, students from financially disadvantaged backgrounds and first generation college students.

As stated previously, the results of this research can inform career counselors and other educational professionals about factors that may be contributing to the initial career choices of minority students both in high school and in initial college entry; thus helping them decide on appropriate interventions to enhance the initial career choices of these students. Because adolescence is the stage of career exploration involving crystallization, specification, and implementation (Super 1990; Zunker, 2006), school and college career counselors may find the data interesting, particularly as it relates to the positive relationship between career decision self-efficacy and initial career choice. Since there is a significant relationship, they can consider career-related interventions that would enhance this relationship.

Career Counselors

School and college career counselors can consider programs and services that include early career counseling initiatives, implementation of career service programming, and career-related courses geared toward increasing career decision self-efficacy for minority student populations in particular. For example, researchers have proposed that exposure to role models in students' fields of interest can serve as highly beneficial to increasing career decision self-efficacy (Alike, 2012; Betz, 2004; Conklin et al., 2013). Therefore, school and college career counselors can use this data to aid with the planning of career-related interventions that would expose students to professionals in a variety of fields who may come from similar cultural backgrounds to mitigate career

decision self-efficacy. Also, information gathering for a variety of occupations can help reduce fears and anxieties of the unknown, while participating in career-related assessments can also help to shift misperceptions about career self-concepts (Burton, 2006; Gordon & Steele, 2003; Herr, 2001; Lepre, 2007; Niles & Harris-Bowlsbey, 2005; Parsons, 2005; Pope, 2000). Career-related interventions should focus on helping students understand their values, interests, personality traits and skills (Niles & Harris-Bowlsbey, 2005; Zunker, 2006). This can positively impact career decision self-efficacy by empowering students to seek information about themselves and career-related information during their early years in college. Lastly, career counselors can use the cultural data from this study to help infuse multicultural career competencies into career-related interventions, particularly because the data clearly showed a significant relationship between career decision self-efficacy and certainty of initial career choice when considering all three cultural variables used in this study (race, gender and college generational status) and because there was a significant relationship between perceived career barriers and college generational status as it related to certainty of initial career choice. Because we know that career decision self-efficacy directly impacts help seeking-behavior and can affect both the decision-making process as well as goal setting for post-college plans (Betz, 2004; Chung, 2002; Foltz & Luzzo, 1998; Gianakos, 1996; Gloria & Hird, 1999; Gushue et al., 2006; Lease & Dahlbeck, 2009; Mau, 2004; Paulson & Betz, 2004; Quimby & O'Brien, 2004; Sandler, 2000), providing these interventions early can increase the number of students seeking career assistance. Furthermore, career counselors should simultaneously consider interventions that may decrease the perception

of career-related barriers when counseling first generation college students specifically, as it was evident from this study's results that first generation college students displayed higher levels of perceived career barriers thus, were less certain about their initial career choices.

EOF Personnel

EOF counselors and administrators can utilize the data gathered from this study as a means to understanding the impact of career development on their overall college student development. Moreover, EOF counselors and administrators can also benefit from gaining an understanding of cultural impacts on students' career decisions. Since the majority of EOF students are of first-generation college student status, specific attention should be given to the relationship between perceived career barriers and certainty of initial career choice for students in this cultural category. Likewise, since the data yielded a strong relationship between career decision self-efficacy and certainty of initial career choice when factoring in all three cultural characteristics (gender, race and college generational status), these results are also important to consider. From a programmatic standpoint, this data can better assist with planning of summer bridge programs and counseling interventions that can continue throughout students' college experiences.

For example, career exposure programming could be implemented during the summer bridge program, exposing students to professionals from a variety of industries who might be from similar cultural backgrounds and/or professionals who are alumni from EOF programs who can share their successes in a variety of professions.

Additionally, it may be helpful to invite parents and/or guardians to take part in such programs in order to help them get a clearer understanding of what might impact their students' career choices, especially because we know that more perceived career barriers exist for those students whose parents/legal guardians did not attend college. These intentional interventions may directly impact the retention rates of EOF programs in that, it may help students become more engaged in the career-planning process, which may ultimately lead to a clearer sense of meaning and purpose for remaining in college while increasing confidence levels as it pertains to career choice. Developing a strong sense of meaning and purpose in college is especially important for EOF students, since many of them are the first in their families to attend (Winograd & Shick Tryon, 2009).

