2003

The Influence Of Ethnic Identity, Gender And Trait Anxiety On Career Decision-Making Self-Efficacy For White And Racial/Ethnic Minority Students

Maureen G. Creagh-Kaiser
Seton Hall University

Follow this and additional works at: https://scholarship.shu.edu/dissertations

Part of the Bilingual, Multilingual, and Multicultural Education Commons, and the Psychology Commons

Recommended Citation
https://scholarship.shu.edu/dissertations/1625
THE INFLUENCE OF ETHNIC IDENTITY, GENDER AND TRAIT ANXIETY ON CAREER DECISION-MAKING SELF-EFFICACY FOR WHITE AND RACIAL/ETHNIC MINORITY STUDENTS

BY

MAUREEN G. CREAGH-KAISER

Dissertation Committee

Laura Palmer, Ph.D., Mentor and Chair
Bruce Hartman, Ph.D.
Arpna G. Inman, Ph.D.
John Smith, Ed.D., External Reader

Submitted in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy
Seton Hall University

2003
THE INFLUENCE OF ETHNIC IDENTITY, GENDER AND TRAIT ANXIETY ON CAREER DECISION-MAKING SELF-EFFICACY FOR WHITE AND RACIAL/ETHNIC MINORITY STUDENTS

Abstract

BY

MAUREEN G. CREAGH-KAISER

Throughout the history of career theories and models, there has been minimal emphasis on racial and ethnic minorities and women. Changing demographics of the population in general, and the workforce in particular heed the call for career research on racial and ethnic minorities. Due to continued oppression and discrimination in the workforce, career counselors need to be informed of the effects of oppression and discrimination on an individual's level of confidence in making a career decision. Counselors and educators are behooved to assess the person by environment fit for each respective individual; male and female, White and racial and ethnic minority and other demographic influences. Further, this and/or other models should be coupled with the exploration of their perceived barriers, subsequent anxiety, and overall level of career decision-making self-efficacy.

It was hypothesized that White students would have higher levels of career decision-making self-efficacy, lower levels of trait anxiety and lower levels of ethnic identity. Analyses failed to detect significant differences in career decision-making self-efficacy between White and racial and ethnic minority students. However, estimated marginal means for the total sample suggested that racial and ethnic minorities yielded higher levels of career decision-making self-efficacy. Analyses also failed to detect
significant differences in trait anxiety. Significant differences were found for levels of ethnic identity, with racial and ethnic minority students yielding higher levels of ethnic identity. A significant gender by ethnicity interaction was found for ethnic identity, suggesting that racial and ethnic minority females have the highest level of ethnic identity.

The present study provided empirical support for the need to further examine influences on college students' confidence in making career decisions. Furthermore, these findings suggest that the more an individual has a sense of awareness, belonging and pride with his/her respective ethnic group, the more one will ascribe oppression, racism and discrimination to external forces. Moreover, that ethnic identity is empowering in the vocational planning and confidence in making career decisions of racial and ethnic minority college students. Implications for counselors and educators working with college students, as well as sampling and measurement issues to guide future research are discussed.
THE INFLUENCE OF ETHNIC IDENTITY, GENDER AND TRAIT ANXIETY ON CAREER DECISION-MAKING SELF-EFFICACY FOR WHITE AND RACIAL/ETHNIC MINORITY STUDENTS

BY

MAUREEN G. CREAGH-KAISER

Dissertation Committee
Laura Palmer, Ph.D., Mentor and Chair
Bruce Hartman, Ph.D.
Arpana G. Inman, Ph.D.
John Smith, Ed.D., External Reader

Submitted in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy Seton Hall University 2003
DEDICATION

To my husband Chris, my parents James and Ellen Creagh, and my mentor Dr. Palmer

With all of my gratitude and love
# TABLE OF CONTENTS

DEDICATION.................................................................................................................. iii

LIST OF TABLES.............................................................................................................. vi

I  INTRODUCTION........................................................................................................ 1
    Introduction to the Problem...................................................................................... 1
    Rationale of the Study............................................................................................ 10
    Statement of the Problem....................................................................................... 12
    Research Questions.................................................................................................. 12
    Research Hypotheses.............................................................................................. 13
      Hypothesis I.......................................................................................................... 14
      Hypothesis II......................................................................................................... 14
      Hypothesis III........................................................................................................ 14
    Definition of Variables........................................................................................... 14
    Significance of the Study....................................................................................... 15
      Theory................................................................................................................... 15
      Research of client................................................................................................. 15
      Practice.................................................................................................................. 16
    Limitations............................................................................................................... 16
    Delimitation............................................................................................................ 17

II  THEORETICAL FOUNDATION AND REVIEW OF RELATED
    LITERATURE............................................................................................................. 18
    Introduction............................................................................................................ 18
    Self-Efficacy.......................................................................................................... 18
    Empirical Literature on Self-Efficacy................................................................... 19
    Self-efficacy and Women....................................................................................... 23
    Theoretical Rationale: Social Cognitive Career Theory....................................... 24
    Career Decision-Making Self-Efficacy................................................................. 27
    Empirical Literature on Career Decision-Making Self-Efficacy......................... 28
    Ethnic Identity....................................................................................................... 37
    Empirical Literature on Ethnic Identity................................................................ 38
    Gender and Career Decision-Making Self-Efficacy.............................................. 48
    Empirical Literature on Gender and Career Decision-Making Self-Efficacy....... 48
    Trait Anxiety and Career Decision-Making Self-Efficacy.................................... 56
    Empirical Literature on Trait Anxiety and Career Decision-Making Self-Efficacy 56

III  METHODOLOGY......................................................................................................... 61
    Participants and Sampling Strategy..................................................................... 61
    Participant Response Rate Necessary................................................................ 62
    Procedure............................................................................................................... 63
    Research Instruments............................................................................................ 64
Demographic Information Questionnaire
The Multigroup Ethnic Identity Scale
Career Decision-Making Self-Efficacy Scale
Trait Anxiety Scale (State Trait Anxiety Inventory (STAI))
Study Design and Statistical Analyses
Hypotheses Testing
Hypothesis 1
Hypothesis 2
Hypothesis 3
Scale Statistics
Statistical Analyses
Analysis of variance (ANOVA)
Assumptions of analysis of variance
Multivariate analysis of variance (MANOVA)
Assumptions of MANOVA
Factorial analysis of variance
Assumptions of factorial ANOVA

IV RESULTS
Descriptive Statistics
Test of Hypotheses
Hypothesis 1
Hypothesis 2
Hypothesis 3
Summary of Results

V DISCUSSION
Summary of Previous Literature
Summary of Findings and Discussion of Results
Discussion of Extension of the Study Conducted by Gloria and Hird (1999) "Influences of ethnic and nonethnic variables on the career decision-making self-efficacy of college students"
Significance of the Study: Theory, Research, and Practice
Implications for College Counseling and Career Services Programs
Limitations
Future Directions

References
Appendixes
Appendix A
Appendix B
Appendix C
Appendix D
Appendix E
LIST OF TABLES

TABLE                        PAGE

1. Means and Standard Deviations for the Career Decision-Making Self-Efficacy Scale (CDMSES), Trait Anxiety Scale (TA), and Multigroup Ethnic Identity Scale (EI) ................................................................. 78

2. Intercorrelations Between Career Decision-Making Self-Efficacy (CDSME), Trait Anxiety (TA), and Ethnic Identity (EI) for Total Sample ................................................................. 79

3. Correlations Between Independent and Dependent Variables ....................................... 81

4. Multiple Analysis of Variance for Group Differences Between White and R/EM Students' on All Measures ................................................................. 82

5. Multiple Analysis of Variance for Group Differences in Gender on All Measures ................................................................. 83

6. Correlations Between Career Decision-Making Self-Efficacy (CDMSE) and Ethnic Identity (EI) for Racial and Ethnic Minority Students ......................................................... 84

7. Correlation Between Career Decision-Making Self-Efficacy (CDMSE) and Ethnic Identity for White Students ................................................................. 84

8. Interaction Between Race/Ethnicity and Gender for Ethnic Identity ................................ 86
CHAPTER I

Introduction

The career development process has been well researched on the college population. The concept of career decision-making self-efficacy has been introduced and investigated within the career development literature (Hackett & Betz, 1981; Betz & Hackett, 1981). However, the exploration of career development in general, and career decision-making self-efficacy, in particular, of racial and ethnic minorities has been limited. With the increase in number of ethnic minorities entering college, and making career decisions or engaging in career planning tasks, it behooves us to attend to the needs of these populations. Hence, the purpose of this study is to expand on the limited research on racial and ethnic differences with regard to career decision-making self-efficacy, in particular ethnic identity and trait anxiety. This chapter will present and elaborate on the importance of ethnic identity, gender and trait anxiety as influences on career decision-making self-efficacy. The rationale and significance of this research, hypotheses, variables, and limitations are outlined and explored.

Introduction to the Problem

Researchers have studied the concept of self-efficacy for the past twenty years. Extensive research has grown explaining the relationship of self-efficacy (Bandura's social cognitive theory) to career development and career decision-making (Betz & Hackett, 1981; Hackett & Betz, 1981; Bandura, 1986, 1989, 1977). Self-efficacy is
defined by Bandura (1986), as people's judgements of their abilities to initiate, organize and execute courses of action required to achieve a specific performance. Furthermore, Bandura asserted that self-efficacy expectations are an individual's estimation of his or her confidence in the ability to master behaviorally specific tasks. A critical feature of self-efficacy expectations is the link between one's self-efficacy expectations and the actual performance of the task (Bandura, 1977, 1986). Higher levels of self-efficacy expectations lead to an increased frequency of the specific behavior. Lower levels of self-efficacy expectations correlate with avoidance of the specific behavior and lower levels of performance of the specific behavior.

As previously stated, the concept of self-efficacy stems from Bandura's social cognitive theory (1986). Subsequently, researchers have utilized this concept as a theoretical underpinning, predictor, and/or influence on behavior. Self-efficacy has been operationalized for a diverse range of participants, inclusive of White, racial and ethnic minorities, males, females, and varied age groups. Discussion of the research on said populations is addressed throughout this study.

Hackett and Betz (1981) introduced self-efficacy into the career literature as a predictor of academic major and career choice, in particular for women. Investigation of the utility of self-efficacy in the career development process, in particular that of career decision-making was conducted by Lent, Brown and Hackett (as cited in Brown, Brooks, & Associates, 1996). Lent et al. developed the Social Cognitive Career Theory and highlighted the interrelationships between self-efficacy, outcome expectations, and goal representations as part of an individual's career decision-making process. A
comprehensive review of the Social Cognitive Career Theory and theoretical rationale for the utility of this theory in the present investigation will be presented in Chapter II.

Career decision-making self-efficacy is one type of a career self-efficacy measure that has received expansive empirical attention. Career decision-making self-efficacy has been correlated with a number of career variables/outcome including career indecision (Taylor and Betz, 1983); vocational indecision, locus of control and career salience (Taylor and Pompa, 1990); career decision-making attitudes (Luzzo, 1993b); career choice (Gianakos, 1999); cultural differences (Mau, 2000); and ethnic and nonethnic variables (Gloria & Hird, 1999).

Taylor and Betz (1983) developed and tested the predictive validity of the Career Decision-Making Self-Efficacy Scale (CDMSES), a 50-item instrument used to assess an individual's level of confidence in career decision-making tasks. The authors reported a strong relationship between career decision-making self-efficacy and career indecision. Furthermore, this study provided some evidence of the predictive validity for the Career Decision-Making Self-Efficacy Scale, with the finding that all CDMSES scores significantly predicted levels of career indecision. Taylor and Pompa (1990) partially replicated the Taylor and Betz (1983) study and investigated the relationship between the variables of vocational indecision, (external) locus of control and career salience and career decision-making self-efficacy. They found that CDMSE was a significant predictor of vocational indecision. Furthermore, Taylor and Pompa (1990) found a negative relationship between (external) locus of control and career decision-making self-efficacy; the more external an individual's views on life's events consequences, the lower the level of confidence in completion of tasks of career decision-making.
Support for the relationship between career decision-making self-efficacy and career salience was not found. Luzzo (1993b) found a significant relationship between career decision-making self-efficacy and career decision-making attitudes. This relationship suggests that an individual's level of confidence is associated with their feelings toward the process. Further, career decision-making self-efficacy was a significant contributor to the student's attitudes toward career decision-making. Gianakos (1999) found that differences in career decision-making self-efficacy are associated with career choice patterns. Individuals with stable (e.g. career chosen) or multiple (e.g. moving from stable career path to another) group patterns reported higher levels of career decision-making self-efficacy than individuals with conventional (e.g. exploration and trials of career paths prior to permanent choice) or unstable (e.g. trials of career paths with no notion of permanency) patterns. Individuals with the conventional career choice pattern reported higher levels of career decision-making self-efficacy than individuals with an unstable pattern. There were no significant differences in career decision-making self-efficacy between individuals in the stable and multiple pattern groups. In sum, the concept of career decision-making self-efficacy has been correlated with variables pertaining to salient issues in the career development process.

Recently, career counselors and researchers have come to realize the importance of culture and gender in career development, with the understanding that sociopolitical, background contextual and cultural factors all influence career decision-making, as well as attitudes toward career development (Hernandez & Morales, 1999; Gloria & Hird, 1999; Fouad & Arbona, 1994; Hackett & Byars, 1996). Hernandez & Morales (1999) posit that career development is a unique process for each individual, and is based on the
interaction of genetic traits, personality, self, and environmental variables. Ethnic identity has been defined as an aspect of an individual's social identity, which is derived from his or her identification with membership within that particular group (Phinney, 1992; Tajfel, as cited in Phinney, 1992). For Phinney (1992), defining ethnic identity included having a sense of belonging and attitudes with regard toward the specific ethnic group. Research focusing on the importance of ethnic identity with regard to career development in general, and career self-efficacy in particular although limited has been explored by several researchers (Gloria & Hird, 1999; Gainor & Lent, 1998; Miranda & Umhoefer, 1998; Hackett et al., 1996; Hackett, Betz, Casas, & Singh, 1992; Gainor, & Lent, 1998; Parham, & Austin, 1994; Evans & Herr, 1994). In 1987, Lent and Hackett endorsed that career self-efficacy research be conducted with individuals from culturally diverse populations; in turn research in this area began to emerge. Fouad & Arbona (1994) noted ethnic identity is a vocational task such that one's career development is a function of one's ethnic group identification and one's reference group perspective. Hackett & Byars (1996) suggest that ethnic identity development may be a useful concept in understanding the influence of a change in physiological states (emotional arousal, anxiety) on academic self-efficacy in African American women. They further suggest that ethnic identity may also serve to "mediate or moderate the effects of other sources of information on academic and career self-efficacy". However, the influence of ethnic identity and gender on career decision-making is not clearly delineated (Miranda & Umhoefer, 1998; Gloria & Hird, 1999).

Another recent trend in the literature has been exploring cultural differences with regard to career decision-making self-efficacy (Mau, 2000; Gloria & Hird, 1999). Mau
(2000) examined the relationship between two constructs with career development: career decision-making style and career decision-making self-efficacy. Harren (as cited in Mau, 2000) has a typology of the styles: rational (making decisions emphatically), intuitive (making decisions based on how one feels), and dependent (making decisions based on the views of others). It was hypothesized that these two constructs would vary by cultural orientation. In particular, Mau (2000) examined the relation of career decision-making style and self-efficacy for both American and Taiwanese students. Results revealed that the majority of students (American and Taiwanese) reported a rational style of career decision-making. Taiwanese students reported lower levels of career decision-making self-efficacy than American students, suggesting that the collective-oriented culture of the Taiwanese ethnic group may obstruct self-efficacy development, whereas the individual oriented culture of America fosters self-efficacy.

Gloria and Hird (1999) examined the influences of ethnic identity (attitudes and sense of belonging, ethnic identity achievement, and ethnic behaviors - high vs. low), other-group orientation (attitudes towards other groups - high vs. low), trait anxiety and declaration of academic major (declared vs. undeclared) on career decision-making self-efficacy for White and racial and ethnic minority (R/EM) students. The authors reported significant differences in career decision-making self-efficacy, trait anxiety, ethnic identity and other group orientation between White and R/EM students. R/EM students reported higher levels of ethnic identity and trait anxiety, and lower levels of career decision-making self-efficacy, relative to White students. Further, the results indicate that students with an undeclared major have higher levels of trait anxiety and lower levels of career decision-making self-efficacy. Furthermore, ethnic variables (ethnic identity
and other group orientation) were predictive of career decision-making self-efficacy scores and trait anxiety scores in both Whites and R/EM's; however, ethnic variables were more predictive of CDMSES scores and trait anxiety scores for R/EM's.

The relationships of ethnic identity, other group orientation and trait anxiety to career decision-making self-efficacy were significantly stronger for R/EM as compared to White students. Other-group orientation was a stronger predictor of career decision-making self-efficacy as compared to ethnic identity, and ethnic identity was the stronger predictor of trait anxiety as compared to other-group orientation for R/EM students. These findings suggest that the more an individual associates with the dominant group (Whites) in terms of career aspirations and planning, the more efficacious he/she may be, without necessarily losing sight of their cultural values.

Because of the changes in the workforce regarding gender and ethnicity, counselors must be knowledgeable and skilled in the effect of ethnic identity and gender on career related issues. The sources of self-efficacy (performance accomplishment, verbal persuasion, vicarious learning, and physiological states and reaction) (Bandura, 1986) conjure the importance of reviewing the barriers and influences these sources have on racial and ethnic minorities and females in career development and decision-making. Researchers have begun to review these effects; which has lead to the emerging theories of the Social Cognitive Career Theory (Lent, Brown & Hackett, 1994, 1996) and the Culturally Appropriate Counseling Model (Fouad & Bingham, 1995, as cited in Walsh & Osipow, 1995), however, there remains a scarcity of career theories applicable to racial and ethnic minorities.
There have been inconsistent findings in the literature exploring gender differences of career decision-making, and career decision-making self-efficacy (Hackett & Betz, 1981; Larson, Butler, Wilson, Medora, & Allgood, 1994; Scbeye & Gilroy, 1994; Hackett & Byars, 1996; Luzzo & McWhirter, 2001). Luzzo and McWhirter (2001) found that women and ethnic minorities perceive more and greater barriers to career development. They further reported that women and men reported the same level of confidence in their ability to cope with these career development barriers; however, ethnic minorities reported a significantly lower level of coping self-efficacy for said barriers.

However, researchers have documented that significant gender differences do exist in the structure of career development (Corder & Stephan, 1984; Betz & Hackett, 1981; Gianakos, 2001; Betz & Voyten, 1997). Corder & Stephan (1984) and Kriger (1972) indicate that the main difference is an isolated decision for men, versus a dichotomous decision for women, in particular with regard to socialization. Hackett & Betz (1981), Betz & Hackett (1981); and O'Hare & Beutell's (1987) reports' of women having lower self-efficacy support the theory that women have higher levels of anxiety (Bandura, 1977).

Betz and Hackett (1981) found a difference in efficacy expectations between males and females. Females' expectations of their level of performance varied according to the occupation. For instance, females held higher self-efficacy expectations for traditionally female occupations and lower for male-dominated careers. In addition, the results indicated that males have equivalent self-efficacy for traditional and nontraditional careers, females' self-efficacy is mediated by their perception of performance capability -
the self-efficacy expectations of females were much lower for traditional occupations than their self-efficacy expectations for nontraditional occupations. Gianakos (2001) found gender to be significantly related to some career decision-making self-efficacy scores, and added to the regression models. She found that women reported higher levels of career decision-making self-efficacy, specifically in the domains of career planning and gathering occupational information.