College Counselors

College mental health counselors may also benefit from this study, since stress, depression and anxiety have all been noted as negative responses to perceived barriers and low levels of career decision self-efficacy (Lent & Hackett, 1987; Robbins, 1985; Wang & Castaneda-Sound, 2008). Since we know that the perception of career-related barriers was present among first generation college students within the EOF population, it is likely that this population will seek out counseling services to help mitigate any existing issues surrounding career-related concerns. To that end, the need for a collaborative relationship between counseling centers and career centers is evident. One example might be the implementation of in-service trainings for college counselors, highlighting the significant relationships between perceived career barriers and career decision self-efficacy on the certainty of initial career choice among EOF students. In-

service trainings can also serve as a platform to help determine ways to consult with career services departments to provide comprehensive counseling services when the need is related to career decisions and choice. In addition, this study can provide further insight into what may be part of the normal developmental processes of EOF students as a result of their uncertainty of initial career choice. Consequently, the existence of collaborative relationships between career counselors and college mental health counselors is highly recommended.

College Administrators

Results from this study may help inform the practices of higher education administrators, particularly at institutions who have a commitment to either maintaining or increasing diversity at their institutions. Since we know that EOF students and students who have similar cultural backgrounds than those in EOF programs have less certainty regarding their initial career choices, the ways in which budgets could be allocated to support programs geared toward increasing career decision self-efficacy and decreasing perceived career barriers should be considered. Senior level administrators may allocate additional funding toward EOF programs and to other programs specifically dedicated to other specified populations of students (e.g., the women's center, upward bound programs who also focus on low-income, first-generation college student success, and other federal TRIO grant funded programs) on campus (<http://www2.ed.gov/programs/trioupbound/index.html>). Other higher education administrators could also benefit from the data collected as part of this study such as enrollment management personnel within the offices of College Admissions and

Retention, for example. Since we know that making clear and well-informed academic and career decisions can lead to an increased level of student engagement while helping students develop a sense of meaning and purpose for remaining in college (Astin, 1993; Burton, 2006; Chickering & Reisser, 1993; Gordon, 1995; Kuh, 2005; Pascarella & Terenzini, 2005; Terenzini et al., 1994; Tinto, 1993), this study can provide these constituents with a better understanding of the role that career development plays in overall college student persistence to graduation. Therefore, this information can serve as a stepping stone for collaborative efforts between enrollment management and career development offices.

School Counselors

Additionally, results from this study may be of particular interest to school counselors dealing with a large population of minority students. Specifically, since it was clear that students from multiple minority backgrounds in this study did experience lower levels of career decision self-efficacy, programming related to enhancing career decision self-efficacy would be beneficial. Likewise, school counselors working with a large population of first generation college students should pay particular attention to the results dealing with perceived career barriers, since results yielded a strong relationship between perceived career barriers and less career certainty from those who were the firsts in their families to attend college specifically.

This study can encourage school counselors to provide career-related interventions at an earlier stage so that students may enter college with a clearer career self-concept. School counselors can create opportunities for early career exposure via

career days, job shadowing opportunities, use of career assessments, and other counseling and advising interventions that can help diminish possible perceived career barriers while simultaneously increasing students' levels of career decision self-efficacy. This can help the college admissions process in that, it can better guide school counselors when advising students on college choices based on their career decisions. Ultimately, this may aid in the transition between secondary to post-secondary education for this population in particular.

Counselor Educators

Lastly, this study may provide counselor educators with specialized information about diverse populations within colleges and universities. Clearly, there is a need for further emphasis on the impacts of cultural characteristics on the career choice process for populations like EOF students and those who share similar demographics. This implies that multicultural career counseling competencies should be further emphasized in Career Counseling courses when focusing on high school and college student populations in particular. In addition, results from this study should help shape curriculum planning for student affairs courses and school counseling courses specifically. Moreover, Counselor Educators should continually address the significance of college generational status on the personal and career development processes of college students.

Recommendations for Future Research

Although the findings from this study can foster a better understanding of factors influencing the initial career choices of EOF students, more research is warranted to

better understand the career development of EOF students, a representative population comprised of multiple minority identities. Specifically, additional research exploring the relationship between perceived career barriers and career decision self-efficacy and their impacts on the career decision-making process is recommended. In addition, more information is needed about the effects of certain cultural characteristics (race and gender) on the career decision-making process, since this study did not show any significant impacts on initial career choice when measured individually, with the exception of college generational status. Moreover, although race, gender, and college generation status were the primary cultural characteristics mentioned throughout existing literature, it may be worth assessing the moderating effects of additional characteristics. For instance, since we know that college generational status played a significant role in the existence of perceived career barriers in this study, parental/guardian influence may play a role in career choice among EOF students. As previously mentioned, parental involvement and encouragement is considered one of the most influential factors when considering overall college experience, including academic and career decision making (Forbus et al., 2011; Hertel, 2002; Titus, 2006). To that end, additional research investigating family influence on certainty of career choice is strongly recommended.

This study offered some information about the predictive nature of perceived career barriers on the certainty of initial career choice. Because results from this study contradicted results from prior studies that measured the relationships of perceived career barriers and the career decision-making process, additional studies are needed addressing these concerns. Within the past two decades, a significant amount of research has

emerged addressing the role of perceived career barriers on the career decision-making process for high school and college students (Albert & Luzzo, 1999, Brown & Lent, 1996; Lent et al., 1994, 2002; Luzzo, 1993; Luzzo & McWhirter, 2001; McWhirter, 1997; Swanson & Woitke, 1997, p.446). Although these studies have shown some correlation between perceived career barriers and career choice, they have failed to show a strong enough relationship between the two variables. Much of the empirical research has focused on racial/ethnic and gender minorities; however, very little has focused on special populations like athletes, LGBTQ, and international students. Furthermore, most of these studies have used fairly small samples, which may have skewed the results. Because this dissertation used a similar sample to that of other studies measuring similar variables, it is important to mention the contradictory results that came out of this study.

Similarly, additional research measuring career decision self-efficacy in relation to the certainty of initial career choice is suggested. Since this dissertation only addressed the ways in which career decision self-efficacy predicted the certainty of initial career choice for EOF pre-freshman, it would be beneficial to explore whether the predictive nature of career decision self-efficacy on the certainty of career choices of EOF populations would vary when using a sample of students who have already begun their college tenure and, consequently, may have already received some exposure to career-related interventions. Along with this, further investigation of the predictive nature of career decision self-efficacy on the certainty of career choices for students who were not part of a specialized population, yet have shared cultural characteristics than those in

EOF programs is recommended., with particular emphasis on those from multiple minority backgrounds.

Results from prior studies measuring the importance of career decision self-efficacy on the career development of college students have consistently shown a significant relationship between the two (Alika, 2012; Betz, 2004; Chung, 2002; Foltz & Luzzo, 1998; Gloria & Hird, 1999; Quimby & O'Brien, 2004; Taylor & Betz, 1983; Keller & Whiston, 2008; Kniveton, 2004; Wang & Castaneda-Sound, 2008). However, more empirical evidence is needed with specialized populations within college settings. For example, little research exists focusing on special admits, athletes, and international students and the career development process. With that said, additional studies for other special populations can add to the existing literature.

When considering the cultural impacts on perceived career barriers, career decision self-efficacy and career choice, supplementary research on other cultural characteristics would be advantageous. In addition to race, gender and college generational status, there is some research addressing the relationship between sexual identity and career choice, with special attention on perceived barriers (Schmidt, Miles, & Welsh, 2011; Schneider & Dimito, 2010; Tomlinson & Fassinger, 2003). There seems to be some correlation between the two variables and may help to show additional relationships between the intersections of multiple minority identities. Similarly, since the majority of the sample population used in this study was non-White, it may be beneficial to further explore between group difference (e.g., differences between Latino and Black participants). Moreover, the impact of family on perceived barriers, career decision self-

efficacy and career choice is apparent throughout the literature (Hill, Ramirez, & Dumka, 2003; Metheny & McWhirter, 2013; Sumari, Gerard, & Sin, 2009). Although this dissertation study did not specifically address the direct impact of family, the data gathered from the college generational status variable presented some insight into the need for further investigation. Based on the supplementary data collected, family origin and acculturation issues may be worth examining further, since the majority of this study's population consisted of children of immigrants. In addition, family was considered to be one of the most influential factors to the career choice process, as indicated on the demographic questionnaire. Therefore, further investigation of family as a career choice influencer is recommended.

Also worthy of further investigation are the additional career choice influencers highlighted by participants on the demographic questionnaire. Although family was considered the most influential, television and media, friends, teachers and counselors also received considerable mention. Given where traditional age college students fall within developmental models (e.g., college student development model, Super's model of career development), the level of influence of such factors is to be expected (Chickering & Reisser, 1993; Pascarella & Terenzini, 2005; Super, 1990). Additional studies focusing on this supplemental data could have implications for teachers, counselors and counselor educators.