Betz and Voyten (1997) found substantial gender differences in the relationships among career decision-making self-efficacy, outcome expectations, career indecision, and exploration intentions. Men were found to have higher correlations between efficacy and outcome expectations. Men were also found to have statistically significant greater paired correlations between Goal Selection and Academic Outcome, Goal Selection and Career Outcome and Total Career Decision-Making Self-Efficacy score and Career Outcome. Thus, a relationship between thought and behavior was discovered in men; men with higher levels of confidence (efficacy) also believed that career exploratory behavior would facilitate career development outcomes (outcome expectations).

Another variable in the career development literature in general and career decision-making self-efficacy literature in particular is trait anxiety. Trait anxiety has been found to correlate with self-efficacy (Bandura, 1986), career self-efficacy (Robbins, 1985); and career decision problems (Hartman, Fuqua, & Blum, 1985). Bandura (1986) notes that self-efficacy theory proposes a reciprocal relationship; levels of anxiety arousal can affect the extent to which individuals believe that they are able to handle threatening situations and vice versa. "When people experience weak efficacy in potentially threatening situations, they also tend to experience increased anxiety" (Haycock,
McCarthy, & Sky, 1998, p. 318). Hackett and Byars (1986) exemplify Bandura’s proposal by suggesting that the experience of being different (ethnically) can arouse anxiety. Levels of efficacy are altered by inauspicious behavioral consequences due to feelings of being different or being ousted by a group [dominant] (Gloria & Hird, 1999, Beale-Spencer, Kim, & Marshall, 1987; Suarez, Powers, Garwood, & Szapocznik, 1997).

Robbins (1985) found career self-efficacy to be correlated with anxiety. Hartman, Fuqua, and Blum (1985) report that anxiety is the most commonly found cause of career decision problems. Further, the development of self-identity is inhibited by anxiety and is related to an external locus of control; with self-identity and locus of control also contributing to career decision problems. Thus, the investigation of an individual’s level of (trait) anxiety in the career decision-making process is a crucial component.

Rationale of the Study

Hackett and Betz (1981) proposed Bandura's self-efficacy theory to career development and career decision-making self-efficacy. Subsequently, many researchers have investigated career self-efficacy, in particular with college students. Anxiety, in particular has been examined and researchers have established the correlation of anxiety with career self-efficacy. Gender differences have also been explored and inconsistent findings have evolved. However, the influence of ethnic identity and minority status on career decision-making self-efficacy has received very little attention.

With the increase in number of ethnic minorities entering college, and making career decisions or engaging in career planning tasks, it behooves us to attend to the needs of these populations. Thus, the purpose of this study is to expand on the limited research on cultural differences with regard to career decision-making self-efficacy.
Specifically, self-efficacy, career decision-making self-efficacy, trait anxiety and ethnic identity will be explored, with elaboration on the influences of ethnic variables and gender and how these relate to confidence in making career decisions. The examination will be theoretically based on the Social Cognitive Career Theory (Lent et. al., 1994). This research is being conducted as an extension of Gloria & Hird's (1999) research on ethnic (ethnic identity and other-group orientation) and nonethic (trait anxiety, and major vs. undeclared major) variables on the career decision-making self-efficacy of the college populations.

The four major R/EM groups include African American, Asian American, Native American, and Hispanic/Latino. Individuals in these groups have different racial standings and experiences than those of individuals from the dominant group (Whites). Hence, the aforementioned group members will be categorized into racial and ethnic minorities. However, it is crucial to note that this categorization does not suggest that all racial and ethnic minorities are the same, or that members within and between groups do not experience differences. Further, the researcher does not assume that these groups share cultural values or historical backgrounds. Such a categorization will afford the opportunity to further research potential differences of career decision-making self-efficacy between racial and ethnic minority and White college students. As will be described in Chapter III, the Multigroup Ethnic Identity Scale (Phinney, 1992) will be used to measure the participants' ethnic identity. The rationale for using this measure is the utility across all groups; the Multigroup Ethnic Identity Scale is not specific to one group, hence affording the opportunity for comparisons.
Statement of the Problem

Throughout the history of career theories and models, emphasis on racial and ethnic minorities and women has been scarce. Changing demographics of the population in general, and the workforce in particular heed the call for career research on racial and ethnic minorities. Due to continued oppression and discrimination in the workforce, career counselors need to be informed of the effects of oppression and discrimination on an individual's level of confidence in making a career decision. Racial/ethnic minorities and women should not solely be treated with the model of person by environment fit for career exploration, rather this and/or other models should be coupled with the exploration of their perceived barriers, and subsequent anxiety, and overall level of career decision-making self-efficacy. In order for career counselors to feel competent in the aforementioned assessments, research has to be expanded and delineated.

Further, career development of women of color in general, and career decision-making self-efficacy of women in color in particular, has received the least amount of investigation. Hence an important focus of this study is to examine the interaction of gender and ethnic influences on career decision-making self-efficacy.

Research Questions

1. Are there group differences in career decision-making self-efficacy, trait anxiety, and ethnic identity between White and racial and ethnic minority students?

2. Will degree of ethnic identity account for different degrees of variance in career decision-making self-efficacy for Whites vs. R/EM students?

3. Will there be a gender by ethnicity interactional effect on career decision-making self-efficacy, trait anxiety, and ethnic identity scores?
Research Hypotheses

As previously stated, this study is an extension of Gloria and Hird’s (1999) examination of the influences of ethnic identity, other-group orientation, trait anxiety and declaration of academic major. The present study is investigating two of the same variables (ethnic identity and trait anxiety), and adding the gender variable. Gloria and Hird (1999) reported higher levels of career decision-making self-efficacy for White students as compared to R/EM’s, and higher levels of trait anxiety and ethnic identity for R/EM’s compared to White students. Furthermore, ethnic identity and other-group orientation were more predictive of career decision-making self-efficacy for R/EM as compared to White students. Bandura (1986) noted a reciprocal relationship between anxiety and the way in which individuals react to situations. Hackett and Byars (1996) in their review of African-American women’s career development assert that being ethnically different can be a source of anxiety arousal. O’Hare and Beutell (1987) report women have higher levels of anxiety due to more perceived barriers in career development. Gender differences have been reported with career decision-making self-efficacy (CDMSE). Women reported higher levels of CDMSE for nontraditional careers (Betz & Hackett, 1981), and in the domains of career planning and gathering information of CDMSE (Gianakos, 2001). The four sources of self-efficacy (performance accomplishment, vicarious learning, verbal persuasion, and physiological states [anxiety]) can serve to increase or diminish the self-efficacy (career decision-making) of African American women (Hackett & Byars, 1996). Hence, based on the empirical evidence, the following are the three hypotheses for the present study.
Hypothesis I.

White students will report higher career decision-making self-efficacy, lower trait anxiety scores, and lower ethnic identity scores than R/EM students.

Hypothesis II.

Ethnic identity will result in a stronger correlation with career decision-making self-efficacy scores for R/EM students than for White students.

Hypothesis III.

1. White male students will report higher levels of career decision-making self-efficacy than White female and R/EM students. 2. White and R/EM female college students will report higher levels of trait anxiety than White and R/EM males. 3. Racial/ethnic minority male and female students will report higher levels of ethnic identity than White male and female students.

Definition of Variables

Self-efficacy. Self-efficacy is defined by Bandura (1977, 1986), as people's judgements of their abilities to initiate, organize and execute courses of action required to achieve a specific performance. Furthermore, he asserted that self-efficacy expectations are an individual's estimation of his or her confidence in the ability to master behaviorally specific tasks. There are four primary sources of self-efficacy: performance accomplishments, vicarious learning, verbal persuasion, and physiological states (anxiety).

Career decision-making self-efficacy. Hackett and Betz (1986) used the term career self-efficacy to employ the notion that self-efficacy expectations related to various aspects of career behavior (i.e. decision-making, anxiety) may influence career development and
choice of actions. Lent and Hackett (as cited in Lent et al, 1994) described career self-efficacy as a general term connecting personal efficacy to behaviors and actions involved in career choice.

Ethnic Identity. Tajfel (as cited in Phinney, 1992) defined ethnic identity as the part of an individual's overall identity which stems from the knowledge of being part of a group(s), together with the emotional importance the individual attaches to the membership. Phinney (1992) indicates that ethnic identity is multifaceted, including one's level of identification to the group, one's sense of belonging to the group, and the degree to which one values and engages in one's group.

Trait Anxiety. Trait anxiety is a stable characteristic of individual's differences in proneness to anxiety or in a tendency to perceive situations as dangerous or threatening (Haycock et al, 1998).

Significance of the Study

Theory.

Examining the ethnic and nonethnic influences on career decision-making self-efficacy will enable counselors to understand the repertoire racial and ethnic minorities are working within in order to ascertain career development. In addition, it will further enlighten counselors as to the power of ethnic identity in shaping an individual's (vocational) identity.

Research of client.

Further, career counselors can begin to implement the sources of self-efficacy, in particular that of vicarious learning with their clients (Bandura, 1986). They can begin to operationalize with their clients how their role models were influenced by ethnic identity;
as well as how their role models progressed in light of the (perceived) barriers of the world-of-work; this will allow the counselor to "attend to contextual issues" (Gloria & Hird, 1999, p. 165). Facilitating coping mechanisms, and anger, anxiety, and stress management, due to a decreased career self-efficacy, could assist clients in networking with social supports to enable career exploration (Pyant & Yanico, 1991; Hackett & Byars, 1996).

Practice.

It is important for counselors to also address the internal factors of the clients; the values and perceived negative stereotypes they hold for their own skills and ability to succeed. Facilitating change in one's negative thought processes, and in turn their cognitive schema with regard to their career will foster career exploration with many more options. In addition, counselors assessing the degree of influence of one's psychosocial factors (family, culture and community) on career decision-making self-efficacy will allow for a more extensive understanding of the client's script (Gloria & Hird, 1999). Counselors will understand their clients in light of the spheres of influence on career behaviors, with further delineation of how to implement a working model for culturally diverse clients.

Limitations

The following are limitations of the present study. The measures are self-report, and the participants are volunteers. The self-report nature of the instruments could increase the potential for social desirability factors to affect the participants' responses, as "volunteers tend to be higher in need for social approval than nonvolunteers" (Rosenthal & Rosnow, as cited in Gall, Borg, & Gall, 1996, p. 238). Another limitation is that
grouping of racial and ethnic minority students into one category can obscure within group differences. Finally, a methodological limitation concerns the sample of the study. The sample consists of individuals who are currently students enrolled in college/university; this limits the generalizability of the results to individuals who have chosen to pursue academia beyond high school.

*Delimitation*

Being that the population of interest for this study is undergraduate college students, the research sample will be delimited to undergraduate students. However, the inclusion of the public college broadens the sample to a wider age range of the students, as well as inclusion of traditional (college-age) and nontraditional (returning students, older than college-age) students.
CHAPTER II
Theoretical Foundation and Review of the Related Literature

Introduction

The purpose of this chapter is to provide the theoretical foundation for this research and the empirical literature pertinent to this study. The review of the literature is organized in the following sections: (1) self-efficacy; (2) theoretical rationale - Social Cognitive Career Theory; (3) career decision-making self-efficacy; (4) ethnic identity and career decision-making self-efficacy; (5) gender and career decision-making self-efficacy; and (6) trait anxiety and career decision-making self-efficacy. Each section includes a review of relevant empirical literature and a rationale for the present study.

Self-Efficacy

Research on self-efficacy in general, and career self-efficacy in particular has evolved over the past twenty years (Bandura, 1986, 1989, 1997; Betz & Hackett, 1981; Hackett & Betz, 1981; Lent & Brown, 1996; Betz & Voyten, 1997; and Luzzo, 1993b). Bandura (1986, 1989, 1997) reports that self-efficacy refers to people's judgements of their ability to organize, initiate, and carry out the course of action required to achieve designated types of performances. He initially defined self-efficacy as an individual's estimates of his or her confidence in his or her ability to master behaviorally specific tasks (Bandura, 1977). Bandura (1977) identifies four primary sources of self-efficacy: performance accomplishments, vicarious learning or modeling, verbal persuasion, and
physiological state or arousal (anxiety). These four sources of self-efficacy are hypothesized by Bandura (1986) to be influences in the behavior and choice of actions in determining several career-relevant outcomes. Gainor and Lent (1998) assert that self-efficacy acts as a bridge, linking personal and social aspects from past experiences to future behavior.

Bandura (1977) describes self-efficacy (expectations) as being significantly related to performance, the amount of initiation, motivation and persistence to perform or complete a task, particularly in light of obstacles. Hence, a crucial component of self-efficacy expectations is the connections between one's self-efficacy expectations and the actual performance of the task (Bandura, 1977, 1986). High levels of self-efficacy expectations lead to increased frequency of the targeted behavior. Low levels of self-efficacy expectations correlate with low levels of performance of the task, as well as avoidance of the particular task.

Empirical Literature on Self-Efficacy

Studies by Solberg, Good, Fischer, Brown and Nord (1995), Luzzo, Hasper, Albert, Bibby, and Martinelli (1999), and Hackett and Betz (1981) contribute a major piece to the literature on self-efficacy in general, and career decision-making self-efficacy in particular. These studies provide support for the utility of the self-efficacy theory postulated by Bandura (1977, 1986) in many domains of career development research.

Solberg, Good, Fischer, Brown and Nord (1995) examined the purpose between human agency and career search self-efficacy. Based on previous literature revealing that the components of assertiveness, instrumentality, and interpersonal facility (shyness) of human agency were related to level of career self-efficacy (Arnold & Bye as cited in
Solberg, Good, Fischer, Brown, & Nord, 1995); Matsui & Onglatco (as cited in Solberg, Good, Fischer, Brown, & Nord, 1995); Neville & Schlecker (as cited in Solberg Good, Fischer, Brown & Nord, 1995); O'Hare & Beutell, 1987; & Taylor & Pompa, 1990), the study used these three correlates in their investigation to examine the relationship between human agency and career search self-efficacy. It was hypothesized that the three correlates (assertiveness, instrumentality, and interpersonal facility) in combination would predict levels of career search self-efficacy. The second purpose of this study was to examine the relationship between human agency, career search self-efficacy, vocational identity, career decision needs, and number of career activities performed. Career search self-efficacy was assessed as a mediator of the relationship between the career indices and human agency. As the mediator, career search self-efficacy would be the link between human agency and the indices. Also assessed for was human agency as a moderator of the relationship between career search self-efficacy and the career indices. As the moderator, the interaction of human agency and career search self-efficacy account for most of the variability in the career indices. The sample consisted of 427 participants, with 236 reported females and 155 reported males.

Results revealed support for the hypothesis that the correlates of human agency were significantly associated with career search self-efficacy. Specifically, instrumentality and interpersonal facility were stronger predictors (in relation to assertiveness) of career search self-efficacy. These results are consistent with the literature on career search self-efficacy and personal agency as previously stated. Furthermore, the results revealed support for the expectations that career search self-efficacy mediates the relationship between human agency and career indices. This
finding supports Bandura's (as cited in Solberg et al., 1995) literature that one of the key features of personal agency is the beliefs about one's ability to control life events. The findings of this study suggest that the level of confidence an individual has in their ability to perform career-related search tasks may be a link in the relationship between personal (human) agency and career indices (vocational identity, career decision needs, and career activities performed). This study did not report any significant gender differences throughout the results. Specifically, this study revealed that career search self-efficacy appears to be a more precise determinant of career outcomes, than human agency alone or in general.

Luzzo, Hasper, Bibby, and Martinelli (1999) investigated the effects of two of the sources of Bandura's self-efficacy theory - performance accomplishment and vicarious learning - on career undecided college students' math/science self-efficacy, and the math and science related career interests, goals, choice of academic major, and course selections. Several treatment groups were assigned; students who received a combination of performance accomplishment and vicarious learning (26 participants); students who received only performance accomplishments (22 participants); students who received only vicarious learning (22 participants); and students who did not receive any treatment, the control group (24 participants).

Based on the theories of Bandura (1977, 1986, 1997) and Lent et al. (1994), it was hypothesized that students who received the combination treatment would have higher levels of math/science self-efficacy and interests, and be more inclined to schedule classes, declare majors and report vocational aspirations in the math/science domain than students in the other groups. Further, students who received only the performance
accomplishment source were predicted to have higher levels of career self-efficacy and interests, and be more inclined to schedule classes, declare majors and report vocational aspirations in the math/science domain than students in the vicarious learning group. Finally, students in the vicarious learning group were predicted to have higher levels of career self-efficacy and interests, and be more inclined to schedule classes, declare majors and report vocational aspirations in the math/science domain than students in the control group. The sample consisted of 55 females and 39 men. Via random sampling, the participants were divided into the four treatment conditions.

The findings of this study support the use of the Bandura's self-efficacy theory to career development via the Social Cognitive Career Theory postulated by Lent et al. (1994). The results revealed that the higher the level of pretreatment self-efficacy for math/science, the more likely the student was to take action (declare an academic major in math/science or schedule math/science classes) and to cite interests in math/science related careers. Students in the performance accomplishment group reported significantly higher levels of math/science interests, goals and actions than students in the vicarious learning group. Students in the vicarious learning group did not experience any significant changes in their math/science self-efficacy subsequent to the experiment. Furthermore, students in the performance accomplishment group reported significantly different effects on their self-efficacy in math/science related courses; they reported higher levels of confidence in the ability to achieve a B or better grade. The results did not support the hypothesized relationship between pretreatment of math/science self-efficacy and increase in vocational aspirations in the math/science domain. This study
adds to the empirical literature on the use of self-efficacy to the career development behaviors and actions.

**Self-efficacy and Women**

Hackett and Betz (1981) were the first researchers to investigate the role of the self-efficacy theory to career development of women. They proposed that the self-efficacy theory provides a theoretical rationale for understanding the career choices and actions of women. Furthermore, they proposed that the personal self-efficacy expectations influence the initiation, motivation and persistence of tasks involved in the career decision-making process.

In reviewing the four sources of self-efficacy postulated by Bandura (1977), performance accomplishments, vicarious learning, emotional arousal (anxiety), and verbal persuasion, Hackett and Betz (1981) described the effects of socialization experiences within each source on career-related self-efficacy for women. Specifically, in the performance accomplishments source (i.e. past successful performances leading to a higher level of self-efficacy expectations), women are typically socialized with a greater engagement in domestic activities, and less in mechanical, technical, and other traditional masculine activities. Hence, Hackett & Betz (1981) suggest that with regard to self-efficacy for career-related behaviors, women have higher levels for domestic activities, and lower levels for most other domains of activities.

In the vicarious learning source (e.g. role model), women are socialized within more traditional career occupations and roles rather than a varied amount of role models in the career world. Hence, the researchers proposed that women have a higher level of self-efficacy for traditional roles and career options for women, and lower levels of self-
efficacy for nontraditional careers. In the emotional arousal (e.g. anxiety) source, typically the traditional socialization of women increases levels of anxiety, particularly feminine sex-typed individuals report higher levels of anxiety. Thus, this higher level of anxiety further decreases their levels of self-efficacy, both within general and specific areas (career). Finally, in the verbal persuasion source (e.g. encouragement from others to initiate and perform a task), women are typically socialized with discouragement and/or lack of encouragement to pursue or engage in nontraditional female activities and careers, such as math and science related fields. Hence, Hackett & Betz (1981) indicate that women have a lower level of self-efficacy expectations in relation to a variety of career options.

In sum, Hackett & Betz (1981) gave rise to the utility of the self-efficacy theory to career development behaviors, choices and actions, in particular to that of women. This research represented an initial investigation on gender differences in self-efficacy expectations with regard to the behaviors of initiation, motivation, and persistence within performance of career related tasks such as decision-making.

Theoretical Rationale: Social Cognitive Career Theory

The Social Cognitive Career Theory is relatively new. Hackett and Betz (1981) were the first to explore the concept of career self-efficacy, and Lent, Brown and Hackett (1994) fully developed the theory in its full description.

Social Cognitive Career Theory (Lent et al., 1994) emphasizes the importance of personal agency in the career decision-making process and focuses upon how both internal and external factors enhance or constrain personal agency. This theory uses a framework that emphasizes three social cognitive mechanisms relevant to one's personal
career path: self-efficacy, outcome expectations, and goal setting. The rationale for this theory is the emphasis on self-efficacy.

Interacting variables such as self-efficacy, outcome expectations, and goals are central to Social Cognitive Career Theory and segments of the theoretical framework. Self-efficacy refers to one's confidence in his or her ability to be successful in a task or series of tasks and are the most central mechanisms of personal agency (Bandura, as cited in Gloria & Hird, 1999). Self-efficacy beliefs result from four primary sources (e.g. performance accomplishments, vicarious learning, verbal persuasion, and physiological states and emotional arousal - i.e. anxiety) that interact with one's gender, race/ethnicity, disability/health status, and other personal characteristics or genetic predisposition (Lent, Brown, & Hackett, 1994). Self-efficacy is viewed as dynamic and varying across performance domains and activities (Lent & Brown, 1996). What remains constant, however, is that personal mastery experiences prove to be the most influential and pervasive source of self-efficacy beliefs, with successful performances increasing self-efficacy and the probability of future successful performances. Conversely, unsuccessful performances tend to weaken self-efficacy. Self-efficacy is also influenced by vicarious learning, social persuasion (in the form of verbal encouragement or discouragement), and physiological states and reactions (Lent, Brown, & Hackett, 1994).

One's behavior is not only motivated by a person's sense of their abilities but also by his or her beliefs about the effects of various actions. Thus, outcome expectations, the second variable, refer to beliefs about the consequences or outcomes of performance (Bandura, as cited in Lent & Brown, 1996). Outcome expectations are the result of direct
and vicarious learning experiences and allow individuals to formulate perceptions of both positive and negative outcomes.

Goals, the third variable in Social Cognitive Career Theory, are affected by an individual's self-efficacy and outcome expectations in that they reflect an individual's intention to engage in a particular activity and to work toward a particular outcome. Goal setting makes use of personal agency by allowing individuals to organize, guide and sustain efforts across time and regardless of external reinforcement (Lent & Brown, 1996).

Self-efficacy, outcome expectations, and goal setting work together in allowing individuals to exercise personal agency and become self-directed, especially with their career decision-making and career development (Lent, Brown, & Hackett, 1994; Albert & Luzzo, 1999). Social cognitive (intrapersonal) and contextual factors are both believed to interact and to directly influence the development of career interests, plans, and actions. Lent, Brown, and Hackett (1994) argued that the particular effect that contextual factors have on individual's career choices often depends on their personal appraisal of and response to such factors. Contextual factors have been conceptualized as being responsible for shaping the experiences that lead to the development of career interests and choices. An individual may rule out a potentially rewarding career if his or her environment has offered a limited amount of efficacy building opportunities or has resulted in inaccurate outcome expectations. The results of these beliefs and expectations can make any given career option seem out of one's reach (Albert & Luzzo, 1999).

Even if individuals possess high levels of career self-efficacy, high outcome expectations, and interests congruent with expectations, they may still avoid selecting a
particular career if they perceive insurmountable barriers to career entry or career goal attainment (Lent & Brown, 1996). Economic needs, educational limitations, lack of familial support, and gender discrimination may inhibit the pursuit of primary interests or preferred career goals. Additionally, ethnic variables such as ethnic identity and other-group orientation have also been found to be more significant predictors of career decision-making self-efficacy for racial and ethnic minorities than for Whites (Gloria & Hird, 1999). To the degree that ethnicity and race are salient aspects for an individual, they are also likely to affect vocational identity development (Fouad & Arbona, as cited in Gloria & Hird, 1999). Thus, inclusion of contextual variables in the spheres of influences of an individual's level of career decision-making self-efficacy is crucial.

Career Decision-Making Self-Efficacy

Hackett and Betz (1986) used the term career self-efficacy to employ the notion that self-efficacy expectations related to various aspects of career behavior (i.e. decision-making, anxiety) may influence career development and choice of actions. Lent and Hackett (1987) described career self-efficacy as a general term connecting personal efficacy to behaviors and actions involved in career choice. Career self-efficacy has been investigated by vocational researchers within many domains of career development, in particular, decision-making. Variables such as career indecision (Taylor & Betz, 1983); career salience and locus of control (Taylor & Pompa, 1990); ethnic and nonethnic (Gloria & Hird, 1999); cultural differences (Mau, 2000); attitudes and skills (Luzzo, 1993b); and career choice patterns (Gianakos, 1999) have been examined in relation to career decision making self-efficacy. Each of the studies investigated contributes to the career decision-making self-efficacy (career self-efficacy) literature and further support
the significance of this concept in vocational psychology. Thus examinations of this
construct contribute to the validity of career decision-making self-efficacy as a major
component in the career decision-making process.

Empirical Literature on Career Decision-Making Self-Efficacy

Taylor & Betz, (1983) were one of the first to investigate career decision-making
self-efficacy, using the self-efficacy theory postulated by Bandura (1977), to the
understanding of the career indecision. Furthermore, these researchers developed the
Career Decision-Making Self-Efficacy Scale (CDMSES), which is a 50-item scale
designed to measure an individual's level of confidence in completing career decision-
making tasks. The scale consists of five subscales: Self-Appraisal, Occupational
Information, Goal Selection, Planning, and Problem Solving. In their study, in addition,
to developing and examining the psychometric and normative properties of the CSMSES,
they further examined the relationship of career decision-making self-efficacy
expectations to career indecision. The sample consisted of a total of 346 undergraduate
university students, separated into two groups. The first group consisted of 85 female
and 68 male students; the second group consisted of 133 female and 60 male students.

Results revealed high internal consistency reliability, within each subtest group
and for the total group of 346 students, the standardized value of coefficient alpha was
.97. No sex differences were reported for any of the subscales or for the total score on
the CDMSES for both groups; however, females reported somewhat higher scores on the
goal selection and planning subscales within group two. The findings report that levels
of self-efficacy were significantly predictive of career indecision. This suggests that
students who report a lower level of confidence in the ability to complete career decision-
making tasks were more likely to be vocationally undecided. Thus, this present study suggests a relatively strong relationship between career decision-making self-efficacy and career indecision. Furthermore, this study provides predictive validity for the Career Decision-Making Self-Efficacy Scale, with the finding that all CDMSES scores significantly predicted levels of career indecision.

In sum, the present study resulted in the development and implementation of a reliable measure of self-efficacy expectations with regard to tasks and behaviors required in the career decision-making process. This study lends further support to the use of the self-efficacy theory in career development.

Taylor and Pompa (1990) performed a study that investigated career decision-making self-efficacy as a global measure of the career decision-making process. The study also investigated the relationship between the variables of vocational indecision, (external) locus of control, career salience and career decision-making self-efficacy. This study was performed in partial replication of the Taylor and Betz (1983) study, the original work that resulted in the career decision-making self-efficacy scale. In the original work by Taylor and Betz (1983), vocational indecision was found to be significantly related to career decision-making self-efficacy.

Taylor and Pompa (1990) had three purposes for this study on career decision-making self-efficacy as a global measure. The first was to provide a partial replication of the original work to ascertain the global versus specific nature of the career decision-making self-efficacy scale. The second was to add to the literature on vocational indecision and career decision-making self-efficacy with the constructs of locus of control, career salience, and career indecision. Finally, the third purpose was to examine
the use of prediction of career decision-making self-efficacy, career salience and locus of control in determining career indecision. The sample consisted of 203 female and 204 undergraduate college students.

The findings of this study are a major contribution to the career decision-making self-efficacy literature. The results revealed that the career decision-making self-efficacy scale may be best characterized as a more general or global measure, rather than a career specific nature measure, as it was found to cover a wide array of career behaviors. Furthermore, the results revealed and added support to the previous literature on the negative relationship between career decision-making self-efficacy and vocational indecision. In other words, the lower an individual's self-efficacy is for career decision-making, the higher the level of career indecision. These findings indicate that CDMSE is a significant predictor of vocational indecision. The other variables of career salience and locus of control did not significantly contribute to the prediction of career indecision.

Taylor and Pompa (1990) found a negative relationship between locus of control and career decision-making self-efficacy. Results revealed that the more external an individual's beliefs are (control over events, consequences in life), the lower their level of confidence in making career decisions. Support for the relationship between career decision-making self-efficacy and career salience was not found. This result behooves the need for research assessing the link between expectations and engagement in behaviors related to career development. The results further revealed that career decision-making self-efficacy, vocational indecision and career salience are predictive of the status of a student's academic or career choice; specifically, higher levels of confidence in making career decisions, lower career indecision, and higher career
salience were found amongst students who selected an academic major or career choice. No gender differences were found throughout the results of this study.

Gloria and Hird (1999) examined differences in ethnic identity, other group orientation, trait anxiety, and career decision-making self-efficacy. The researchers grouped trait anxiety and major declared or undeclared as nonethnic variables of influence, and ethnic identity and other group orientation as ethnic variables of influence in predicting the level of career decision-making self-efficacy. The categorization of racial and ethnic minorities (R/EM) consisted of African Americans, Asian Americans, Biracials, International students, Pacific Islanders, Latino(a)s, and American Indians. The justification for grouping individuals was defined by socioracial classification, in that as a result of sociopolitical and socioeconomic classifications, resources are allocated differently amongst members from these groups, as opposed to members of the White group (those who self-identify or are commonly identified as solely being White). Individuals who are not part of the dominant group (i.e. R/EM) receive "different" treatment and live through different experiences than those of the dominant group (Whites). However, Gloria and Hird (1999) note the important fact that the categorization of the ethnic groups does not minimize between and within group differences.

The purpose of the study was to investigate differences in trait anxiety, ethnic identity, other-group orientation and career decision-making self-efficacy by race (Whites and R/EM's) and major (declared and undeclared). White students were hypothesized to have higher levels of career decision-making self-efficacy, lower levels of trait anxiety, ethnic identity and other-group orientation as compared to racial and ethnic minority
students. Students with a declared major were expected to have higher levels of career decision-making self-efficacy and lower trait anxiety than undeclared students. The second hypothesis stated that ethnic variables (ethnic identity and other group orientation) would be stronger predictors of career decision-making self-efficacy for racial and ethnic minorities as compared to White students. Finally, the third hypothesis stated that ethnic variables (ethnic identity and other group orientation) would be stronger predictors of trait anxiety for racial and ethnic minorities as compared to White students.

The sample consisted of 351 female and 336 male (total 687) undergraduate university students. The White sample consisted of 589 students; the racial and ethnic minority sample consisted of 98 students (30 Asian; 21 Biracial; 20 International; 12 Latino; 7 Pacific Islander; 4 American Indian; and 4 African American). Sixty-nine percent (69%) of the students had declared a major and thirty-one (31%) had undeclared majors. Sixty-eight percent (68%) of the White students had declared a major and seventy-five percent (75%) of racial and ethnic minorities had declared a major. The percentages should be read with caution due to the low level of racial and ethnic minority participation as compared with White student participation.

The results revealed significant differences in career decision-making self-efficacy, trait anxiety, ethnic identity and other group orientation between White and racial and ethnic minority students. The findings indicate that racial and ethnic minority students have higher levels of ethnic identity and trait anxiety, and lower levels of career decision-making self-efficacy. Further, the results indicate that students with an undeclared major have higher levels of trait anxiety and lower levels of career decision-making self-efficacy. Furthermore, ethnic variables (ethnic identity and other group
orientation) were predictive of career decision-making self-efficacy and trait anxiety in both Whites and R/EM's, however ethnic variables were more predictive of CDMSE and trait anxiety for R/EM's. The relationships of ethnic identity, other group orientation and trait anxiety to career decision-making self-efficacy were significantly stronger for R/EM as compared to White students. Other-group orientation was a stronger predictor of career decision-making self-efficacy as compared to ethnic identity, and ethnic identity was the stronger predictor of trait anxiety as compared to other-group orientation for racial and ethnic minority students. These findings suggest that the more an individual associates with the dominant group (Whites) in terms of career aspirations and planning, the more efficacious he/she may be, without necessarily losing sight of their cultural values. For example, understanding and emulating the White individual's role and progression in the workforce aids in his/her level of confidence, however, the individual does not compromise his/her ethnic values. The results of trait anxiety having a significantly stronger relationship to career decision-making self-efficacy for R/EM's, and ethnic identity being a strong predictor of trait anxiety, support Hackett and Byars' (1996) assertion that physiological states (anxiety) can be altered in living the experiences of being ethnically different.

The findings of this study contribute significant to the literature on career decision-making self-efficacy, trait anxiety and ethnicity. A limitation of this study is the disparity in the sample sizes between White (589) and racial and ethnic minority (98) participants. Furthermore, the study did not analyze for gender differences.

Mau (2000) examined the relationship between career decision-making style (CDMS) and career decision-making self-efficacy (CDMSE) for American and
Taiwanese students. Decision-making style is based on Harren's typology (as cited in Mau, 2000) of the styles: rational (making decisions after mature consideration), intuitive (making decisions based on how one feels), and dependent (making decisions based on the views of others). It was hypothesized that CDMS and CDMSE would vary by cultural orientation as well as gender. The participants consisted of 540 American undergraduate college students, and 1,026 Taiwanese undergraduate college students.

Results revealed that majority of students (American and Taiwanese) reported a rational style of career decision-making. Taiwanese students reported lower levels of career decision-making self-efficacy than American students, suggesting that the collective-oriented culture of the Taiwanese ethnic group may obstruct self-efficacy development, whereas the individual oriented culture of America fosters self-efficacy. With regard to gender differences, Mau (2000) found that females overall were more likely to report a dependent decision-making style. For Taiwanese students, males reported a higher level of career decision-making self-efficacy, however, for American students, no gender differences were reported.

The most important finding of this study was the significant association between career decision-making self-efficacy and career decision-making style and cultural orientation. In general, individuals who reported a dependent style also reported a lower level of career decision-making self-efficacy, and those who reported a rational style reported a stronger level of self-efficacy. However, the study also revealed cultural variation. For American students, the dependent style was more predictive of the level of career self-efficacy, whereas, for the Taiwanese students, the rational style was more predictive of the level of career self-efficacy. In short, American students with a
dependent style of career decision-making were less confident in making career decisions. Taiwanese students with a rational style of career making were more confident in making career decisions. Thus, the study supports the notion that cultural orientation of an individual affects the approach to career decision-making, and in turn the individual's CDMSE.

Luzzo (1993b) investigated the relationship between career decision making self-efficacy and career decision-making attitudes and skills. Based on Bandura's (1977) theory of self-efficacy as a predictor of performance, a significant relationship between scores on the CDMSES and Career Decision-Making scale scores was hypothesized. In addition, gender differences were hypothesized for career decision-making attitudes and skills, but not for career decision-making self-efficacy. The sample consisted of 162 female and 71 male undergraduate college students.

The results of this study reveals significant support for the relationship between career decision-making self-efficacy and career decision-making attitudes. This relationship suggests that an individual's level of confidence is associated with their feelings toward the process. Further, career decision-making self-efficacy was a significant contributor to the student's attitudes toward career decision-making. Surprisingly, the relationship between career decision-making self-efficacy and career decision-making skills was not significant. Gender differences on the career decision-making self-efficacy scale were not significant, however, were revealed for career decision-making skills. This study lends support to the utility of the self-efficacy theory to career decision-making. Further, this study contributes to the literature on career
decision-making self-efficacy; in particular, the relationship between the career decision-
making self-efficacy construct and career decision-making attitudes and skills.

Gianakos (1999) examined the relationship between stable, multiple trial, conventional and unstable patterns of career choice development and career decision-
making self-efficacy. Based on literature, (Super, as cited in Giankakis, 1999; Bandura, 1977), it was hypothesized that significant differences in career decision-making self-
efficacy would be found for individuals who exhibit consistency, inconsistency, and instability in their career choice pattern. In addition, Gianakos (1999) hypothesized that individuals with a stable or multiple group pattern would have significantly higher levels of career decision-making self-efficacy than individuals with conventional or unstable patterns. No differences between the level of career decision-making self-efficacy were expected for individuals in the stable and multiple group patterns. However, individuals with the conventional pattern of career choice development were predicted to have higher levels of career decision-making self-efficacy than individuals with an unstable pattern.

Participants consisted of 130 female and 42 male undergraduate university students.

The findings contribute to the career decision-making self-efficacy literature, and support the hypothesis that differences in career decision-making self-efficacy are associated with career choice patterns. Individuals with stable or multiple group patterns reported higher levels of career decision-making self-efficacy than individuals with conventional or unstable patterns. Individuals with the conventional career choice pattern reported higher levels of career decision-making self-efficacy than individuals with an unstable pattern. As predicted the study did not reveal a significant difference in career decision-making self-efficacy between individuals in the stable and multiple pattern
groups. Gianakos (1999) has added further support to the notion that career decision-making self-efficacy is an important construct in the career development and vocational behavior of individuals.

Overall, the studies that have been explored have investigated career decision-making self-efficacy in relation to various aspects of career development, behaviors and tasks associated with career development and choice of actions. The research investigated has either found support for the present study or has challenged the research questions and hypotheses. Hence, the extensive review of related literature was to afford the nature of the impact of the support versus challenge for this study.

*Ethnic Identity*

Tajfel, (as cited in Phinney, 1992) defined ethnic identity as the part of an individual's overall identity which stems from the knowledge of being part of a group(s), together with the emotional importance the individual attaches to the membership. Phinney (1992) indicates that ethnic identity is multifaceted, including one's level of identification to the group, one's sense of belonging to the group, and the degree to which one values and engages in one's group. Furthermore, the environmental culture and community contexts in which people live as well as the feedback received from others on racial features contribute to one's sense of identity. Research (Phinney, 1992; Worrell, 2000; and Reese, Vera and Paikoff, 1998) has been conducted to analyze and conceptualize the phenomena of ethnic identity.

There has been research, however scant, reviewing the career development of racial and ethnic minorities. Furthermore, researchers have included ethnicity, racial/ethnic identity, and other group orientation as variables influencing career development.
Research and review of relevant literature (Hackett, Betz, Casas, & Singh, 1992; Gainor, & Lent, 1998; Parham, & Austin, 1994; Evans, & Herr, 1994; & Miranda, & Umhoefer, 1998) has found support for the utility of ethnic variables in the behaviors of career development.

**Empirical Literature on Ethnic Identity**

Phinney (1992) developed the Multigroup Ethnic Identity Measure and examined the use of this measure with young adults from varied ethnic populations. Phinney (1992) asserts that self-identification, ethnic behaviors and practices, affirmation and belonging, and ethnic identity achievement are all components of ethnic identity. Further, she asserts that attitudes toward other groups are not part of ethnic identity, however, contribute to an individual's social identity in the larger society.