Furthermore, this dissertation study explored the predictive value of perceived career barriers and career decision self-efficacy on the certainty of initial career choice among EOF pre-freshman using quantitative methods, allowing for a breadth of general

knowledge. It may be equally important to explore these variables further, using qualitative methods of inquiry. Conducting focus groups and interviews with students may allow for a deeper investigation into the experiences of EOF and similar groups of minority college students as it pertains to their career development process. Qualitative methods would allow researchers to more intensely explore personal stories about culture and the career decision-making process for these groups. Furthermore, this study may also serve as a starting point for a possible longitudinal mixed methods study following a group of EOF students throughout their college careers to assess other contributing factors to career decision self-efficacy and to measure other perceived career barriers along the way. This study could include interviews with EOF populations and other minority college students and multiple minority college students.

Finally, this study could be replicated with a larger sample size, including samples from different universities across the region and country, since regional differences may exist. Recommended populations include Opportunity Programs throughout New York state (EOP, HEOP, SEEK) (https://www.suny.edu/student/academic_eop.cfm), Act 101 Programs in Pennsylvania (<http://www.pheaa.org/partner-access/schools/act-101.shtml>), Educational Opportunity Programs throughout the University of California school system (<http://eop.ucsc.edu/>), the California State University school system (<https://secure.csumentor.edu/planning/eop/>) and federal TRIO programs throughout the country (<http://www2.ed.gov/programs/trioupbound/index.html>).

Conclusion

This dissertation study examined the predictive value of perceived career barriers and career decision self-efficacy on the certainty of initial career choice of EOF pre-freshman college students. This study also yielded supplementary data pertaining to the moderating effects of certain cultural characteristics on the certainty of initial career choice among the EOF pre-freshman population. The most noteworthy findings from this study were the significant relationships between perceived career barriers and college generational status on the certainty of initial career choice. The first-generation college students who participated in this study noted more perceived career barriers and lower levels of career decision self-efficacy, while displaying less certainty about their initial career choices. Additionally, there was enough evidence to show a strong relationship between career decision self-efficacy and certainty of initial career choice. Although the evidence was not strong enough to determine the moderating effects of certain cultural characteristics individually (e.g. race and gender), there was enough information provided to show the need for additional research in this area in particular.

The EOF population is a special group within many colleges and universities, comprised of historically underrepresented students, yet, empirical research about college access programs such as EOF are nearly non-existent (Winograd & Shick Tryon, 2009). Given the uniqueness of such programs, continued research on the career development process for groups such as this is highly recommended. Based on the results of this study, there is enough evidence to support the existence of perceived career barriers among this population. Likewise, the sample population within this study displayed

moderate to lower levels of career decision self-efficacy, especially among those who were of first-generation college student status, who also reported less certainty of initial career choices. Since the majority of EOF students are the firsts in their families to attend college, this data is worthy of more attention.

Career choice is considered to be one of the most significant developmental tasks for college students (Amundson, Borgen, Iaquina, Butterfield, & Koert, 2010; Dik, Sargent, & Steger, 2008; Galles & Lenz, 20013; Niles & Harris-Bowlsbey, 2005). Because we know that traditional age college students tend to be at the exploration stage of career development, when they are still working to crystallize their career interests and overall self-concept, they may base their initial decisions on limited life and work experiences (Chickering & Reisser, 1993; Super, 1990; Suzuki, Amrein-Beardsley, & Perry, 2012). Determining levels of career certainty for pre-freshman college students may be of particular interest to counselors and administrators, as it can ultimately affect whether or not someone will solidify a college major that may lead to that specific occupation (Astin, 1993; Gordon & Steele, 2003; Ringer & Dodd, 1999). Therefore, examining the level of career certainty early on during a student's college tenure is advantageous.

Empirical research on the significance of perceived career barriers continues to emerge within the fields of counseling and education and has postulated major emphasis on the moderating effects of cultural characteristics on the existence of perceived career barriers among both high school and college student populations (Albert & Luzzo, 1999; Lent et al., 2002; Luzzo & McWhirter, 2001; McWhirter, 1997). Initial research noted

gender as having the biggest impact on the perception of barriers as they related to career choice. Race and ethnicity have also been noted to have a great deal of impact on career choices (Cardoso & Marques, 2008; Chung, 2002; Constantine et al., 2005; Corkin et al., 2008; Duffy & Klingaman, 2009). Although there were no clear correlations made between gender or race on the perception of career barriers among my EOF sample, results may have varied given a larger sample size. Therefore, this study can be used as a starting point for future researchers interested in investigating this further.