Phinney (1992) investigated the construct validity of this measure on 417 high school and 136 college students. The high school population consisted of 235 females and 182 males. The ethnic breakdown included 134 Asian Americans, 131 African Americans, 89 Hispanics, 41 students with mixed backgrounds, 12 Whites, and 10 other. The college population consisted of 89 females and 47 males. The ethnic breakdown included 58 Hispanics, 35 Asians, 23 Whites, 11 African Americans, 8 of mixed backgrounds, and 1 American Indian.

Ethnic identity did not differ by gender or socioeconomic status in this study. However, the results revealed differences in the strength of ethnic identity. Minority group members reported higher ethnic identity scores than either White or mixed participants. In both the high school and college samples, Black participants scored higher in ethnic identity than other group members. Whites scored lower in ethnic
identity than the three minority group members. The components of affirmation and belonging and ethnic behaviors did not show differences between the age group samples, however, ethnic identity achievement was found to be higher for the college students. In sum, this study validates the use of the MEIM on ethnically diverse use, and supports the general phenomena and importance of ethnic identity amongst ethnically diverse individuals (young adults).

Worrell (2000) examined the psychometric properties of the Multigroup Ethnic Identity Measure (MEIM) (Phinney, 1992) as the researcher deemed it necessary to investigate the "soundness" of the measure. The MEIM is a measure designed to assess ethnic identity across all groups, it is not specific to one group. In particular, the purpose of the study was to examine the construct validity of the MEIM. The sample consisted of 166 female and 109 male (total=275) academically talented adolescents who were attending a summer program at a university. The ethnic breakdown of the participants included: 53% Asian American, 21% White, 7.6% African American, 7.6% Hispanic, 4.7% mixed, and 6.2% reported the other category.

Structure coefficients ranged from .35 to .77 for the Ethnic Identity factor of the MEIM, with reliability coefficient for subscale scores on the factor structure at .89. Structure coefficients ranged from .40 to .77 for the Other-Group Orientation factor of the MEIM, with reliability coefficients for subscale score on the factor structure at .76. This study revealed that the ethnic identity as measured by the MEIM is stable during the adolescent years. Of importance, is Worrell's (2000) suggestion that the MEIM be further examined for its item development, and the scales need of further examination and refinement.
Reese, Vera and Paikoff (1998) investigated the reliability of the Multigroup Ethnic Identity Measure (MEIM) (Phinney, 1992). Furthermore, the researchers examined the utility of this measure across all ethnic and racial groups. The measure is based on Phinney's (1992) postulation that ethnic identity is comprised of an individual's self-identification as a member of the group, ethnic behaviors and practices, ethnic identity achievement, and affirmation or a sense of belonging to the group. Further, the attitudes an individual has taken toward other ethnic group (other group orientation) contribute to one's overall social identity. The sample consisted of 118 (59 male and 59 female) fourth and fifth grade African American students from an inner-city elementary school. Most of the participants (75%) came from indigent families. Reese et al. (1998) used this population in order to assess whether context, such as poverty, influences ethnic identity. The researchers collected the data in two administrations, 6 weeks apart, to allow assessment of internal consistency and test-retest reliability.

Results revealed reliability for the total score on the MEIM of .72 on the first administration, and .59 on the second administration. For the subscales in the first administration, reliability coefficients were .71 for Affirmation and Belonging, .50 for Ethnic Behavior and .30 for Ethnic Identity Achievement. For the second administration, reliability coefficients .62 for Affirmation and Belonging, .16 for Ethnic Behavior, and .15 for Ethnic Identity Achievement. Test-retest reliability for the total scores was .25, .20 for the Affirmation and Belonging subscale, .10 for the Ethnic Behavior subscale, and .00 for the Ethnic Identity Achievement subscale. In sum, the results of this study provide empirical support that the MEIM and each of the subscales are measuring a common construct. It is important to note, however, that this finding should be
interpreted with caution. This was the first study to examine the use of the MEIM with an African American preadolescent population, and to review whether the low reliability coefficients are a function of the measure or the utility of the measure to young African Americans who live in poverty.

The findings of this study demonstrated feelings of affirmation and belonging as well as ethnic behaviors. Due to the authors not assessing for cognitive development, it is unclear whether the participants were aware of the attitudes, and preferences that link to racial and ethnic identity. Hence, the findings are mixed with varied levels of reliability and validity provided. This study calls attention to the importance of contextual factors in ethnic identity, as well as suggests that ethnic identity begins prior to adolescence.

Hackett, Betz, Casas, and Singh (1992) performed a study on 197 undergraduate college students enrolled in a school of engineering. The breakdown of participants includes: 125 Euro-American (99 men and 26 women); 42 Mexican-American (32 men and 10 women); 9 African-American (5 men and 4 women); and 21 Asian American (13 men and 8 women). Due to the underrepresentation of women and people of color in the math and science fields in general, and engineering in particular, the authors chose to investigate reasons for this. The researchers had five major purposes for this study. The first was to examine gender and ethnic differences in school performance, self-efficacy and outcome expectations, in stress and social support, and the race/ethnicity and gender interactive influence. The second was to examine the relationships between high school GPA and scholastic scores (SAT) and career and academic self-efficacy to performance in college. The third was to examine the relationships between vocational interests and
outcome expectations to self-efficacy and achievement in academia. The fourth was to examine the relationship between stress and social support to self-efficacy. The final purpose was to examine the contributions of stress, support, faculty feedback (encouragement and discouragement), coupled with the social cognitive variables to the prediction of achievement in academia of engineering majors.

The researchers developed two sets of hypotheses. The first included that gender and ethnic differences would be small due to the decreased number of women and people of color in the sample (as engineering majors). Ethnic differences for SAT scores in particular and other academic variables were expected. Ethnic and gender differences for outcome expectations were expected. Further, it was hypothesized that self-efficacy and outcome expectations would be a mediator in the influence of past on future performance in academics. The second set of hypotheses included that ethnic differences would exist on the stress and social support variables, in particular faculty feedback. Further, social support and faculty encouragement were expected to be positively related, and strain and stress inversely related to academic achievement.

The results revealed that self-efficacy for academic milestones was the best predictor of performance in academia, and faculty feedback was also consistently related to performance - faculty encouragement resulted in higher self-efficacy, faculty discouragement resulted in lower self-efficacy. Coupled with other academic variables, such as interests, faculty feedback, and positive outcome expectations, academic milestone self-efficacy was also the best predictor of achievement. Ethnicity was not directly predictive of performance, which supports the hypothesis. However, for both occupational and academic milestones self-efficacy, ethnicity was a significant predictor.
with Mexican-Americans reporting a lower level of ethnic identity than Euro-Americans. Few gender differences were found in this study, which potentially could result from the disparity in sampling of men and women. However, there was a significant ethnicity x gender interaction for faculty feedback, whereby, Mexican-American and Euro-American men reported significantly higher levels of faculty encouragement than Mexican-American and Euro-American women. These results suggest that self-efficacy in career decision-making is influenced by perceived stress and strain, social support, and faculty feedback in promoting the math/science (engineering) fields to women and people of color, contributing to the literature on career decision-making self-efficacy and ethnicity.

Gainor and Lent (1998) examined propositions of the social cognitive career theory to the self-efficacy and outcome expectations of Black college students' math choices. The purpose of the study was to examine eight of the propositions and their relationships to Black students pursuing math college courses and majors. The researchers hypothesized that math self-efficacy and outcome expectations would directly affect math interests. Self-efficacy was expected to mediate the relation of math ability to interests. Students' interests in math related courses were hypothesized as a prediction to promote pursuit of math courses and majors. Through the impact on interests, self-efficacy and outcome expectations were expected to influence academic intentions directly and indirectly. Furthermore, the researchers hypothesized that self-efficacy and outcome expectations would be influenced by the sources of self-efficacy, performance accomplishments, vicarious learning, verbal persuasion, and physiological states, with performance accomplishments accounting for the strongest influence. Outcome expectations were expected to be drawn through self-efficacy. Finally, if gender
differences were found in self-efficacy and outcome expectations, they were expected to
be interceded by experiences with the four sources of self-efficacy.

The sample consisted of 114 female and 50 male first year Black undergraduate
university students, at a predominantly White institution. The results of this study are a
contribution to the literature extending the social cognitive career theory to Black College
students, specifically, in the utility of self-efficacy and outcome expectations in
explaining the math choice pattern and intentions of these students. The findings of this
study reveal that math self-efficacy and outcome expectations of Black college students
were predictive of their interest in math. Further, self-efficacy indirectly via outcome
expectations affected interests, and mediated the effect of achievement and ability on
interests. These findings suggest that when Black college students feel confident in math
related tasks they are more likely to pursue an interest and positive outcome beliefs.

Gainor and Lent (1998) found that only outcome expectations and self-efficacy
predicted choice intentions with regard to enrolling in math classes. However, interests
in predicting the preference in college major mediated self-efficacy and outcome
expectations. Each of the four sources of self-efficacy was positively related to self-
efficacy and outcome expectations. Finally, the results revealed gender differences of
math self-efficacy. Black male college students were found to have a higher level of
math self-efficacy expectations than Black female college students. In sum, this study
was a major contribution to the utility of the social cognitive career theory to Black
College students.

Parham and Austin (1994) reviewed research on the scant attention career
development and African Americans have received. They further asserted the importance
of assessing an African American's level of racial identity in conjunction with their career development process. The researchers proposed that counselors review and conceptualize the nigrescence phenomena ("the process of developing and crystallizing one's identity as an African American" (Parham and Austin, 1994, p. 142) in understanding an African American's vocational journey. In sum, these authors have called attention to the fact that career development theories are generalized to the Eurocentric viewpoint of White males, and may be appropriately applied to African Americans in the preencounter stage of racial identity (pro-White, anti-Black attitude), however, for those African Americans in other stages, and who truly identify with their African American ethnic group, the role of this racial/ethnic identity should not be underestimated.

Parham and Austin (1994) behoove counselors to understand the client's level of racial identity, and indicate that this will facilitate the establishment of rapport and meeting the client's career development needs. However, they do acknowledge that issues such as workforce diversity, perceptions of occupations and occupational stereotyping, values orientation, and career development theories are influenced by the environmental appendage in which one's identity is shaped.

Evans and Herr (1994) investigated the role of racial identity (as part of the self-concept) and the perception of discriminations as influences of African American's career development. The authors hypotheses were based on Cross's (as cited in Evans & Herr, 1994) stages of African American racial identity; Cross (as cited in Evans & Herr, 1994) termed this identity, nigrescence. Cross (as cited in Evans & Herr, 1994) defined nigrescence as the development of a positive racial identity for self and group, and further
noted that it is a progression from a negative to a positive view. The five stages are: Pre-encounter (anti-black, pro-White); Encounter (questions anti-Black views); Immersion/Emersion (idealize being Black); Internalization (inner security in being Black); and Internalization/Commitment (actively participate in the community with African American pride). Three hypothesized were stated. The first hypothesis stated that attitudes from the pre-encounter and immersion/emersion stages would be positively related to traditional (protected) career aspirations. The second hypothesis stated that attitudes from the encounter and internalization stages would be negatively related to traditional career aspirations. The third hypothesis states that perceptions of discrimination against African Americans and women would be positively related to traditional career aspirations. The sample consisted of 61 female and 50 male African American undergraduate university students. These participants were enrolled in a predominantly White university.

The findings of this study did not support the hypothesis that racial identity attitudes (stages) would predict career aspirations. This suggests that the development of a positive racial identity does not relate to traditional career choice of an African American. This finding further informs that the African American self-concept is complex, and there are many variables that impact the career development process, not only the racial identity. The hypothesis regarding perceptions of discrimination was not supported. The authors suggest that these findings indicate a complacent view of discrimination, and that African Americans see this as a "way of life", and do not try to tackle this in the career development process.
Miranda and Umhoefer (1998) examined the predictors of career self-efficacy for Latino individuals in career counseling. Based on the Latino culture, the authors hypothesized that mastery of the English language as well as acculturation (culture) would be the best predictors of career self-efficacy for Latino individuals to function in a culture other than their own. The participants were 85 Latino individuals who voluntarily sought employment and career counseling over a five-month period. Ninety-eight (97.6%) of the participants were immigrants, with the average level of education being the twelfth grade.

The results revealed support for the hypothesis that the best predictor of career self-efficacy for Latino individuals was English use and acculturation. This finding suggests that the more competent a Latino individual feels in the ability to use the English language and be part of his/her new culture, the more confident he or she feels in his/her competency of job performance, regardless of other major factors that immigrants face, such as, age, education level, and length of residence in the United States. These finding contribute to the career development of racial and ethnic minorities' literature and provide practical implications for the counselor in facilitating the career needs of Latino individuals.

The overall findings of the investigated studies lend support to the influences of ethnic identity and cultural variables on the career development process in general, and career decision-making self-efficacy, in particular. Researchers reviewed the specificity of barriers on racial and ethnic minority students, as well as revealed the nature of the approach (i.e. style) to career decision-making and how this affects career decision-making self-efficacy. Despite the limitations in the career development of racial and
ethnic minority literature, the studies explored delineate the relevance and necessity to expand research in this area.

**Gender and Career Decision-Making Self-Efficacy**

Researchers (Betz & Hackett, 1981; Gianakos, 2001; Betz & Voyten, 1997; Scheye, & Gilroy, 1994; Ancis & Phillips, 1996; and Hackett & Byars, 1996) have explored and analyzed the relationship between gender and career decision-making self-efficacy. Each of these researchers has significantly contributed to the research examining gender differences in career decision-making self-efficacy. However, results from these studies reveal mixed findings, with either no gender differences, gender differences with males have a higher level of career decision-making self-efficacy, or gender differences with females have a higher level of career decision-making self-efficacy.

**Empirical Literature on Gender and Career Decision-Making Self-Efficacy**

Betz and Hackett (1981) examined the relationship of women's underrepresentation in traditional careers to self-efficacy expectations from Bandura's self-efficacy theory. The purpose of this study was an attempt to explore the applicability of the self-efficacy theory to the understanding of career development in general and women's career development in particular. The study is based on two investigations. The first is the relationship of career self-efficacy expectations to the perceived occupational alternatives by undergraduates. The second is regarding sex differences in self-efficacy expectations concerning traditionally male and female occupations' academic/educational requirements and job responsibilities, and the relationship of these
to perceived career opportunities and sex differences. The sample consisted of 134 female and 101 male undergraduate college students.

The results revealed sex differences in self-efficacy of traditional and nontraditional career options. Findings suggest that educational requirements and job responsibilities of the traditionally female occupations yielded significantly greater self-efficacy among females, and educational requirements and job responsibilities of the traditionally male dominated occupations yielded greater self-efficacy among males. In addition, the results indicated that males have equivalent self-efficacy for traditional and nontraditional careers. Females' self-efficacy was mediated by their perception of performance capability - the self-efficacy expectations of females were much lower for traditional occupations than their self-efficacy expectations for nontraditional occupations. This finding suggests that the "traditionality" of the career is an important factor affecting self-efficacy expectations.

The findings of this study support the utility of the self-efficacy theory, and career decision-making self-efficacy in conceptualizing vocational behavior, and women's career development. In addition, this study suggests that the range of perceived career opportunities and the level of personal self-efficacy are important variables affecting the career choice of women.

Gianakos (2001) examined the influence of self-reliance styles and work preferences on 209 undergraduate students. The author assessed for overdependence (the individual lacks independence, and forms inappropriately close relationships with others) and counterdependence (the individual becomes socially withdrawn and distant from others. Further, assessed were two subscales within work preferences: need for growth
(which consists of items addressing: achievement, challenge, and skill improvement); and need for predictability (which consists of items addressing security, quality of management, and reputation of organization.

Gianakos (2001) hypothesized that both dependency styles and a need for growth would be significant predictors of career decision-making self-efficacy (CDMSE), as well as the five subscales (competencies) of CDMSE scale: goal setting, occupational information, problem solving, planning and self-appraisal. Gender was found to be a significant correlate, hence was analyzed as an independent variable in the regression analysis.

Overall, support was found for the hypothesis that both dependency styles and a need for growth are significant predictors of career decision-making self-efficacy, and the five competencies. Further, gender was significantly related to some career decision-making self-efficacy scores, and added to the regression models. Gianakos (2001) found that women reported higher levels of career decision-making self-efficacy, specifically in the domains of career planning and gathering occupational information.

Betz and Voyten (1997) examined the relation of career decision-making self-efficacy and outcome expectations to career indecision and exploration intentions of 350 undergraduate students. They further examined the relationships of outcome expectations, level of indecision and self-efficacy to exploration intentions. The findings revealed that career decision-making self-efficacy beliefs are the best predictors of career indecision, and that career outcome expectations are the best predictors of career exploration intentions.
Overall, the results revealed that there were no statistically significant gender differences in the scores on Career Decision-Making Self-Efficacy scale, The Career Decision scale, or the Career Decision Making Outcome Expectations and Exploratory Intentions measure. However, substantial gender differences were found in the relationships among variables. Men were found to have higher correlations between efficacy and outcome expectations. Men were also found to have statistically significant greater paired correlations between Goal Selection and Academic Outcome, Goal Selection and Career Outcome and Total Career Decision-Making Self-Efficacy score and Career Outcome. In women, Betz and Voyten (1997) found that higher self-efficacy, greater indecision and career outcome expectations were all related to higher levels of stated exploratory intentions. In men, the authors found that academic and career outcome expectations and indecision all significantly added to predictive efficacy. The findings of this study support earlier research suggesting the relationship of career decision-making self-efficacy to career indecision.

Research conducted by Scheye and Gilroy (1994) examined the relation of composition by gender of high school or college students and gender of influential teachers in each of these settings to career self-efficacy beliefs of women to careers considered nontraditional (male-dominated) for women. The sample consisted of 274 third and fourth year college students; two of the schools were single-sex (women only) and two were coeducational (men and women).

The findings revealed that women from single-sex colleges who reported having a male teacher as influential in high school or college, reported a higher level of nontraditional career self-efficacy. This is in comparison to those who reported female
teachers as influential, or those who attended coeducational schools regardless of the influential teacher's sex. This finding suggests that the influence of both male and female role models is important to the development of women's confidence in nontraditional careers. Further, these findings suggest that a male teacher's influence is powerful, when coupled with an environment (Single-sex College) that empowers women. Women tend to have a higher sense of competency and self-efficacy in nontraditional careers with the combination of male and female influences.

Scheye and Gilroy (1994) also found that students who did not report an influential teacher in high school or college and attended a single sex high school or college scored high on nontraditional self-efficacy. This finding may indicate that these women are either independent in their personal or academic choices and reject social classifications, or reject the female dominated roles, or both. These results add to the growing literature of the influences of gender on career decision-making self-efficacy.

Ancis and Phillips (1996) examined the relationship of agentic self-efficacy (will an individual take the initiative and risks necessary to better one's life) and academic gender bias on female students. In terms of career development, agentic self-efficacy refers to the individual's beliefs about successfully engaging in an educational and career plan. The sample consisted of 67 full-time female undergraduates. Ancis and Phillips (1996) hypothesized that the discriminatory messages (gender bias) of reproachful comments, lack of faculty support, misperceptions of the level of commitment females have to education, sexual harassment, and decreased amount of role models, negatively affect female undergraduate's career self-efficacy expectations and behaviors, in particular the agentic behaviors.
The results of this study indicate that females who perceive a higher level of gender bias in their experiences of undergraduate education also report a lower level of agentic self-efficacy expectations, regardless of academic major, race/ethnicity, or their sex role attitudes. The authors suggest that due to a lower level of agentic self-efficacy regarding career development, women may not take the initiative, risks, and opportunities necessary to facilitate a career success plan, rather see proactive behaviors as beyond their scope.

Hackett and Byars (1996) reviewed and analyzed literature on African American women's career development, and in particular how the social cognitive career theory components of self-efficacy and outcome expectations operate. The authors chose this population due to African American women's exposure to both sexism and racism. Bandura (1986) postulates four sources of self-efficacy: performance accomplishments, vicarious learning, physiological states and verbal persuasion. Hackett and Byars (1996) provide formulations of the influences of contextual and environmental learning experiences on the aforementioned sources of self-efficacy of African American women.

The performance accomplishments source can serve to enhance or diminish an African American women's self-efficacy. Factors such as unpredictability of how the environment will respond to her behavior, "differential standards" in the classroom, disparity in the workforce between African American women and White women concerning salary and positions, preexisting self-efficacy beliefs and outcome of efforts put forth in school, serve as influences of a weaker or stronger sense of self-efficacy in general and career self-efficacy in particular. Individuals with a stronger sense of self-efficacy are able to attribute situations to racism, hence the academic and career self-
efficacy has not suffered, whereas individual's who experience a lowered self-efficacy attribute the situations to his/her abilities, and their academic and career self-efficacy is abraded. African American women are reared in an environment of decreased gender role socialization, whereby women succeed in feminine as well as masculine forces of work. This increased access to male dominated careers serves as an opportunity for women to increase their academic and career self-efficacy, and in turn their behaviors and achievements necessary to succeed in education and their career success plan.

Female African American role models continue to be a scarcity in the United States; hence the source of vicarious learning is not being nurtured as easily. However, the educational level of the mother in an African American household is not only an influence on the individual's self-efficacy, but self-esteem and achievement as well (Gibbs, as cited in Hackett & Byars, 1996). The mother serving as a model to her daughter gives evidence to role of vicarious learning affecting career self-efficacy in African American women.

The experience of being different, and in particular being ethnically different can cause anxiety in African American women. This anxiety, coupled with anger and frustration can potentially affect physiological states negatively, hence weakening self-efficacy in achievement situations, and career planning. Mild, moderate or severe forms of racism impact the physiological states of racial and ethnic minority individuals in general and African American women in particular (Essed, 1991). Ethnic identity has been found to be an influence on the arousal state of academic self-efficacy in African American women, with the potential to facilitate a high level of career self-efficacy. Positive ethnic identity has been found to increase racial and ethnic pride, self-esteem,
group identity, and may also serve to facilitate coping self-efficacy of racism and
discrimination (Pyant & Yanico, 1991), which in turn may assist African American
women to maintain or increase self-efficacy beliefs in their education and career.

Verbal messages received from parents can act as encouragement or
discouragement. It has been suggested by Ogbu (as cited in Hackett & Byars, 1996) that
parents who send messages about the institutional and societal actions, coupled with
personal experiences and trials, regarding being African American positively affect the
ethnic identity of their children, which in turn may facilitate coping efficacy, with a
stronger academic and career self-efficacy to follow.

Hackett and Byars (1996) made a major contribution to the self-efficacy literature
regarding women's career development, racial and ethnic minority career development,
and the conceptualization of the social cognitive career theory to the career development
of African American women. The analysis provided adds support to the influences of
ethnic identity on career decision-making self-efficacy, and to the influence of gender on
career decision-making self-efficacy.

Overall, the findings suggest that there are gender differences in career decision-
making self-efficacy (CDMSE). Women have been found to have higher levels of
CDMSE in nontraditional careers, and lower CDMSE in traditional careers. However,
with influences of male teachers, and socialization into the world of work, women's level
of CDMSE has increased. Further, due to women typically being cognizant of their role
as women, their CDMSE for their role at work is high.
Trait Anxiety and Career Decision-Making Self-Efficacy

Researchers (Haycock, McCarthy, & Skay, 1998; Robbins, 1985; and Fuqua, Newman, & Seaworth, 1988) have explored aspects of the utility of anxiety in career development. In particular, Haycock et al. (1998) and Robbins (1985), contribute to the importance of viewing anxiety as a variable of career decision-making self-efficacy. Fuqua et al. (1988), contribute to the importance of viewing anxiety as a variable in the career decision-making process, in particular career indecision.

Empirical Literature on Trait Anxiety and Career Decision-Making Self-Efficacy

Haycock, McCarthy and Skay (1998) performed a study examining self-efficacy and anxiety in relation to procrastination. This investigation was based on Bandura's self-efficacy theory, as well as research on anxiety. Self-efficacy theory applies to procrastination as Bandura (1986) notes that individuals with a higher level of confidence in a pursuing a task will have stronger levels of initiation, motivation and persistence in completing a task. Whereas, individuals with lower levels of self-efficacy expectations may experience behaviors such as avoidance. Further, a procrastination-self-efficacy relationship was revealed through literature in this domain (Tuckman, as cited in Haycock, McCarthy, & Skay, 1998); Tuckman & Sexton, (as cited in Haycock, McCarthy, & Skay, 1998); & Ferrari, Parket & Ware, (as cited in Haycock, McCarthy, & Skay, 1998). Anxiety has been established as a component in procrastination and self-efficacy. Higher levels of anxiety typically indicate more procrastination. Bandura (1986) postulates that there is a reciprocal relationship between anxiety and self-efficacy, in that the levels of anxiety (arousal, physiological states) can affect an individual's belief in their ability to handle threatening situations and vice versa. Further, when people
experience lower levels of self-efficacy in threatening situations, they tend to experience higher levels of anxiety. The purpose of the Haycock et al. (1998) study was to investigate the relationship between self-efficacy expectations and procrastination, as well as between anxiety and procrastination. Age and sex were also assessed in relation to procrastination. Efficacy expectations were hypothesized to be the best predictors of procrastination, and to be inversely related to procrastination. Further, anxiety was hypothesized to be the next best predictor of procrastination, and be positively related to procrastination. The sample consisted of 87 female and 54 male undergraduate (82%) and adult extension and graduate (18%) university students.

Results revealed support for the hypothesis that self-efficacy expectations would be the best predictors of procrastination. This finding suggests that students with higher levels of self-efficacy are less likely to procrastinate. This further supports Bandura's (1986) postulation that individuals with strong self-efficacy are more likely to initiate, be motivated, and persist in task behaviors, than individuals with a weak self-efficacy. Support for anxiety as a contribution to procrastination was not found. The researchers indicated that perhaps anxiety needs to be examined in the context of other variables. In sum, it may be that anxiety had an impact on self-efficacy and thus the anxiety effects on procrastination were mediated by self-efficacy expectations. Neither sex nor age were significant predictors of procrastination, which is consistent with the hypotheses. This study contributes to the literature on anxiety and career decision-making self-efficacy and provides support for the reciprocal relationship of anxiety and self-efficacy.

Robbins (1985) examined the validity of the career decision-making self-efficacy scale with the variables of career decisiveness, self-esteem, vocational identity and trait
anxiety. In order to maintain comparability of sample groups from the original construction of the CDMSES (Taylor & Betz, 1983), Robbins' (1985), sample consisted of 92 undergraduate freshmen and sophomore university students.

Examination of the concurrent validity revealed that career decision-making self-efficacy was moderately related to self-esteem (.53), and to anxiety (.24). Further, CDMSES was related to both career decidedness (.33) and vocational identity (.36). Examination of the discriminant validity via student's scores on the Vocational Identity Scale (Holland, Daiger, & Power, 1980) (students with scores greater than 15 (greater level of vocational identity) or less than 7 (lower level of vocational identity); the total scale score being 18), revealed a significant discriminant function, accounting for 25% of the variance. All five subscales (goal selection, gathering occupational information, problem solving, planning, and self-appraisal) were highly related to vocational identity. Furthermore, via a stepwise selection procedure, goal selection and self-appraisal were found to be significant and unique discriminants of vocational identity. The findings of this study suggest that the career decision-making self-efficacy scale is more of a general measure of self-efficacy expectations rather than specific in its utility of measuring career decision-making skills.

Fuqua, Newman and Seaworth (1988) performed a study to investigation the relation between anxiety and factor scores of the Career Decision Scale (Osipow et al., as cited in Fuqua, Newman, & Seaworth, 1988) for career indecision. The rationale for this study was Goodstein's (as cited in Fuqua, Newman, & Seaworth, 1988) postulation that the relation between career indecision and anxiety could be illustrated along two alternative avenues. The first was that anxiety may be the result of an individual's failure
to develop the specific skills in order to make career decisions. The second avenue suggested that anxiety may be a causative factor in vocational indecision; anxiety is believed to inhibit the use of skills and information in making career decisions. The research question reported was "Does anxiety have a differential pattern of relation across career indecision factors?" (Faqua et al, 1988, p. 154). The sample consisted of 179 female and 170 male (total 349) undergraduate university students. Via a factor analysis, a four-factor solution was revealed. The first factor of the Career Decision Scale (CDS) represented an avoidance or delay in career decision-making, with a need for information about self and careers. The second factor represented the appropriateness of careers and the fit with one’s interests and skills. The third factor represented multiple interests, and the fourth factor represented barriers.

Results of this study support previous research on the relation between anxiety and career indecision. Anxiety was significantly related to the first, second, and fourth factors of the CDS, but not to the factor representing multiple interests. Furthermore, the strongest relationship was found between anxiety and Factor 1 (lack of information about self and careers), with somewhat lower relationships between anxiety and Factors 2 and 4. Correlations of state and trait anxiety with the total Career Decision Scale favorably compared with correlations of Factor 1 scores and state and trait anxiety; with the correlation of trait anxiety and Factor 1 (.32) significantly higher than the correlation of state anxiety and Factor 1 (.18). In sum, these authors lend support to the relationship of anxiety in the career development process, in particular to that of career indecision and career decision-making. Thus, examining the level of influence (trait) anxiety has on career decision-making self-efficacy is pertinent in light of the relationship between
anxiety and barriers (Factor 4). It behooves counselors to explore the precipitating factors of anxiety, which in turn affect the career decision-making self-efficacy of an individual.

Summary

Overall, the findings support the influence of (trait) anxiety on the career decision-making process. Particularly, an individual's level of anxiety in the performance or completion of tasks, coupled with level of confidence, impacts an individual's academic and career plan. Thus, the use of trait anxiety as a variable in the present study is pertinent, as this concept is well established in vocational psychology. Furthermore, as stated by Hackett and Byars (1996) individuals may experience anxiety due to being ethnically different, hence the exploration of this variable in light of the nature of investigating the career decision-making self-efficacy of racial and ethnic minorities is important. In light of the above literature, one purpose of this study is to examine trait anxiety as an influence of a college students' career decision-making self-efficacy.
CHAPTER III

Methodology

This chapter will discuss the methodology used in this study. The nature of the sample and the sampling strategy are discussed. All instruments used are fully described, including explanation of the reliability and validity of each respective measure. The experimental design for this study and statistical analysis are reviewed and reasoning for their selection is provided.

Participants and Sampling Strategy

Participants included 172 undergraduate male and female students enrolled at two institutions. Participants are from a private, Catholic university in the northeast, and a city, public college in the northeast. All participants are 18 years of age or older. Student participants were volunteers from psychology, religion courses, and the Equal Opportunity Program of the private university, and from one-credit student development college courses of the public college. Students received extra-credit in their respective courses for participation in the study. The public college is a diverse institution, with 65% racial and ethnic minority students, traditional and nontraditional students, and lower admission requirements than the Catholic school. The Catholic University comprises approximately 35% racial and ethnic minority students, more traditional age students, and higher admission requirements than the public college. The volunteers being recruited from the one-credit student development were enrolled freshman. Thus,
the number of students, eighteen, who were older than the traditional college student age of 22 is not a large enough number to have effected the variance and distribution of scores for the respective measures. This constitutes oversampling of the undergraduate population in order to ascertain an equal number of racial and ethnic minority students and Caucasian students.

The sample included 80 men (47%) and 92 women (53%). Participants' ages ranged from 18 to 45, with a mean age of 19.1. Of the 172 participants, 86 (50%) were White, and 86 (50% - 22% African-American/Black; 9% Asian; 7% Hispanic/Latino (of color); 12% Hispanic/Latino (White); .6% Native/American Indian) were grouped into racial and ethnic minorities; 104 (60%) were Catholic, 24 (14%) Protestant, 17 reported no religion (10%), 10 (6%) Jewish, 11 (6%) Other, 3 (2%) Atheist and 3 (2%) Muslim. The sample consisted of 64 (37%) freshmen, 49 (29%) sophomores, 40 (23%) juniors and 19 (11%) seniors. Ninety (52%) reported residing on-campus and 82 (48%) reported as commuter students.

**Participant Response Rate Necessary**

Analysis of Variance (ANOVA), Multivariate Analyses of Variance (MANOVA), and bivariate zero-order correlations were be used to analyze the data and test the hypotheses. For ANOVA, Cohen (1992) reports that for a medium-sized relationship between three groups, alpha = .05, β = .20, the sample size is to be 156. To detect medium sized relationships between the mean differences of two groups, alpha = .05 and β = .20, Cohen (1992) reports the sample size needed to be 128 (Hypothesis 1).

Therefore in accordance with Cohen (1992), the current sample size of 172 participants, with equal numbers of participants in each group (Whites and racial and
ethnic minorities) is more than adequate enough for data analysis for each of the three hypotheses for the present study.

**Procedure**

Professors were contacted in advance by the researcher, and permission was requested to recruit volunteers before, during, or after class by the professor. A script of the nature of the study was read to the class by the researcher prior to recruiting volunteers. Individuals who volunteered then read an information sheet, and were asked to participate in a study designed to examine the influences on career decision-making self-efficacy. This sheet further informed the participants that completion of the packet of measures indicates his/her understanding and willingness to participate in the study. Participants were informed verbally as well as in writing that participation is voluntary, and of their rights to withdraw at anytime without negative consequences toward their academic status. Students were not asked to put their name or any other identifying information on their packet. They were assured of the anonymity that the said process would guarantee each participant.

Participants were given a packet of materials containing the following: information sheet, a demographic questionnaire to obtain information regarding age, gender, year in school, race/ethnicity, academic major, religious affiliation, and economic status; (1) The Multigroup Ethnic Identity Measure (Phinney, 1992); (2) the Career Decision-Making Self-Efficacy Scale (Taylor & Betz, 1983); and (3) Trait Anxiety Scale (Speilberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). The measures were counterbalanced in order to protect against any potential problems regarding order of importance of measures. The participation in the study was approximately 25 minutes.
Research Instruments

Demographic Information Questionnaire. A demographic information questionnaire created for the study sought information about the participants' age, gender, year in school, race/ethnicity, academic major, religious affiliation, and economic status.

The Multigroup Ethnic Identity Scale. (Phinney, 1992). The Multigroup Ethnic Identity Scale is a twenty (20) - item scale used to measure ethnic identity. This measure assesses three highly correlated aspects of ethnic identity: 1. Ethnic Identity achievement (i.e. secure sense of self as a member of a minority group), 2. Affirmation and Belonging (i.e. ethnic pride and attitudes toward one's group), and 3. Ethnic Behaviors and Customs (i.e. involvement in activities with other members of one's group and partaking in cultural traditions) (Phinney, 1992). A sample item from the Ethnic Identity Achievement subscale is "I am not very clear about the role of my ethnicity in my life". A sample item from the Affirmation and Belonging subscale is "I am happy that I am a member of the group I belong to". A sample item from the Ethnic Behaviors subscale is "I participate in cultural practices of my own group, such as special food, music or customs". The rationale for using this measure is its utility across all ethnic groups. The Multigroup Ethnic Identity scale is not specific to one group; rather it is controlled across all groups. This affords the researcher the opportunity to make comparisons. The Ethnic Identity scale of MEIM consists of 14 items; these items are rated on a 4-point Likert scale with choices ranging between strongly agree to strongly disagree. The total scale score ranges from 1, which indicates very low ethnic identity to 4, which indicates high ethnic identity, and is calculated by reversing the negatively worded items, summing across the items, and obtaining a mean.
Six questions assessing other group orientation are also included in the measure, for a total of twenty items. An individual's other group orientation, inclusive of attitude may interact with his/her ethnic identity in the global sense of social identity, hence the importance of including the items (Phinney, 1992). A sample item is "I am involved in activities with people from other ethnic groups".

Reliability of the Multigroup Ethnic Identity Measure (MEIM) was conducted on two samples (high school and college) who participated in the study to develop the MEIM (Phinney, 1992). Reliability coefficients (Cronbach's alpha) were conducted on the total MEIM scores and each of its subscales for the two samples. The overall reliability of the 14-item Ethnic Identity scale was .81 for the high school sample and .90 for the college sample. For the Affirmation/Sense of Belonging subscale, reliability coefficients were .75 for the high school sample and .86 for the college sample. For the Ethnic Identity Achievement subscale, reliability coefficients were .69 for high school and .80 for the college sample. No coefficients were calculated for the Ethnic Behaviors subscale, as there are only two items. The 6-item Other-group Orientation scale yielded reliability coefficients of .71 for the high school and .74 for the college sample.

Spencer, Icard, Harachi, Catalano, and Oxford (2000) performed a study on early adolescents who self-identified with a single race or ethnicity to explore the factor structure of the MEIM. The sample consisted of 2,542 students with a mean age of 12.85 and an even distribution of gender. Results revealed the reliability of the MEIM to be .85 for the total sample, utilizing Cronbach's alpha (a measure of a scale's internal consistency).
Branch (2001) also supported the reliability of the MEIM in his study investigating how adolescents develop a sense of ethnic identity. The sample consisted of 297 participants, ranging in age from 13 to 26 years. Results yielded a reliability index of .79.

Construct validity was obtained by assessing the utility of the MEIM with academically talented adolescents (Worrell, 2000). The two-factor (Ethnic Identity and Other-group Orientation) solution postulated by Phinney (1992) was replicated in this study. Structure coefficients ranged from .35 to .77 on the Ethnic Identity Scale (Factor 1) and .40 to .77 on the Other-group Orientation scale (Factor 2). Reliability coefficients for these scales were .89 and .76 respectively.

Gloria and Hird (1999) used the MEIM in their investigation of influences of ethnic identity and other-group orientation (Ethnic) and trait anxiety and declared vs. undeclared students. They obtained reliability coefficients of .84 for the Ethnic Identity scale and .74 for the Other-group Orientation scale for White students; and .88 for Ethnic Identity and .77 for Other-group Orientation for Racial and Ethnic Minority students.

Reliability of the 20 items (total score) was established by a coefficient alpha for internal consistency on the total sample included in this study (N=172) and resulted in an alpha coefficient of .82.