Career decision self-efficacy has been cited throughout the counseling literature, derived from Albert Bandura's empirical research on self-efficacy (Bandura, 1986, 1997; Betz, 2004; Gibbons & Shoffner, 2004; Gushue et al., 2006; Lease & Dahlbeck, 2009; Paulsen & Betz, 2004; Quimby & O'Brien, 2004). Career decision self-efficacy has been shown to have a notable impact on the career development process in that, those having a greater sense of career decision self-efficacy are far more likely to participate in career-related tasks, including help-seeking behavior and completion of career exploration tasks than those with lower levels of career decision self-efficacy. Therefore, it is important to consider career decision self-efficacy as it relates to the career decision-making process. Since we know that career decision self-efficacy can directly impact the likelihood that a student would participate in career-related interventions, counselors and administrators can use this information when assessing for certainty of initial career choices.

Social Cognitive Career Theory (SCCT) served as the theoretical framework to this dissertation study. This framework helped to further the understanding of the interrelatedness of self-efficacy, environmental factors and cultural variables as they

relate to how students go about making career decisions (Lent, 2005; Lent et al., 1994). Since many of the questions on the Perception of Barriers Scale and the Career Decision Self-Efficacy Scale focused on environmental factors and cultural factors impacting career choice and behaviors leading to making a career choice, it was important to use a framework that considered such factors, especially for the EOF population. With that said, counselors should utilize a holistic approach to counseling that fully embraces all aspects of an individual, including cultural characteristics.

In conclusion, this study highlighted two major influencers on the career decision-making process for EOF pre-freshman, that is, perceived career barriers and career decision self-efficacy. Supplemental data was provided to emphasize the moderating effects of certain cultural characteristics (race, gender and college generational status). This study added to the limited research on EOF populations and provided enough evidence to support a continued focus on the unique career development needs of such a population. Data gathered should inform practice for school and college career counselors, administrators and counselor educators. Lastly, results from this study may help to catapult future research focused on the impact of career development on the overall college student experience among special populations like EOF and other minority student populations.

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APPENDIX A

Institutional Review Board (IRB) Approval



Institutional Review Board
College Hall, Room 248

VOICE: 973-655-7583
FAX: 973-655-3022

May 13, 2013

Ms. Nicole Pacheco
109 River Road, # A-6
Nutley, NJ 07110

Re: IRB Number: **001363**

Project Title: **The Relationship between Perceived Career Barriers and Career Decision Self-Efficacy on the Initial Career Choice among Educational Opportunity Fund Program (EOF) Students**

Dear Ms. Pacheco:

After an expedited 7 review, Montclair State University's Institutional Review Board (IRB) approved this protocol on **May 5, 2013**. The study is valid for one year and will expire on **May 5, 2014**.

Before requesting amendments, extensions, or project closure, please reference MSU's IRB website and download the current forms.

Should you wish to make changes to the IRB-approved procedures, prior to the expiration of your approval, submit your requests using the Amendment form.

For Continuing Review, it is advised that you submit your form 60 days before the month of the expiration date above. If you have not received MSU's IRB approval by your study's expiration date, ALL research activities must STOP, including data analysis. If your research continues without MSU's IRB approval, you will be in violation of Federal and other regulations.

After your study is completed, submit your Project Completion form.

If you have any questions regarding the IRB requirements, please contact me at 973-655-5189, reviewboard@mail.montclair.edu, or the Institutional Review Board.

Sincerely yours,

A handwritten signature in blue ink that reads "Katrina Bulkley".

Dr. Katrina Bulkley
IRB Chair

cc: Dr. Larry Burlew, Faculty Sponsor

montclair.edu

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APPENDIX B

Consent Form



College of Education and Human Services
 Department of Counseling and Educational Leadership
 Voice: 973-655-7216
 Fax: 973-655-7662

CONSENT FORM FOR ADULTS

Please read below with care. You can ask questions at any time, now or later. You can talk to other people before you sign this form.

Study's Title: The Relationship between Perceived Career Barriers and Career Decision Self-Efficacy on the Initial Career Choice among Educational Opportunity Fund Program (EOF) Students

Why is this study being done? The purpose of this study is to examine the impacts of perceived career barriers and career decision self-efficacy on the initial career choices of students within the Educational Opportunity Fund (EOF) Program.

For clarity purposes, I have included definitions of the two primary concepts that are being studied:

Career Decision Self-Efficacy-A term that describes an individual's belief that he or she can successfully complete tasks necessary to making career decisions (Taylor & Betz, 1983; Luzzo, 1993).

Perceived Career Barriers-Events or conditions, either within the person or the environment, that make career development difficult (Swanson & Woitke, 1997).