Career Decision-Making Self-Efficacy Scale. (Taylor & Betz, 1983). The Career Decision-Making Self-Efficacy Scale (CDMSES) is a 50-item instrument used to assess an individual’s level of confidence in career-decision making tasks. The subscales of the CDMSES are: Accurate Self-Appraisal, Gathering Occupational Information, Goal Selection, Making Plans, and Problem Solving; each subscale has contributed 10 items to
the scale. Confidence ratings are obtained using a 10-point Likert scale ranging from 0 (no confidence) to 9 (complete confidence). Total scores range from 0 to 450, with higher scores indicating higher self-efficacy levels in career decision-making. The long-version of the CDMSES is being used because of the greater extent of validity on this scale compared to the CDMSES - short form (25 items). Sample items from the Accurate Self-Appraisal subscale include "Accurately assess your abilities" and "Determine what your ideal job would be". Sample items from the Gathering Occupational Information subscale include "Find information about educational programs in engineering", and "Describe the job duties of the career/occupation you would like to pursue". Sample items from the Goal Selection subscale include "Make a career decision and then not worry about whether it was right or wrong" and "Choose a major or career that your parents do not approve of". Sample items from the Making Plans subscale include "Make a plan of your goals for the next five years" and "Find and use the placement office on campus". Sample items from the Problem Solving subscale include "Change majors if you do not like your first choice" and "Move to another city to get the kind of job you really would like".

Reliability of the Career Decision-Making Self-Efficacy Scale (CDMSES) was conducted by Taylor and Betz (1983), who developed the scale. The sample consisted of a total of 346 undergraduate university students, separated into two groups. The first group consisted of 85 female and 68 male students; the second group consisted of 133 female and 60 male students.

Results revealed high internal consistency reliability, within each subtest group and for the total group of 346 students, the standardized value of coefficient alpha was
Generally high item total score correlations with values for 43 of the 50 items in the range of .50 to .80 were also found. Reliabilities for the subscales were: self-appraisal .88, occupational information .89, goal selection .87, planning .89, and problem solving .86.

Luzzo (1993a) further examined the reliability and validity of the CDMSES on 230 college students. Results revealed high internal consistency reliability for the CDMSES, with a coefficient alpha of .93. Item-total score correlations revealed 46 out of 50 items above .50, with is moderate to high. A test-retest reliability of .83 was reported for this CDMSES in this study.

Robbins (1985) assessed the validity of the CDMSES by assessing the relationships between CDMSES and self-esteem, trait anxiety, vocational identity, and career indecisiveness. On his sample of 92 undergraduate university students, the results reveal a moderate relationship between CDMSE and self-esteem (.53), between CDMSE and vocational identity (.36), between CDMSE and career decisiveness (.33), and a relationship between CDMSE and trait anxiety (.24).

Taylor and Pompa (1990) further assessed the validity of the CDMSES, by examining the relationships between CDMSE and occupational self-efficacy, locus of control, career salience, and vocational indecision in a sample of 407 undergraduate university students. Results revealed a significant, negative relationship between CDMSE and vocational indecision (-.51); a negative relationship between CDMSE and locus of control (-.30); a significant positive relationship between CDMSE and vocational indecisiveness (.46); and a moderate, positive relationship between CDMSE and occupational self-efficacy (.44).
Luzzo (1993a) assessed the construct validity of the CD MSEs on 230 undergraduate college students, based on the correlations between CD MSE, attitudes and skills in career decision-making. Results revealed support for the relationship between CD MSE scores and career decision-making attitudes (.41). However, the relationship between CD MSE scores and career decision-making skills was not significant (.05).

Taylor and Betz (1983) assessed the discriminant validity of the CD MSEs between student's CD MSE expectations and ability level on the SAT (math and verbal) and the ACT (math and verbal). The relationship between CD MSE total scores and SAT math and verbal scores were .18 and .19, respectively. The relationship between CD MSEs and ACT math and verbal scores were -.02 and .15, respectively. Robbins (1985) also assessed the discriminant validity of the CD MSEs, to discriminate more extreme ranges of career indecision. The findings reveal that the CD MSEs is more of a generalized measure of self-efficacy expectations for career decision-making tasks. Luzzo (1993a) further assessed the discriminant validity of the CD MSEs and found that the lack of a relationship between CD MSEs and GPA, and the absence of gender differences, support the discriminant validity of the CD MSEs.

Reliability of the 50 items was established by a coefficient alpha for internal consistency on the total sample included in this study (N=172) and resulted in an alpha coefficient of .94.

*Trait Anxiety Scale (State Trait Anxiety Inventory (STA)).* (Spielberger et al., 1983). The State Trait Anxiety Inventory is a 40-item inventory (two twenty item scales) used to measure anxiety. For the current study, only the Trait Anxiety scale will be used. The Trait Anxiety scale is a 20-item measure of relatively stable individual differences in
anxiety proneness, or a tendency to perceive situations as dangerous or threatening. These twenty items ask participants to describe in general how anxious they feel. Anxiety levels are obtained using a 4-point scale ranging from 1 (almost never feel) to 4 (almost always feel). Nine items on this scale are reverse-scored. The total score is obtained by summing item scores. Higher levels of anxiety are indicated by higher scores on the scale. Sample items include "I feel rested" and "I lack self-confidence".

Reliability estimates for the trait anxiety scale have been reported ranging from .89 to .96 using Cronbach's alpha and between .73 and .86 using test-retest correlations (Spielberger et al., 1983). The authors via a 20-day test-retest for reliability, found reliability coefficients ranging from .76 (women) to .86 (men) for Trait Anxiety Scale scores among a large sample of undergraduate college students. Gloria and Hird (1999) in their study investigating ethnic (ethnic identity and other-group orientation) and nonethnic (trait anxiety and status of declaration of academic major) influences of career decision-making self-efficacy reported an overall Cronbach's alpha of .91 for White students and .93 for racial and ethnic minority students.

The authors of the State-Trait Anxiety Inventory (Spielberger et al., 1983) reported a .90 median alpha coefficient of .90, and further reported support for the scale's convergent, divergent, concurrent and construct validity.

The validity of State-Trait Anxiety Inventory has been supported by Robbins (1985) in his assessment of the validity of the career decision-making self-efficacy scale; in the Gloria and Hird (1999) investigation of influences on career decision-making self-efficacy; in the Haycock, McCarthy, and Skay (1998) investigation of procrastination in
college students; and in the Fuqua, Newman, and Seaworth (1988) investigation of state and trait anxiety to factor scores for career indecision.

Reliability of the 20 items was established by a coefficient alpha for internal consistency on the total sample included in this study (N=172) and resulted in an alpha coefficient of .89.

*Study Design and Statistical Analyses*

One part of the design of this study is a causal-comparative, ex-post facto design; "a type of quantitative research that seeks to discover possible causes and effects of a behavior pattern or personal characteristic by comparing individuals in whom it is present with individuals in whom it is absent or present to a lesser degree" (Gall et al., 1996, p. 380). The researcher studied the influences of ethnic identity (personal characteristic), gender (personal characteristic) and trait anxiety (behavior pattern) on career decision-making self-efficacy. The study does not have control over the race/ethnicity, gender, and level of trait anxiety of the participants, each were already established without researcher's control, nor will there be random assignment. The second part of the design of this study is a correlational/regression design, which afforded the discovery of relations between ethnic identity, gender, trait anxiety and career decision-making self-efficacy via bivariate zero-order correlations.

The dependent variables for this study are career decision-making self-efficacy, ethnic identity, and trait anxiety. The independent variables are White, racial and ethnic minority categories, and gender.
Hypotheses Testing. The following will illustrate the hypotheses and the statistical procedures used to analyze each:

**Hypothesis 1** White students will report higher career decision-making self-efficacy, lower trait anxiety scores, and lower ethnic identity scores than R/EM students. The statistical analysis is a MANOVA, to assess for group differences. The independent variables are White and racial/ethnic minority groups; the dependent variables are career decision-making self-efficacy, trait anxiety, and ethnic identity.

**Hypothesis 2** Ethnic identity will result in a stronger correlation with career decision-making self-efficacy scores for R/EM students than for White students. The statistical analyses are bivariate zero-order correlations. The independent variables are White and racial/ethnic minority groups; the dependent variables are ethnic identity and career decision-making self-efficacy.

**Hypothesis 3** Interactional effects of gender and ethnicity by career decision-making self-efficacy and anxiety. 1. White male students will report higher levels of career decision-making self-efficacy than White female and R/EM students. 2. White and R/EM female college students will report higher levels of trait anxiety than White and R/EM males. 3. Racial/ethnic minority male and female students will report higher levels of ethnic identity than White male and female students. The statistical analysis is a 2 x 2 x 2 factorial (three-way) ANOVA. The independent variables are race (White vs. racial and ethnic minorities), gender (males vs. females), and ethnic identity (high vs. low), and the dependent variables are career decision-making self-efficacy and trait anxiety.
Scale Statistics

(a) Reliability analyses were obtained via SPSS for each of the scales, in order to attain Cronbach's alpha on each scale. In addition to informing the reliability of the measure for this study, Cronbach's alpha afforded comparisons of prior administrations. Statistical procedures include descriptive statistics, ANOVA's, MANOVA's, and Pearson r correlations. The level of significance was set at a minimum of the conventional .05 for all analyses.

(b) Descriptive statistics (i.e., mean, standard deviation) were conducted for age, gender, race/ethnicity, residency status, and religious affiliation and will consist of means, and percentages for each group. Further, descriptive statistics were calculated for each of the scales (The Multigroup Ethnic Identity Scale, Career Decision-Making Self-Efficacy Scale, and State-Trait Anxiety Scale).

Statistical Analyses

Analysis of variance (ANOVA).

Separate ANOVA's were conducted for each dependent variable (career decision-making self-efficacy, ethnic identity, and trait anxiety) to compare variables. The ANOVA's informed if group means on a dependent measure differ to an extent that is greater than we would expect by chance alone. Each participant had scores on the independent variables and the dependent variables. Pearson r correlations were calculated to see the relationship between the dependent variables.

Assumptions of analysis of variance.

The following assumptions are required for ANOVA: (1) independent samples have been taken from each population. This means that there is no relationship between
the observations of the different or same groups; (2) The populations are normal. Making a histogram will check for this assumption; and (3) The population variances are all equal. The Levene's test can be computed to check for this assumption (Norusis, 1997). Each of these assumptions were checked via SPSS.

*Multivariate analysis of variance (MANOVA).*

The Multivariate Analysis of Variance (MANOVA) were calculated to understand how the dependent variables are related. A MANOVA is a generalization of ANOVA. The MANOVA informed the combination of the dependent variables as a whole, vary as a function of treatment. At least two or more dependent variables, and at least one independent variable are needed to do the analysis. Information about the interrelationship between dependent variables is used to combine them. This combination of dependent variables was then tested to see if the groups differ significantly on the combination than would be expected by chance, that is, a form of analysis of variance is performed.

*Assumptions of MANOVA.*

The following assumptions were met in order to interpret the results in a valid manner: (1) Homogeneity of variance matrix - each group must have the same variance; the correlation between any two dependent variables must be the same in all groups (The Box's M tests for this assumption); (2) Homogeneity of variance for dependent variables (Levene's test); (3) Observations are independent - observations for one participant are not influenced by another participant; and (4) Multivariate normality - each of the individual variables must be normally distributed; in addition, any combination of the variables are normally distributed; all subsets of variables are normally distributed;
violations of this assumption will be robust to Type I error (Tabachnick & Fidell, 1996). These assumptions will be tested for in SPSS.

A MANOVA examined between group differences for the variance for each of the variables. Separate ANOVA's were conducted on each of the dependent variables. In this study, the MANOVA assessed differences in career decision-making self-efficacy, trait anxiety, and ethnic identity by race and gender.

Factorial analysis of variance.

The Factorial ANOVA is used to focus on more than one independent variable, herein called a factor. With the three-way analysis of variance, the researcher was able to test for main effects of the factors, gender, ethnic identity, and race. That is, do males and females differ significantly in their level of trait anxiety? Do individuals with high and low levels of ethnic identity differ significantly in their level of trait anxiety? And do White and racial/ethnic minorities' students differ significantly in their level of trait anxiety? Will there be a significant gender by race interaction on trait anxiety? "Main effects are the effects of each of the individual factors, ignoring the other factors" (Norusis, 1997). "An interaction is present when the effect of one factor is not the same for all of the categories of the other factor" (Norusis, 1997). The researcher also tested for main effects of the factors, gender, ethnic identity, and race by career decision-making self-efficacy. The researcher also examined if a significant gender by race, and gender by ethnic identity interactions exist.

Assumptions of factorial ANOVA.

The assumptions illustrated for a one-way analysis of variance are similar to those for the factorial ANOVA, however, the factorial has a clear assumption. "The data for
each cell must be an independent random sample from a normal population with a
constant variance" (Norusis, 1997). Via SPSS, the assumption was tested by examining
normal probability charts, and looking at the spread of observations in the box plot.
CHAPTER IV

Results

This chapter presents the results of the statistical analyses of this study. The results of data analyses are presented in the sections of descriptive statistics, tests of hypotheses, and summary of findings.

Descriptive Statistics

Means and standard deviations across the Career Decision-Making Self-Efficacy Scale, Trait Anxiety Scale, and Multigroup Ethnic Identity Scale are presented in Table 1. A measure of central tendency, the mean, and a measure of variability, the standard deviation, collectively provide further explanations of the findings. The range of scores for career decision-making for males was 232, for females, 255, for R/EM students 250, and for White students 249. The range of scores for trait anxiety for males was 38, for females 37, for R/EM students 35, and for White students 38. The range of scores for ethnic identity for males was 44, for females 34, for R/EM students 44, and for White students 31.

For the total sample, the range statistic for career decision-making self-efficacy was 255 (minimum of 190 and maximum of 445), for trait anxiety 38 (minimum of 21 and maximum of 59), and for ethnic identity 21 (minimum of 36 and maximum of 80). "Skewness measures to what extent a distribution of values deviates from symmetry around the mean" (George & Mallery, 1999, p. 86). The skewness for total CDMSES
was -.63, for total trait anxiety .20, and for total ethnic identity -.62. “A positive skewness indicates a greater number of smaller values...a negative skewness indicates a greater number of larger values...a skewness value between + or - 1 is considered excellent for psychometric purposes” (George & Mallery, 1999, p. 86).

Table 1

Means and Standard Deviations for the Career Decision-Making Self-Efficacy Scale (CDMSES), Trait Anxiety Scale (TA), Multigroup Ethnic Identity Scale (EI)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Males (N=80)</th>
<th>Females (N=92)</th>
<th>R/EM (N=86)</th>
<th>Whites (N=86)</th>
<th>Total (N=172)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M  SD</td>
<td>M  SD</td>
<td>M  SD</td>
<td>M  SD</td>
<td>M  SD</td>
</tr>
<tr>
<td>CDMSES</td>
<td>352.05 49.63</td>
<td>344.90 53.38</td>
<td>348.97 50.32</td>
<td>347.49 53.22</td>
<td>348.23 51.64</td>
</tr>
<tr>
<td>TA</td>
<td>38.13 8.68</td>
<td>40.37 9.93</td>
<td>40.34 53.22</td>
<td>38.31 8.92</td>
<td>39.33 9.41</td>
</tr>
<tr>
<td>EI</td>
<td>63.06 7.97</td>
<td>65.54 7.49</td>
<td>65.60 8.47</td>
<td>63.17 6.89</td>
<td>64.39 7.80</td>
</tr>
</tbody>
</table>

Table 2 presents an intercorrelation matrix for the research measures of the study, Career Decision-Making Self-Efficacy Scale, Trait Anxiety Scale, and the Multigroup Ethnic Identity Scale. A Pearson correlation was conducted to assess the magnitude of the relationship between the variables. Career decision-making self-efficacy is positively correlated with ethnic identity at the .01 level (r = .21), and negatively correlated with trait anxiety at the .01 level (r = -.44). The positive relationship between career decision-making self-efficacy and ethnic identity suggests that students with a higher level of
ethnic identity tend to have higher levels of career decision-making self-efficacy. The negative relationship between career decision-making self-efficacy and trait anxiety suggests that students with higher levels of trait anxiety tend to have lower levels of career decision-making self-efficacy. Trait anxiety was not significantly correlated with ethnic identity.

Table 2

<table>
<thead>
<tr>
<th>Scale</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CDMSE</td>
<td>1.00</td>
<td>- .44**</td>
<td>.21*</td>
</tr>
<tr>
<td>2. TA</td>
<td>- .44**</td>
<td>1.00</td>
<td>.02</td>
</tr>
<tr>
<td>3. EI</td>
<td>.21*</td>
<td>.02</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note. * p < .05, two tailed  ** p < .01 two tailed

Tests of Hypotheses

Hypothesis 1. White students will report higher career decision-making self-efficacy, lower trait anxiety scores, and lower ethnic identity scores than R/EM students.

To test Hypothesis 1, correlation's between the variables were examined and subsequently, a multivariate analysis of variance through SPSS was conducted, to assess for group differences. The independent variables were White and racial/ethnic minority groups and gender; the dependent variables were career decision-making self-efficacy, trait anxiety, and ethnic identity.
Table 3 presents a correlation matrix of the independent and dependent variables of gender, race/ethnicity, total career decision-making self-efficacy, trait anxiety and ethnic identity as a procedure within the MANOVA. Gender was significantly correlated with ethnic identity. The relationship was positive and low, and significant at the .05 level (r=.16). The relationship suggests that females have higher levels of ethnic identity (M = 65.54) than males (63.06). There was also a low positive, significant correlation between race/ethnicity and ethnic identity (r=.16, p<.05). The relationship suggests that racial and ethnic minority students have higher levels of ethnic identity (M = 65.60) than White students (M = 63.17). Career decision-making self-efficacy was negatively correlated with trait anxiety (r=-.44, p<.01). The moderate relationship between trait anxiety and career decision-making self-efficacy suggests that students with higher level of trait anxiety tend to have lower levels of career decision-making self-efficacy. Career decision-making self-efficacy was positively correlated with ethnic identity (r=.21, p<.01). This relationship suggests that students with higher levels of ethnic identity tend to have higher levels of career decision-making self-efficacy.
Table 3

Correlations Between Independent and Dependent Variables

<table>
<thead>
<tr>
<th>Scale</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gender</td>
<td>1.00</td>
<td>.05</td>
<td>-.07</td>
<td>.12</td>
<td>.16*</td>
</tr>
<tr>
<td>2. Race/Ethnic</td>
<td>.05</td>
<td>1.00</td>
<td>.01</td>
<td>.11</td>
<td>.16*</td>
</tr>
<tr>
<td>3. CDMSE</td>
<td>-.07</td>
<td>.01</td>
<td>1.00</td>
<td>-.44**</td>
<td>.21**</td>
</tr>
<tr>
<td>4. Trait Anxiety</td>
<td>.12</td>
<td>.11</td>
<td>-.44**</td>
<td>1.00</td>
<td>.02</td>
</tr>
<tr>
<td>5. EI</td>
<td>.16*</td>
<td>.16*</td>
<td>.21**</td>
<td>.02</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note: * P < .05, two tailed  ** P < .01, two tailed

A significant F (3, 168) = 4.26, p < .05 was found with an R squared of .024 for the differences in ethnic identity between White and racial/ethnic minority students. White students yielded a mean of 63.17 (SD = 6.89), and R/EM yielded a mean of 65.60 (SD = 8.47). Hence, supporting the hypothesis that White students would have lower ethnic identity scores than R/EM students. The MANOVA did not reveal significant results for White students reporting higher career decision-making self-efficacy, F (3, 168) = .64, p > .05. Racial/ethnic minorities yielded a higher mean (348.97) than White students (347.49). Further, the MANOVA did not reveal significant results for White students having lower trait anxiety scores, F (3, 168) = 2.00, p > .05. Thus, Hypothesis 1 was supported with White students having lower ethnic identity scores. However, was not supported for White students having higher CDMSE scores and lower trait anxiety scores than R/EM students.
Table 4 presents the multiple analysis of variance assessing group differences between White and racial ethnic minority students' ethnic identity, trait anxiety and career decision-making self-efficacy. Significant multivariate differences were found for White and racial and ethnic minority students' ethnic identity (F (1,170 = .041, p<.05). No significant differences were found for trait anxiety or career decision-making self-efficacy between White and racial and ethnic minority students.

Table 4

*Multiple Analysis of Variance for Group Differences Between White and R/EM Students' on All Measures*

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>df</th>
<th>F</th>
<th>n</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnic Identity</td>
<td>1</td>
<td>4.26*</td>
<td>253.96</td>
<td>.041</td>
</tr>
<tr>
<td>Trait Anxiety</td>
<td>1</td>
<td>2.00</td>
<td>176.02</td>
<td>.159</td>
</tr>
<tr>
<td>CDMSES</td>
<td>1</td>
<td>.04</td>
<td>93.77</td>
<td>.852</td>
</tr>
</tbody>
</table>

*Note. *p < .05

A significant F (3, 168) = 4.42, p < .05 was found with an R squared of .025 for the differences in ethnic identity between male and female students. Female students yielded a higher mean of 65.54 on ethnic identity scores (SD = 7.49) than male students (M = 63.06, SD = 7.97). These results are statistically significant, however, in terms of practical significance, the difference between the means is small. The MANOVA did not reveal significant group differences between males and females for trait anxiety and
career decision-making self-efficacy. Table 5 presents the multiple analysis of variance assessing group differences between male and female students' ethnic identity, trait anxiety and career decision-making self-efficacy.

Table 5

Multiple Analysis of Variance for Group Differences in Gender on All Measures

<table>
<thead>
<tr>
<th>Gender</th>
<th>df</th>
<th>F</th>
<th>n</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnic Identity</td>
<td>1</td>
<td>4.42*</td>
<td>263.39</td>
<td>.037</td>
</tr>
<tr>
<td>Trait Anxiety</td>
<td>1</td>
<td>2.46</td>
<td>215.58</td>
<td>.119</td>
</tr>
<tr>
<td>CDMSES</td>
<td>1</td>
<td>.82</td>
<td>2186.24</td>
<td>.367</td>
</tr>
</tbody>
</table>

Note. * p < .05

Hypothesis 2 Ethnic identity will result in a stronger correlation with career decision-making self-efficacy scores for R/EM students than for White students. The statistical analyses used were bivariate zero-order correlations. The independent variables were White and racial/ethnic minority groups; the dependent variables were ethnic identity and career decision-making self-efficacy.

The correlation between ethnic identity and career decision-making self-efficacy was found to be significant at the .01 level (r = .21). Two separate bivariate zero-order correlations were conducted to investigate race/ethnicity differences in the relationship between career decision-making self-efficacy and ethnic identity. Ethnic identity was found to be statistically significantly correlated with career decision-making self-efficacy for racial and ethnic minority students at the .05 level (r = .26). Ethnic identity was not
found to be statistically significantly correlated with career decision-making self-efficacy for White students ($r=.15$). Thus, Hypothesis 2 was supported. Table 6 presents the correlations among correlations among career decision-making self-efficacy and ethnic identity for racial and ethnic minority students. Table 7 presents the correlations among career decision-making self-efficacy and ethnic identity for White students.

**Table 6**

*Correlations Between Career Decision-Making Self-Efficacy (CDMSE) and Ethnic Identity (EI) for Racial and Ethnic Minority Students*

<table>
<thead>
<tr>
<th>Scale</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CDMSE</td>
<td>1.00</td>
<td>.265**</td>
</tr>
<tr>
<td>2. Ethnic Identity</td>
<td>.265*</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*Note. **p < .01

**Table 7**

*Correlation Between Career Decision-Making Self-Efficacy (CDMSE) and Ethnic Identity (EI) for White Students*

<table>
<thead>
<tr>
<th>Scale</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CDMSE</td>
<td>1.00</td>
<td>.151</td>
</tr>
<tr>
<td>2. Ethnic Identity</td>
<td>.151</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*Hypothesis 3 Interactional effects of gender and ethnicity by career decision-making self-efficacy and anxiety. 1. White male students will report higher levels of career decision-making self-efficacy than White female and R/EM students. 2. White and
R/EM female college students will report higher levels of trait anxiety than White and R/EM males. 3. Racial/ethnic minority male and female students will report higher levels of ethnic identity than White male and female students. The statistical analysis used was a 2 x 2 x 2 factorial (three-way) ANOVA. The independent variables were race (White vs. racial and ethnic minorities), gender (males vs. females), and ethnic identity (high vs. low) and the dependent variables were career decision-making self-efficacy and trait anxiety.

The interaction between gender and ethnicity for career decision-making self-efficacy was not found to be significant. However, cell means suggest that White males have a higher career decision-making self-efficacy (M = 358.33) than racial and ethnic minority females, 352.02, racial and ethnic minority males, 345.11, and White females, 337.14. Thus, hypothesis 3a was not supported, as White males did not have the statistically significant highest levels of career decision-making self-efficacy.

The interaction between gender and ethnicity for trait anxiety was not found to be significant. However, cell means suggest that racial and ethnic minority and White females have higher level of trait anxiety than racial and ethnic minority and White males, 40.63 and 40.09 and 39.97 and 36.45 respectively. Thus, hypothesis 3b was not supported, as White and racial and ethnic minorities did not have statistically significant higher levels of trait anxiety.

A significant interaction between gender and ethnicity was found for ethnic identity ($F (1, 170) = 4.53, p < .05$), with an $R$ squared of .073. Cell means suggest that for the total group, racial and ethnic minority students yielded a statistically significant higher level of ethnic identity (M = 65.60) than White students (M = 63.17). Estimated
cell means suggest that racial and ethnic minority females yield the highest level of ethnic identity, 67.75, as compared with White males, 63.21, White females, 63.14, and racial and ethnic minority males, 62.89. Thus, hypothesis 3c was supported as male and female racial and ethnic minorities yielded statistically significantly higher levels of ethnic identity.

Table 8 presents the 2 x 2 x 2 (three-way) factorial ANOVA's for interactions between race/ethnicity and gender for ethnic identity, trait anxiety and career decision-making self-efficacy.

Table 8

<table>
<thead>
<tr>
<th>Interaction Between Race/Ethnicity and Gender for Ethnic Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender*Ethnicity</td>
</tr>
<tr>
<td>Ethnic Identity</td>
</tr>
<tr>
<td>Trait Anxiety</td>
</tr>
<tr>
<td>CDMSE</td>
</tr>
</tbody>
</table>

Note. * p < .05

Summary of Results

Results of the present study reveal that ethnic identity is significantly correlated with career decision-making self-efficacy, that racial and ethnic minorities have significantly higher levels of ethnic identity, and that ethnic identity resulted in a stronger (significant) correlation with career decision-making self-efficacy for racial and ethnic minorities. Yielded means suggest that racial and ethnic minority students have higher
levels of career decision-making self-efficacy. And, support was not given to the hypotheses and study which was extended (Gloria and Hird, 1999) that White males would have higher levels of career decision-making self-efficacy. Hence, the results of this study give credibility to examining the empowering factor of ethnic identity in college students' career development and confidence therein.
CHAPTER V

Discussion

This chapter will discuss the results of the study, summary of findings, implications for counseling and career services programs, limitations, and future research. The first segment provides a summary of literature that illustrates the foundation of this research study. The second segment provides a summary of the findings and a discussion of the results. The third segment provides a discussion of this study as an extension of Gloria and Hird's (1999) study "Influences of ethnic and nonethnic variables on the career decision-making self-efficacy of college students". The fourth segment provides implications for college counseling and career services programs. The fifth segment provides the limitations of the study. And, the sixth segment provides a discussion of future directions for research in this area of study.

Summary of Previous Literature

Many researchers have examined Bandura's concept of self-efficacy, in general, and career self-efficacy in particular. Researchers have investigated career self-efficacy related to gender (Hackett & Betz, 1981), career indecision (Taylor & Betz, 1983), career salience and locus of control (Taylor & Pompa, 1990), attitudes and skills (Luzzo, 1993b), career choice patterns (Gianakos, 1999), ethnic and nonethnic variables (Gloria & Hird, 1999) and career decision-making style (Mau, 2000). Within the literature that addresses career decision-making self-efficacy, there is a scant amount of research
addressing cultural variables, particularly that of ethnic identity. More specifically, researchers have not examined the role of an interactional effect of gender and ethnicity on a college student's career decision-making self-efficacy.

Hackett and Betz's (1981) study gave rise to the initial investigation of gender differences in career decision-making self-efficacy. They found women to have a lower level of career decision-making self-efficacy in relation to a variety of career options. Taylor and Betz (1983) were some of the first investigators to examine career decision-making self-efficacy in relation to career indecision. Their study found that levels of self-efficacy were significantly predictive of career indecision. And, did not reveal gender differences in career decision-making self-efficacy. Taylor and Pompa (1990) found a negative relationship between locus of control and career decision-making self-efficacy. Further, that the more external an individual's beliefs are the lower his/her level of confidence in making career decisions. They did not find support for a relationship between career salience and career decision-making self-efficacy. Luzzo (1993b) found support for the relationship between career decision-making self-efficacy and career attitudes, but not between career decision-making self-efficacy and skills. No gender differences on the career decision-making self-efficacy scale were reported. Gianakos (1999) found support for differences in career decision-making self-efficacy being associated with career choice patterns.

Two studies that reviewed cultural variables were Gloria and Hird (1999) and Mau (2000). Gloria and Hird (1999) examined the ethnic variables of ethnic identity and other group orientation, as well as nonethnic variables of trait anxiety and academic major as influences of career decision-making self-efficacy. Results yielded White
students having higher levels of career decision-making self-efficacy, lower levels of trait anxiety and lower levels of ethnic identity than racial and ethnic minorities. Mau's (2000) study supports the notion that cultural orientation (American and Taiwanese) of an individual affects the approach (rational, intuitive, dependent) to career decision-making, and in turn the individual's career decision-making self-efficacy.

This present study investigated the differences of influences of gender, trait anxiety and ethnic identity on career decision-making self-efficacy for White and racial and ethnic minority college students. The purpose of the study was to expand upon the limited amount of literature focusing on racial and ethnic minority college student's career development. More specifically, this study was conducted as an extension of Gioria and Hird's (1999) study examining the influences of ethnic and nonethnic variables on career decision-making self-efficacy.

The first hypothesis examined whether there would be group differences in career decision-making self-efficacy, ethnic identity, and trait anxiety between White and racial and ethnic minority students. The second hypothesis examined whether ethnic identity would account for different degrees of variance in career decision-making self-efficacy for White and racial and ethnic minority students. And, the third hypothesis examined whether there would be a gender by ethnicity interactional effect on career decision-making self-efficacy, trait anxiety, and ethnic identity scores.

Summary of Findings and Discussion of Results

Results of the first hypothesis yielded estimated marginal means, which indicate that for the total group, racial and ethnic minority students had higher levels of career decision-making self-efficacy, higher levels of trait anxiety, and higher levels of ethnic
identity than White students did. Thus, the first hypothesis suggesting that White students would report higher levels of career decision-making self-efficacy than racial and ethnic minority students was not supported. The second component of the first hypothesis that White students would have lower levels of trait anxiety was not statistically significant. The third component of the first hypothesis examining group differences, that White students would have lower ethnic identity scores than racial and ethnic minority students, was significantly supported.

The nonsignificant results of White males and females having higher levels of career decision-making self-efficacy than racial and ethnic minorities (rather estimated marginal means yielded racial and ethnic minorities (total group) to have higher means) might suggest that the environmental shaping of one's ethnic identity via family and community are strongly influencing an individual's vocational path. However, as noted by Evans and Herr (1994) the vocational path of racial and ethnic minority students continues to remain complex. As noted by Ogbu (as cited in Hackett & Byars, 1996) parents who send messages (verbal) about the institutional and societal actions, coupled with personal experiences and trials, regarding being African American positively affect ethnic identity of their children. This positive effect may subsequently facilitate coping efficacy, with a stronger academic and career self-efficacy to follow.

Results of the second hypothesis indicated that ethnic identity is significantly correlated with career decision-making self-efficacy. Furthermore, results yielded suggest that ethnic identity is more strongly correlated with career decision-making self-efficacy for racial and ethnic minority students than for White students. This finding supports the second hypothesis that ethnic identity would be significantly correlated with
career decision-making self-efficacy. This finding also supports Gloria and Hird's (1999) result of ethnic identity being a more significant predictor of career decision-making self-efficacy for racial and ethnic minorities. A negative moderate significant relationship between trait anxiety and career decision-making self-efficacy was found. Gender was not found to be significantly correlated with career decision-making self-efficacy.

That ethnic identity was significantly correlated with career decision-making self-efficacy and stronger for racial and ethnic minority students in both studies supports Fouad and Arbona's (1994) argument that another vocational task for racial and ethnic minorities is ethnic identity development. These results further suggest that ethnic identity development is rudimentary in order to nurture his/her self-concept in a vocational identity and to achieve confidence in career decision-making. Furthermore, these findings support that racial and ethnic minority individuals will vary in terms of response to racism and discrimination as well as perception of barriers to the workforce (Mitchell and Dell, 1992; and Parham and Austin, 1994).

O'Brien, Martinez, and Kopala (1999) lend support to this present study's finding of ethnic identity as a predictor of career decision-making self-efficacy. O'Brien et al. (1999) examined the relations of ethnic identity, prior academic choice, self-efficacy and career choice in science and mathematics. Within their study, these authors suggest that a decrease in ethnic identity may negatively influence the student's perception of his/her skills and educational and vocational aspirations. Amongst other findings, O'Brien et al. (1999) yielded significant results suggesting that ethnic identity and academic performance predict self-efficacy for adolescent female and minority students. Thus, this
study further suggests the importance of exploring ethnic identity as a variable in a student's career development and career decision-making self-efficacy.

Data for hypothesis three suggests that White male students reported higher levels of career decision-making self-efficacy when the data was analyzed separately for each respective ethnic group, however, the results were not significant. Thus, hypothesis 3a was not supported. White and racial and ethnic minority females revealed higher estimated marginal means for trait anxiety than males. However, this was not statistically significant. Thus, hypothesis 3b was not supported. Racial and ethnic minority males and females had significantly higher levels of ethnic identity than White males and females. Thus, hypothesis 3c was supported.

Racial and ethnic minority females had higher levels of career decision-making self-efficacy than White females and racial and ethnic minority males. This result supports Hackett and Byars (1996) review of literature on African-American females. Specifically, this study validates research indicating that individuals with a stronger sense of self-efficacy are able to ascribe forms of oppression to racism, hence his/her academic and career decision-making self-efficacy do not necessarily suffer. As noted by Pyant and Yanico (1991), positive ethnic identity has been found to increase racial and ethnic pride, self-esteem, group identity, and may also serve to facilitate coping self-efficacy of racism and discrimination. This coping self-efficacy may subsequently assist African American women to maintain or increase self-efficacy beliefs in their education and career. And to furthermore face the potential barriers of internalized oppression, discrimination, and societal “recordings” regarding his/her racial or ethnic background.
White and racial and ethnic minority females presenting with higher levels of trait anxiety is supported by a study conducted by Fuqua, Newman and Seaworth (1988). Fuqua et al. (1988) suggested that anxiety was significantly related to an avoidance or delay in career decision-making, with a need for information about self and careers; the appropriateness of careers and the fit with one's interests and skills; and barriers.

It is also important to note that Betz and Hackett (1981) suggested that female's self-efficacy is mediated by their perception of performance capability; this performance capability might also serve as a source of anxiety as role models might not be present in certain career fields. Females in the current study yielded higher levels of trait anxiety. And, racial and ethnic minorities via the analysis of the total group of the present study yielded higher estimated marginal means of trait anxiety than White students. This underscores the need for counselors and educators to assess the person by environment fit for each respective individual; male and female, White and racial and ethnic minority. And, to furthermore, explore the barriers that might be present, and how these barriers might be affecting one's level of anxiety. Barriers might include (mis)perceptions from influences of the student's familial or cultural variables, internalized oppression, and/or internalized "recordings" from one's environment informing him/her that he/she can or cannot perform due to gender or race/ethnicity. Hackett and Byars (1996) assert that being ethnically different can be a source of anxiety for individuals, thus lending support for counselors and educators to assess anxiety within a student's career development.
Discussion of Extension of the Study Conducted by Gloria and Hird (1999) "Influences of ethnic and nonethnic variables on the career decision-making self-efficacy of college students"

Gloria and Hird (1999) examined differences in ethnic identity, other group orientation, trait anxiety, and career decision-making self-efficacy. The researchers grouped trait anxiety and major declared or undeclared as nonethnic variables of influence, and ethnic identity and other group orientation as ethnic variables of influence in predicting the level of career decision-making self-efficacy. The categorization of racial and ethnic minorities consisted of African Americans, Asian Americans, Biracials, International students, Pacific Islanders, Latino(a)xs, and American Indians. The justification for grouping individuals was defined by socioracial classification, in that as a result of sociopolitical and socioeconomic classifications, resources are allocated differently amongst members from these groups, as opposed to members of the White group, i.e. those who self-identify or are commonly identified as solely being White. Individuals who are not part of the dominant group (i.e. racial and ethnic minorities) receive "different" treatment and live through different experiences than those of the dominant group (Whites). However, Gloria and Hird (1999) note the important fact that the categorization of the ethnic groups does not minimize between and within group differences.

The purpose of the study was to investigate differences in trait anxiety, ethnic identity, other-group orientation and career decision-making self-efficacy by race, Whites and racial and ethnic minorities, and major, declared and undeclared. White students were hypothesized to have higher levels of career decision-making self-efficacy, lower
levels of trait anxiety, ethnic identity and other-group orientation as compared to racial and ethnic minority students. Students with a declared major were expected to have higher levels of career decision-making self-efficacy and lower trait anxiety than undeclared students. The second hypothesis stated that ethnic variables (ethnic identity and other group orientation) would be stronger predictors of career decision-making self-efficacy for racial and ethnic minorities as compared to White students. Finally, the third hypothesis stated that ethnic variables (ethnic identity and other group orientation) would be stronger predictors of trait anxiety for racial and ethnic minorities as compared to White students.

The sample consisted of 351 female and 336 male (total 687) undergraduate university students. The White sample consisted of 589 students; the racial and ethnic minority sample consisted of 98 students (30 Asian; 21 Biracial; 20 International; 12 Latino; 7 Pacific Islander; 4 American Indian; and 4 African American). Sixty-nine percent (69%) of the students had declared a major and thirty-one (31%) had undeclared majors. Sixty-eight percent (68%) of the White students had declared a major and seventy-five percent (75%) of racial and ethnic minorities had declared a major. The percentages should be read with caution due to the low level of racial and ethnic minority participation as compared with White student participation.

The results revealed significant differences in career decision-making self-efficacy, trait anxiety, ethnic identity and other group orientation between White and racial and ethnic minority students. The findings indicate that racial and ethnic minority students have higher levels of ethnic identity and trait anxiety, and lower levels of career decision-making self-efficacy. Further, the results indicate that students with an
undeclared major have higher levels of trait anxiety and lower levels of career decision-making self-efficacy.