What will happen while you are in the study? Following a brief demographic questionnaire, you will be given directions and asked to complete two separate survey instruments (Career Decision Self-Efficacy Scale-Short Form and the Perception of Barriers Scale). The surveys will then be collected and stored in a sealed envelope and will remain anonymous.

Time: This study should take about 30-35 minutes in total and will take place during one meeting session.

Risks: Given the nature of some of the questions, you may experience some negative emotions when asked particular questions; however, there is minimal risk associated with this study. You may skip any questions you do not wish to answer.

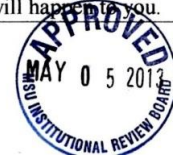
Benefits: Although there are no direct benefits to you being in this study, you may benefit by gaining an increased awareness of things that may influence your college major and career decisions through the various questions asked of you.

Who will know that you are in this study? You will not be linked to any presentations. We will keep who you are confidential and anonymous.

Although we will keep your identity confidential as it relates to this research project, if we learn of any suspected child abuse we are required by NJ state law to report that to the proper authorities immediately.

Do you have to be in the study?

You do not have to be in this study. You are a volunteer. It is okay if you want to stop at any time and not be in the study. You do not have to answer any questions you do not want to answer. Nothing will happen to you.





College of Education and Human Services
Department of Counseling and Educational Leadership
Voice: 973-655-7216
Fax: 973-655-7662

Do you have any questions about this study? If so, please contact Nicole Pacheco (Principal Investigator) at (973) 868-7463 (mobile) or via email at pachecon1@mail.montclair.edu or Dr. Larry Burlew (Faculty Sponsor) at burlewl@mail.montclair.edu.

Do you have any questions about your rights as a research participant? Phone or email the IRB Chair, Dr. Katrina Bulkley, at 973-655-5189 or reviewboard@mail.montclair.edu.

One copy of this consent form is for you to keep.

Statement of Consent

I have read this form and decided that I will participate in the project described above. Its general purposes, the particulars of involvement, and possible risks and inconveniences have been explained to my satisfaction. I understand that I can withdraw at any time. My signature also indicates that I am 18 years of age or older and have received a copy of this consent form.

_____	_____	_____
Print your name here	Sign your name here	Date
<u>Nicole Pacheco</u>	_____	_____
Name of Principal Investigator	Signature	Date
<u>Dr. Larry Burlew</u>	_____	_____
Name of Faculty Sponsor	Signature	Date



APPENDIX C

Demographic Questionnaire Form

This questionnaire is designed to obtain demographic information. Please fill out the form completely.

Age: _____ Identifying Gender: Male _____ Female _____ Transgender _____ Other _____

1. Are you a first-generation college student? Yes _____ No _____

Definition: Students whose parent(s) or guardians did not attend college.

2. How do you describe yourself? (please check the one option that best describes you)

- | | |
|---|---|
| <input type="checkbox"/> American Indian or Alaska Native | <input type="checkbox"/> Hawaiian or Other Pacific Islander |
| <input type="checkbox"/> Asian or Asian American | <input type="checkbox"/> Black or African American |
| <input type="checkbox"/> Hispanic or Latino | <input type="checkbox"/> Non-Hispanic, White, Caucasian |

3. Where were your parents/guardians born? _____

4. Where were you born? _____

5. How many people live in your household (including you)?

- Just you (1 in household) 2 in household 3 in household 4 in household
 5 in household 6 in household 7 in household 8 + in household

6. Highest education level in household? (N/A if unknown) _____

7. Parent/Guardian 1-What is his/her job?: _____
 Parent/Guardian 2-What is his/her job?: _____

8. My parent(s)/guardian(s) have been involved assisted me in selecting my career choice(s) Y____N____

9. What do you plan to choose as a college major? _____

10. What is your current career choice? _____

11. Do you think your cultural background has influenced your career choice? Y____N____

12. Please rate the certainty of your current career choice: (circle the best option)

APPENDIX D

Instruments

Perceived Barriers Scale

Each of the statements below begins with, "**In my future career, I will probably...**", or a similar phrase. Please respond to each statement according to what you **think (or guess)** will be true for you.

"In my future career, I will probably...."	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1. ... be treated differently because of my sex.	A	B	C	D	E
2. ... be treated differently because of my ethnic/racial background.	A	B	C	D	E
3. ... experience negative comments about my sex (such as insults or rude jokes).	A	B	C	D	E
4. ... experience negative comments about my racial/ethnic background (such as insults or rude jokes).	A	B	C	D	E
5. ... have a harder time getting hired than people of the opposite sex.	A	B	C	D	E
6. ... have a harder time getting hired than people of other racial/ethnic backgrounds.	A	B	C	D	E

- | | | | | | | |
|---|---|---|---|---|---|---|
| 7. ... experience discrimination
because of my sex. | A | B | C | D | E | |
| 8. ... experience discrimination
because of my racial/ethnic
background. | A | B | C | D | E | |
| 9. ... have difficulty finding
quality daycare for my children. | A | B | C | D | E | |
| 10. ... have difficulty getting time
off when my children are sick. | | A | B | C | D | E |
| 11. ... have difficulty finding work
that allows me to spend time
with my family. | A | B | C | D | E | |

For each item below, finish the sentence with: "**... currently a barrier to my educational aspirations.**" For example, Item 14 would read: "**Money problems are ... currently a barrier to my educational aspirations.**"

- | | Strongly Agree | Agree | Not Sure | Disagree | Strongly Disagree |
|--|----------------|-------|----------|----------|-------------------|
| 12. Money problems are...
" ...currently a barrier to my educational aspirations " | A | B | C | D | E |
| 13. Family problems are... | A | B | C | D | E |
| 14. Not being smart enough is... | A | B | C | D | E |
| 15. Negative family attitudes
about college are... | A | B | C | D | E |
| 16. Not fitting in at college is... | A | B | C | D | E |
| 17. Lack of support from teachers is... | A | B | C | D | E |

- | | | | | | |
|--|---|---|---|---|---|
| 18. Not being prepared enough is... | A | B | C | D | E |
| 19. Not knowing how to study well is... | A | B | C | D | E |
| 20. Not having enough confidence is... | A | B | C | D | E |
| 21. Lack of support from friends to
pursue my educational aspirations is... | A | B | C | D | E |
| 22. My gender is... | A | B | C | D | E |
| 23. People's attitudes about my gender are... | A | B | C | D | E |
| 24. My ethnic background is... | A | B | C | D | E |
| 25. People's attitudes about my ethnic
background are... | A | B | C | D | E |
| 26. Childcare concerns are... | A | B | C | D | E |
| 27. Lack of support from my "significant
other" to pursue education is... | A | B | C | D | E |
| 28. My desire to have children is... | A | B | C | D | E |
| 29. Relationship concerns are... | A | B | C | D | E |
| 30. Having to work while I go to school is... | A | B | C | D | E |
| 31. Lack of role models or mentors is... | A | B | C | D | E |
| 32. Lack of financial support is... | A | B | C | D | E |

Career Decision Self-Efficacy Scale-Short Form Sample

For use by Nicole Pacheco only. Received from Mind Garden, Inc. on June 13, 2013

Score: _____

Please provide the following information:

Name or I.D. _____

Date _____ Age _____ Gender (*Please Circle*): **F** **M**

Career Decision Self-Efficacy Scale Short Form

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

Example:

No Confidence at All	Very Little Confidence	Moderate Confidence	Much Confidence	Complete Confidence
1	2	3	4	5

How Much Confidence Do You Have That You Could:

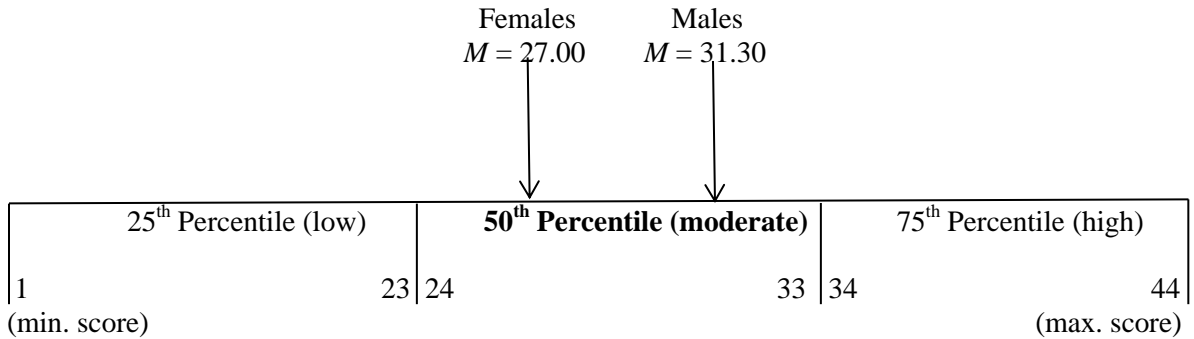
- | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------------|
| | 1 | 2 | 3 | 4 | 5 |
| a. Summarize the skills you have developed in the jobs you have held? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> |