Furthermore, ethnic variables (ethnic identity and other group orientation) were predictive of career decision-making self-efficacy and trait anxiety in both Whites and racial and ethnic minorities, however ethnic variables were more predictive of career decision-making self-efficacy and trait anxiety for racial and ethnic minorities. The relationships of ethnic identity, other group orientation and trait anxiety to career decision-making self-efficacy were significantly stronger for racial and ethnic minorities as compared to White students. Other-group orientation was a stronger predictor of career decision-making self-efficacy as compared to ethnic identity, and ethnic identity was the stronger predictor of trait anxiety as compared to other-group orientation for racial and ethnic minority students.

These findings suggest that the more resources available to an individual in terms of career aspirations and planning, the more efficacious he/she may be, without necessarily losing sight of his/her cultural values. For example, understanding and emulating the White individual’s role in career development, exploration, and experiential planning aids in his/her level of confidence, however, the individual does not compromise his/her ethnic values. The results of trait anxiety having a significantly stronger relationship to career decision-making self-efficacy for racial and ethnic minorities, and ethnic identity being a strong predictor of trait anxiety, support Hackett and Byars’ (1996) assertion that physiological states (anxiety) can be altered in living the experiences of being ethnically different.
A difference that was addressed in the extension of this study was ascertaining an equal number of White and racial and ethnic minority students. This was addressed in response to one of the limitations of the Gloria and Hird (1999) study, that of the disparity in the sample sizes between White (589) and racial and ethnic minority (98) participants. Furthermore, the present study analyzed for gender differences, as well as investigated gender by ethnicity interaction.

Findings of the two studies varied in terms of significance. Gloria and Hird (1999) found significant results for White students having higher levels of career decision-making self-efficacy and trait anxiety, whereby the present study did not find significant results for these influences. Rather, estimated marginal means suggested that racial and ethnic minority students have higher levels of career decision-making self-efficacy. However, findings of the present study supported Gloria and Hird's (1999) finding of racial and ethnic minorities having a significantly higher level of ethnic identity, as well as ethnic identity being significantly correlated with career decision-making self-efficacy; moreover, a stronger relationship for racial and ethnic minorities.

Variations in significance versus nonsignificance might be attributed to the difference in sample sizes, the number of White and racial and ethnic minority students in each respective study, and/or the current study being conducted three years later with counselors being more educated. Moreover, variables might be attributed to institutions with which the participants were a part of. Specifically, racial and ethnic minorities might be achieving stronger levels of verbal persuasion and vicarious learning, and/or might be affected by the increasing level of diversity in the academic setting of the public
(65% racial and ethnic minority students) and private (35% racial and ethnic minority students) institutions.

Chung (2002) further lends support to investigating gender and ethnic differences among college students regarding career decision-making self-efficacy. In his study, he did not find significant gender differences. However, he found that Black participants scored significantly higher on career decision-making self-efficacy, of which he partially attributes to the large percentage of Black females in the study. Chung (2002) further asserts that the environment with which racial and ethnic minority students reside may contribute to the resources and role models available for these students. Hence, an institution with a larger minority population might be a contributing factor to a student's career decision-making self-efficacy.

**Significance of the Study: Theory, Research, and Practice**

Examining the ethnic and nonethnic influences on career decision-making self-efficacy will enable counselors to understand the repertoire racial and ethnic minorities are working within in order to ascertain career development. In addition, it will further enlighten counselors as to the power of ethnic identity in shaping an individual's (vocational) identity.

Further, career counselors can begin to implement the sources of self-efficacy, in particular that of vicarious learning with their clients (Bandura, 1986). They can begin to operationalize with their clients how their role models were influenced by ethnic identity; as well as how their role models progressed in light of the (perceived) barriers of the world-of-work; this will allow the counselor to "attend to contextual issues" (Gloria & Hird, 1999, p. 165).
It is important for counselors to also address the internal factors of the clients; the values and perceived negative stereotypes they hold for their own skills and ability to succeed. Facilitating change in one's negative thought processes, and in turn their cognitive schema with regard to their career will foster career exploration with many more options. In addition, counselors assessing the degree of influence of one's psychosocial factors (family, culture and community) on career decision-making self-efficacy will allow for a more extensive understanding of the client's script (Gloria & Hird, 1999).

Implications for College Counseling and Career Services Programs

The present exploratory study provided support for the need to further examine career decision-making self-efficacy of racial and ethnic minorities. Support was also found for Parham and Austin's (1994) call for counselors to integrate the client's racial identity into assessment and counseling of the student to better facilitate his/her career development. The present study suggested that in lieu of racism and oppression, racial and ethnic minorities yielded a higher level of career decision-making self-efficacy than White students did.

Thus, counselors should nurture this confidence via awareness, knowledge, and skills in multicultural counseling, and outreach and intervention programs. Counselors should be aware of the ethnic identity construct, as well as the racial identity construct. The rationale is that racial identity models evolved from black and White experiences and may not be reflective of all ethnic groups. As previously stated, Phinney (1992) indicates that ethnic identity is multifaceted, including one's level of identification to the group, one's sense of belonging to the group, and the degree to which one values' and engages in
one's group. Helms and Cook (1999) describe a racial identity model where minority members begin thinking less dichotomously and more flexibly about race at later statuses, are more self-valuing at later statuses, and value Whites least at intermediate statuses. This model speaks of six stages of racial identity development.

Counselors should address spheres of influence in career decision-making (Fouad & Bingham, as cited in Walsh & Osipow, 1995), which are inclusive of gender, family, religion, race/ethnicity, misperceptions and barriers as an all encompassing approach to a students' vocational planning and confidence therein. Further, it is recommended to investigate all of Bandura's (1977) sources of self-efficacy, performance accomplishment, verbal persuasion, vicarious learning and anxiety. Specifically, the vicarious learning source of self-efficacy facilitates an understanding of how an individual's career aspirations came about. A counselor and/or educator is recommended to query the student about role models in their family, community, race or ethnicity, and how this has influenced his/her current thought process of career development.

Counselors should address the contextual variables for a student, inclusive of expectations placed on the individual by his/her family and/or community. And, it is recommended that counselors and educators understand the collectivism vs. pluralism approach to vocational planning that respective students' engage in. Assessing a student's level of anxiety presently, and if he/she has any feelings of "being different", as well as if this has been a pattern, might facilitate data gathering and understanding of the student.

Tucker and Herman (2002) address the implications for counselors working with African-American children, in particular, as a way to address the social and academic barriers effecting the success of these children. These authors suggest the self-
empowerment theory (SET), proposed by Tucker and Herman to guide research and practice to prevent failure of African-American children. The SET borrows the construct of self-efficacy, utilizes "communication mobilization", and the involvement of African-American churches, community and business leaders, parents, teachers, schools and education policy makers, and culturally sensitive interventions. The Model program is an example of an effort within an African-American community to assist the educational progress of African-American children. Effects of the Model program were empirically investigated. Results suggest that students who participated in the program revealed significant effects yielding higher GPA's and skills, and a decrease in maladaptive behaviors. Thus, the implications from this research parallels with implications for the present study, that of utilizing sources of self-efficacy to mediate barriers that children and adolescents are facing.

When working within an institution in general, and with college students, in particular, it is crucial for counselors to be sensitive to cultural variables and the influence on the student (past and present messages). It is recommended for counselors to be sensitive to the individual's internal "recordings" regarding a students' career path, i.e. whether the individual was verbally persuaded that he/she can do anything, or whether the individual was informed that he/she would not equate to much. It is further recommended for counselors to be sensitive to gender related "recordings", such that women are more "fit" for service oriented positions, and to assess an individual's level of internalization of this recording.
Limitations

There are limitations of the present study and therefore results should be interpreted with some caution. The research instruments used in this study were self-report, therefore relying on the biases of self-reporting ethnic identity, trait anxiety and career decision-making self-efficacy; this self-report nature could limit the validity of the instruments. Another limitation is that assignment of the participants into groups was based on participant race/ethnicity. Hence, randomization of participants into groups was not possible, and is a limitation of this study. Furthermore, grouping of racial and ethnic minority students into one category can obscure within group differences.

The voluntary nature of the participants poses potential threats to both external and internal validity and the design of the study was correlational, thus no cause and effect results can be made. Thus, two more limitations within this study.

A methodological limitation concerns the sample of the study. The sample consists of individuals who are currently students enrolled in college/university; this limits the generalizability of the results to individuals who have chosen to pursue academia beyond high school.

Future Directions

The present study suggests the need for future research investigating career decision-making self-efficacy of racial and ethnic minorities. Possibilities to employ for future research include replicating or extending the study to further establish validity and reliability; increase the sample size; and conduct research on another region of the United States to afford the opportunity for comparison of regions thereafter. Future studies should focus on more diverse populations, inclusive of gay, lesbian and bisexual
individuals, people with disabilities, religious diversity, and varied socio-economics statuses. Future studies should also utilize alternative research methodologies such as qualitative methods (case studies, interviews) to further investigate the gender by ethnicity interaction as influences of career decision-making self-efficacy.
References


Appendixes
Appendix A

Informed Consent
Dear Potential Participant:

Purpose and Duration of Research

We appreciate your time and willingness to consider participating in this survey research. The primary researcher is a doctoral student at Seton Hall University, and this research is for her dissertation. The purpose of this research is to examine the influences of ethnic identity, gender and trait anxiety on the confidence in making career decisions among college students. Your volunteer participation will help us reach these goals and will be greatly appreciated. It is estimated that your participation in this research will last approximately 25 minutes.

Procedures

If you are at least 18 years of age and decide to participate in this present study, we ask that you complete all of the brief surveys. The self-report inventories that you will be asked to complete are: (1) a demographic measure (7 items); (2) The Multigroup Ethnic Identity Scale (20 items); (3) Trait Anxiety Scale of the State-Trait Anxiety Scale (20 items); and (4) The Career Decision-Making Self-Efficacy Scale (50 items). Please be sure to follow the instructions for each scale and do not leave any items blank. You are free to ask questions during the administration of this study. Upon completion, we ask that you return your anonymous survey materials to the locked drop box in front of the classroom.

Voluntary Participation

Participation in this study is completely voluntary. If you decide not to participate in the present study, there will be no penalty. Further, if you decide to participate, you are free to discontinue participating without penalty at any time during the administration.

Anonymity Preservation

Your anonymity will be protected in several ways. First, we ask that you do not place your name or any other identifying information on the packet. Second, your individual responses will be consolidated with other responses in order to be analyzed as an anonymous group. All final results and conclusions will be based on aggregate data only.

Confidentiality Maintenance

Your confidentiality will be maintained in the following ways. First, we ask that you conceal your packet and personally bring it to the locked drop box. Second, your anonymous responses on the self-reported inventories will be kept confidential. Only the researcher and researcher's advisor will have access to the survey materials, which will be secured in the researcher's home.

Anticipated Risks or Discomforts

These self-report inventories are designed to be non-threatening and minimal discomfort is expected from participating in this research. However, if you do experience any discomfort or distress during or after participating in this study, you are encouraged to contact a faculty member, administrator, or Seton Hall University's Counseling Services (973) 761-9500 to help you address any of your concerns.

College of Education and Human Services
Department of Professional Psychology and Family Therapy
Tel: 973.761.9451
400 South Orange Avenue • South Orange, New Jersey 07079-2685
Research Contact

If you have any questions about the study or would like a copy of the results, please feel free to contact Maureen G. Creagh at (973) 761-9000 ext. 5426 or by e-mail at creaghma@shu.edu, the primary researcher, or dissertation advisor. Dr. Byron K. Hargrove at (973) 275-2855 or by e-mail at hargroby@shu.edu. If you should have questions about the rights of the research participants, you may contact: The Chairperson of the IRB, Office of Grants and Research Services, 973-275-2974.

This project has been reviewed and approved by the Seton Hall University Institutional Review Board for Human Subjects Research. The IRB believes that the research procedures adequately safeguard the subject’s privacy, welfare, civil liberties, and rights. The Chairperson of the IRB may be reached through the Office of Grants and Research Services. The telephone number of the Office is 973-275-2974.

I have read the material above and any questions I have asked have been answered to my satisfaction. I agree to participate in this activity, realizing that I may withdraw without prejudice at any time.

Thank you for considering to take part in our project. Your informed consent is implied if you decide to complete and return your surveys.

Sincerely,

Maureen G. Creagh, M.A.
Counseling Psychology Ph.D. Student
Department of Professional Psychology
and Family Therapy

Byron K. Hargrove, Ph.D.
Assistant Professor
Department of Professional Psychology
and Family Therapy

APPROVED

DEC 29 2001
IRB
SETON HALL UNIVERSITY
Appendix B

Demographic Background
1. **Age:** _______  2. **Gender:** Male  Female

3. **Race/Ethnic Background:** (please circle all that apply)
   - African American/Black
   - Afro-Carribean
   - African
   - Asian/Pacific Islander
   - Asian/East Indian
   - Hispanic/Latino(a) (of color)
   - Hispanic/Latino(a) (White)
   - Native American
   - White/Caucasian
   - Other (please indicate) ________________________________

4. **Religious Affiliation:** (please circle one)
   - Atheist
   - Buddhist
   - Catholic
   - Hindu
   - Jewish
   - Protestant (specify: e.g. Baptist, Lutheran, etc.) ________________________________
   - Muslim
   - None
   - Other (please indicate) ________________________________

5. **Economic Status:** of your family (please circle one)
   - Upper class
   - Upper middle class
   - Middle class
   - Lower-Middle class
   - Working class
   - Lower class

6. **Residency Status:**
   - on-campus resident
   - commuter

7. **Academic Major(s):** ________________________________

8. **Year in School (please circle)**
   - Freshman
   - Sophomore
   - Junior
   - Senior

   **THANK YOU FOR YOUR PARTICIPATION**
Appendix C

Multi-group Ethnic Identity Measure
Multi-group Ethnic Identity Measure

In this country, people come from a lot of different cultures and there are many different words to describe the different backgrounds or ethnic groups that people come from. Some examples of the names of ethnic groups are Mexican-American, Hispanic, Asian-American, American Indian, Anglo-American, and White. Every person is born into an ethnic group, or sometimes two groups, but people differ on how important their ethnicity is to them, how they feel about it, and how much their behavior is affected by it. These questions are about your ethnicity or your ethnic group and how you feel about it or react to it.

Please fill in:

In terms of ethnic group, I consider myself to be ____________________________

Use the numbers given below to indicate how much you agree or disagree with each statement.

4: Strongly agree  3: Somewhat agree  2: Somewhat disagree  1: Strongly disagree

1. I have spent time trying to find out more about my own ethnic group, such as its history, traditions, and customs.

2. I am active in organizations or social groups that include mostly members of my own ethnic group.

3. I have a clear sense of my ethnic background and what it means for me.
4: Strongly agree  3: Somewhat agree  2: Somewhat disagree  1: Strongly disagree

4. I like meeting and getting to know people from ethnic groups other than my own.

5. I think a lot about how my life will be affected by my ethnic group membership.

6. I am happy that I am a member of the group I belong to.

7. I sometimes feel it would be better if different ethnic groups didn’t try to mix together.

8. I am not clear about the role of my ethnicity in my life.

9. I often spend time with people from ethnic groups other than my own.

10. I really have not spent much time trying to learn more about the culture and history of my ethnic group.

11. I have a strong sense of belonging to my own ethnic group.

12. I understand pretty well what my ethnic group membership means to me, in terms of how to relate to my own group and other groups.

13. In order to learn more about my ethnic background, I have often talked to other people about my ethnic group.

14. I have a lot of pride in my ethnic group and its accomplishments.

15. I don’t try to become friends with people from other ethnic groups.

16. I participate in cultural practices of my own group, such as special food, music, or customs.

17. I am involved in activities with people from other ethnic groups.
18. I feel a strong attachment towards my own ethnic group.

19. I enjoy being around people from ethnic groups other than my own.

20. I feel good about my cultural or ethnic background.

21. My ethnicity is

1. Asian, Asian American, or Oriental

2. Black or African American

3. Hispanic or Latino

4. White, Caucasian, European, not Hispanic

5. American Indian

6. Mixed: parents are from two different groups

7. Other (write in) ____________________________

22. My father’s ethnicity is (use numbers above) ________

23. My mother’s ethnicity is (use numbers above) ________

Questionnaire found in:

Appendix D

Trait Anxiety Scale (State Trait Anxiety Inventory)
Copyright Restriction Page
Copyright Restriction Page

Due to copyright restrictions, the following measure could not be reproduced here

State-Trait Anxiety Inventory - Form Y

©

1983

All Rights Reserved

For more information contact the copyright holder.

Mind Garden
P. O. Box 60669
Palo Alto, California 94306

Bibliographical Reference:

Appendix E

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

Please put in the number that would best describe your Confidence Level, any number from 0 to 9, for each of the following questions.

0 Represents No Confidence 9 Represents Complete Confidence

1. Make a career decision and then not worry about whether it was right or wrong. __________

2. Find information about companies who employ people with College majors in English. __________

3. Come up with a strategy to deal with flunking out of college. __________

4. Go back to school to get a graduate degree after being out of school 5-10 years. __________

5. Find information about educational programs in engineering. __________

6. Make a plan of your goals for the next five years. __________

7. Choose a major or career that your parents do not approve of. __________

8. Prepare a good resume. __________

9. Change occupations if you are not satisfied with the one you enter. __________

10. Choose the major you want even through the job market is declining with opportunities in this field. __________

11. Accurately assess your abilities. __________

12. Get letters of recommendation from your professors. __________

13. Determine the steps to take if you are having academic trouble with an aspect of your chosen major. __________

14. Choose a career in which most workers are the opposite sex. __________

15. Identify some reasonable major or career alternatives, if you are unable to get your first choice. __________
16.5. Change majors if you did not like your first choice.

16.5. Figure out whether you have the ability to successfully take math courses.

18. Figure out what you are and are not ready to sacrifice to achieve your career goals.

19. Find and use the placement office on campus.

20. Determine what your ideal job would be.

21. Select one occupation from a list of potential occupations you are considering.

22. Describe the job duties of the career/occupations you would like to pursue.

23. Successfully manage the job interview process.

24. Select one major from a list of potential majors you are considering.

25. Apply again to graduate schools after being rejected the first time.

26. Find information in the library about occupations you are interested in.

27. Find out the employment trends for an occupation in the 1980's.

28. List several majors that you are interested in.

29. Move to another city to get the kind of job you really would like.

30. Decide what you value most in an occupation.

31. Persistently work at your major or career goal even when you get frustrated.

32. Choose a career that will fit your preferred lifestyle.
33. Plan course work outside of your major that will help you in your future career.

34. Determine the academic subject you have the most ability in.

35. Identify employers, firms, institutions relevant to your career possibilities.

36. Resist attempts of parents or friends to push you into a career or major you believe is beyond your abilities.

37. Determine the steps you need to take to successfully complete your chosen major.

38. List several occupations that you are interested in.

39. Choose a major or career that will suit your abilities.

40. Decide whether or not you will need to attend graduate or professional school to achieve your career goals.

41. Choose a major or career that will fit your interests.

42. Choose the best major for you even if it took longer to finish your college degree.

43. Get involved in a work experience relevant to your future goals.

44. Find information about graduate or professional schools.

45. Find out about the average yearly earnings of people in an occupation.

46. Ask a faculty member about graduate schools and job opportunities in your major.

47. Talk to a faculty member in a department you are considering for a major.

48. Define the type of lifestyle you would like to live.
49. Determine where you would rather work primarily with people or with information.

50. Talk with a person already employed in the field you are interested in.