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

Appendix E

Demographic Figures

Perceived Career Barriers by Gender



Perceived Career Barriers by College Generational Status

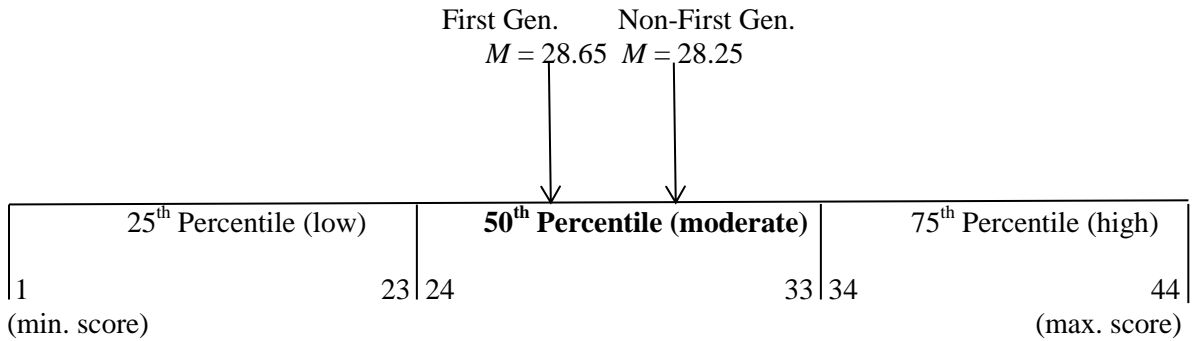
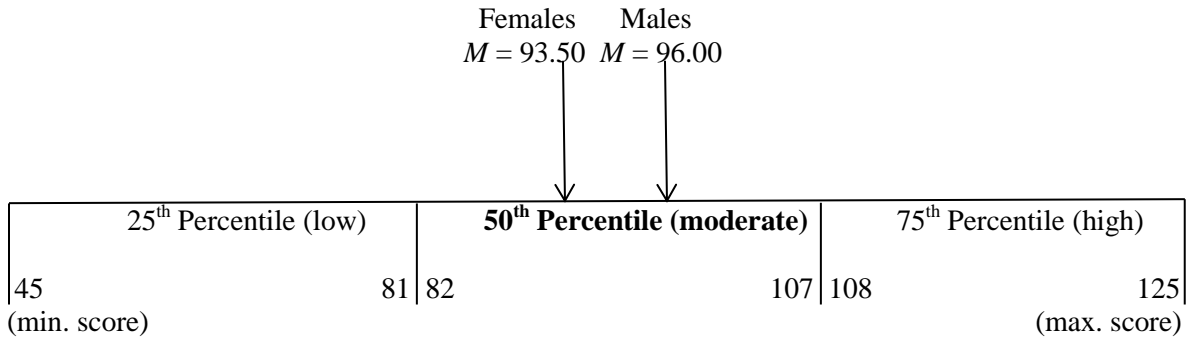


Figure 1. Demographic variables, score ranges and percentile scores on perceived career barriers.

Career Decision Self-Efficacy by Gender



Career Decision Self-Efficacy by College Generational Status

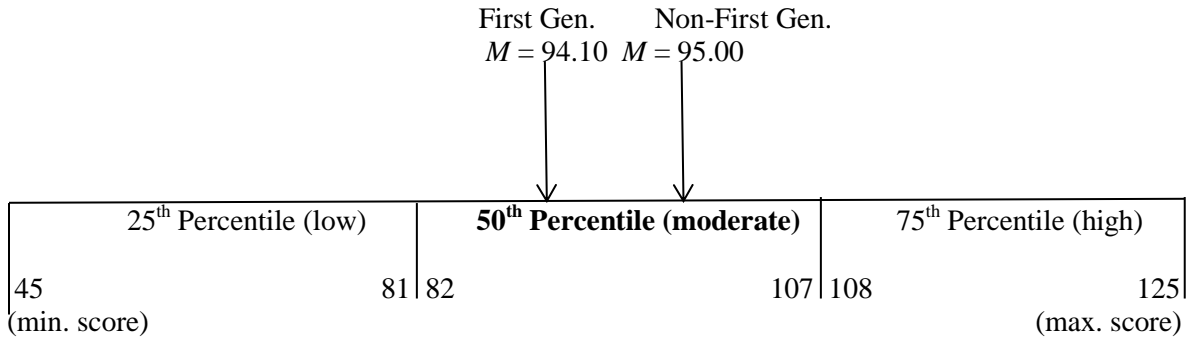


Figure 2. Demographic variables, score ranges and percentile scores on career decision self-efficacy.

